ISLAM, AUTHORITARIANISM, AND FEMALE EMPOWERMENT
What Are the Linkages?

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MOST Islamic countries are governed by authoritarian regimes, and in most Islamic countries women's economic, social, and political rights are significantly less than those of the men of their country. These well-known facts provide the basis for a highly original and important analysis by M. Steven Fish.[1] Fish's major contribution is his suggestion that the relationships at issue are not merely a matter of spurious correlation but rather are indicative of a deep underlying causal pattern. In a sophisticated cross-national quantitative analysis he shows the following:

    1. Even controlling for many other alleged influences on countries' political systems, countries with a largely Islamic religious tradition have significantly more autocratic governments than do non-Islamic countries.
    2. Controlling for level of economic development, the condition of women is significantly worse in Islamic countries than in others.
    3. In a more limited test, even when controlling for economic development and Islamic tradition, a low level of women's rights may produce lower levels of democracy.
    4. More speculatively, Islamic states may be more autocratic so as to repress women's rights more effectively, or autocratic government may permit and even require the repression of a range of human rights, including those of women. This second causal arrow may replace the one just above, or the two may reinforce each other in a feedback loop.

    Fish combines his quantitative analysis with a wide-ranging theoretical and factual review of the relationships among Islam, democracy,

[1] Fish, "Islam and Authoritarianism," *World Politics* 55 (October 2002). Specific page references to Fish's article are embedded in the text.

and female empowerment. We will not significantly add to or modify that part of his contribution. We are, however, skeptical of cultural arguments about why some states are authoritarian. Such arguments, after all, were made about Asian and Latin American cultures, yet democracy now flourishes in many such states. Thus we replicate and modify his quantitative analyses to see whether his findings are robust, and we address the question of complex causation. In doing so we find the following:

1. Islamic countries in general are more likely to be ruled autocratically even when other influences are controlled. But Arab countries in particular are more often ruled autocratically. So, too, are states that have frequently engaged in international military conflicts. However, the effects of culture can change dramatically. Before 1980 countries with large Catholic populations were even less likely than Islamic ones to have democratic governments, but that relationship subsequently turned strongly positive.

2. Islamic countries generally are more likely than others to repress some rights of women. But the effect is much stronger and more consistent for Arab countries in particular.

3. The evidence that autocratic governments systematically repress women's rights in particular is at best inconsistent rather than general and distinctive. Furthermore, we find little indication that female empowerment contributes causally to democratic government as measured by specific indicators.

4. Thus, while Islamic religious tradition and especially characteristics of Arab states or culture do seem to support both autocratic government and the repression of women, our analysis does not support the view that the repression of women is central to maintaining autocratic rule in Arab or other Islamic states or that greater democracy in those countries would greatly improve women's conditions on a broad range of measures. Our analysis of more nuanced equations for female empowerment finds the relationships among regime, Islamic/Arab tradition, and the status of women to be more complex than Fish suggests. In addition, such causal relationships as there are differ depending on the issue-area being considered. Female political rights, economic activity, health, and educational attainment should be treated as distinct measures and not substituted for one another as general proxies for the status of women.

Our contribution, while supporting much of Fish's argument, is thus to greatly weaken major parts of it, especially about any causal role linking women's rights to Islam and democracy. These results leave still largely unanswered the question of *why* countries with a largely Islamic or Arab tradition tend to be more autocratic and to keep their women so little empowered, as measured by conventional criteria of human rights. They also raise fundamental and more general questions about the role of culture and democracy in enhancing the condition of women.

Does Islamic Tradition Discourage Democracy?

We begin with the analysis of determinants of democracy, taking off from Fish's analysis. In numerous regression analyses, he examines the effects of many hypothesized influences, including level of economic development and recent economic growth, sociocultural division, colonial or communist heritage, OPEC membership, and Islamic religious tradition. Of these he finds only three exert a strong and consistent impact: economic development, OPEC membership, and Islamic tradition. We nevertheless suspected that his analysis could be more finely and completely specified.

The correlation between democracy and economic development is one of the strongest and oldest in the literature. Although the particular nature of any causal relationship is strongly contested among scholars, we are inclined to believe in a causal linkage from economic development to the sustainability and perhaps the initiation of democracy, as well as perhaps a reverse arrow from democracy back to development.[2] Since our purpose is not to enter the debate on the reciprocality of the relationship between development and democracy, we simply accept—in the company of Fish and many others—the plausibility of a causal arrow from development to democracy and include development as one independent variable affecting democracy. We also concur with Fish that the independent effects of recent economic growth, sociocultural division, and colonial or communist heritage are inconsistent and at best weak. Consequently we omit them here.

For purposes of replication we conduct our analyses on the same set of countries Fish used, and we use his data whenever we use his variables. When we change or add a variable, we discuss the measure and source and provide details in the appendix. Our reservations concern, first, two of the measures that he finds to have strong and robust effects and, second, possible underspecification in the equations.

OPEC membership is the first of the two measurement decisions with which we quibble. Fish chooses this as a proxy for the theoretical variable of resource abundance, notably its availability to authoritarian actors to buy off large segments of the populace and thus stunt demands for political accountability and its enablement of the state to sustain a large and powerful internal security apparatus. Similarly resource abun-

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[2] In the political science literature Adam Przeworski, Michael Alvarez, Jose Cheibub, and Fernando Limongi provide perhaps the most persuasive evidence, particularly for the ability of reasonably developed states to sustain democracy once it has been established. See Przeworski, Álvarez, Cheibub, and Limongi, *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990* (New York: Cambridge University Press, 2000).

dance is one of the most commonly and successfully employed variables in examinations of the causes of civil wars.[3] But a dummy variable for OPEC membership unnecessarily loses the potential explanatory power of an interval variable of more or less oil, specifically, the ratio of oil and other fuel income to the economy. It is more plausible to hypothesize a continuous relationship; that is, the greater the relative input of *fuel income* to the total GDP, the greater the ability of an authoritarian regime to sustain itself. Even more relevant may be the ratio of the value of *fuel exports* to GDP, as that more directly measures the regime's potential to import hard-currency consumer goods and security equipment to monitor and suppress dissent.[4]

The other measure we modify is Fish's dummy variable for Islamic religious tradition. He uses "predominance" of Muslims as the "tipping point" for substantial Islamic influence on politics (p. 7). This is especially plausible when considering influences on democracy, since an Islamic majority could in some kinds of democratic systems impose its practices on the entire population. Nevertheless, the binary variable still discards valuable information about the relative impact of small or large Islamic populations on state policy and is at least equally problematic for our later discussion of influences on female empowerment. Thus, for example, the subjugation of women may be largely the result of overt state action or of less formal social practices that may be enabled by state nonintervention in religious cultures. Especially for the latter, the appropriate hypothesis would be the larger the number of *Muslims as a percentage of the total population*, the lower the country's overall level of female empowerment—potentially strengthening Fish's argument.[5]

We identify an additional five possible variables for his equation to explain democracy. First, it is increasingly recognized that a state's po-

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[3] See Paul Collier and Anke Hoeffler, *Greed and Grievance in Civil War: Justice Seeking and Loot-Seeking in Civil War* (Washington, D.C.: World Bank, 2001); James Fearon and David Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 2 (2003). The idea of a "resource curse" is often traced to Jeffrey Sachs and Andrew Warner, "Natural Resource Abundance and Economic Growth," Development Discussion Paper no. 517a (Cambridge: Harvard Institute for International Development, 1995). Michael L. Ross considers fuel (mostly oil and natural gas) and other mineral exports separately but gets somewhat stronger results for fuel; Ross, "Does Oil Hinder Democracy?" *World Politics* 53 (April 2001). That also seems more relevant for our focus on Islamic countries, for which petroleum products are more often the principal export. We use the measure of fuel exports as a percentage of GDP; it is more highly correlated with authoritarian government than is OPEC membership.

[4] World Bank, *World Development Indicators*, http://devdata.worldbank.org/dataonline (accessed May 2003). We use the average measure of fuel exports as a percentage of GDP from the period 1991–2000. Data from earlier years were used for Afghanistan, Cambodia, Chad, Democratic Republic of Congo, Cuba, Guinea-Bissau, Guyana, Iraq, Liberia, Myanmar, Rwanda, Sierra Leone, Somalia, and Vietnam.

[5] Data for about 1990 are mostly from Tatu Vanhanen, "Domestic Ethnic Conflict and Ethnic Nepotism: A Comparative Analysis," *Journal of Peace Research* 36, no. 1 (1999).

litical neighborhood matters. In his discussion of conditions producing transitions to democracy, Huntington mentions "snowballing," or demonstration effects, enhanced by international communication, as transitions to democracy serve as models for their neighbors. Similarly, among conditions that favor the consolidation of new democracies, he identifies a favorable international political environment, with outside assistance.[6] The notion of a favorable international environment can readily be extended to a low-threat environment, where the new democracy does not fear attack or subversion by its neighbors and consequently does not need to enhance its military capabilities or suppress civil liberties in the name of national security. It is reasonable to expect that democratic neighbors would be perceived as less threatening. Maoz found that the probability of a transition to democracy was strongly related to the average level of democracy in a state's "politically relevant international environment," defined largely though not exclusively in geographic terms.[7] More recently, Gleditsch establishes strong correlations between the average level of democracy among contiguous neighbors and both the absence of violent conflict by a state with those neighbors and that state's own level of democracy. Pevehouse reports that regional international organizations composed largely of democratic states can ease both democratic transitions and consolidation.[8]

Accordingly, we add a measure of the *degree of democracy in the neighborhood*.[9] This is particularly important for our question here, since most Islamic countries are found in neighborhoods composed largely of undemocratic countries. Any causal relationship could therefore be ambiguous at the very least. Islam and perhaps certain other cultures may be inherently antithetical to democracy, and cultures in turn are largely the product of regional influences (for example, Islamic countries are concentrated in Africa, the Middle East, and South and Southeast Asia). Or autocracies may in general sustain each other, perhaps deliberately

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[6] Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century* (Norman: University of Oklahoma Press, 1991), 46, 273–74.

[7] Zeev Maoz, *Domestic Sources of Global Change* (Ann Arbor: University of Michigan Press, 1996).

[8] Kristian Skrede Gleditsch, *All International Politics Is Local: The Diffusion of Conflict, Integration, and Democratization* (Ann Arbor: University of Michigan Press, 2002); Jon Pevehouse, *Democracy from Above? Regional Organizations and Democratization* (New York: Cambridge University Press, 2004).

[9] The Democracy in the Neighborhood variable is the average Polity score of contiguous states 1991–2000. Monte Marshall and Keith Jaggers, *Polity IV Dataset, 2000*. Polity is used more often in the international relations literature than are Freedom House rankings, which begin only in 1973; and the rankings for the 1970s were rather controversial. The difference is nevertheless not consequential, as one would expect by comparing Fish's Tables 2 and 3 with his Tables 4 and 5. Contiguity is coded as either directly contiguous by land or contiguous by sea within 150 miles; Douglas Stinnett, Jaroslav Tir, Philip Schafer, Paul Diehl, and Charles Gochman, "The Correlates of War Project Direct Contiguity Data, Version 3," *Conflict Management and Peace Science* 19, no. 2 (2002).

through imitation or inadvertently by mounting threats against one another and thereby providing a reason or excuse for target governments to suppress democratic liberties.[10] Controlling for neighbors' level of democracy will help tell us whether Islam still makes an independent contribution to the likelihood of authoritarian government.

The second variable is the previous experience of democracy in a country. Theories of path dependence and consolidation of regimes are common. Again we cite Huntington, who proposes that "a longer and more recent experience with democracy is more conducive than is a shorter and more distant one."[11] Przeworski et al. discuss the relative staying power of democracy and dictatorship, and Maoz notes the importance of past regime instability to subsequent regime change.[12] From these we draw the hypothesis that the level of democracy in a state will be greater the higher the *average level of democracy in preceding years*. We use every year of independence from 1970 to 1990 to include the most recent and relatively uniform period of experience for all countries.[13] Again this matters for Islamic countries with their largely nondemocratic institutional experience: is the absence of a democratic history a general influence operating to reduce the current level of democracy or, even controlling for such a general influence, are Islamic countries still especially likely to be nondemocratic?

A third potentially important influence on democracy appears in Fish's final equations (Table 9 and 10), where he adds several measures of women's rights but drops OPEC membership. We restore it—or rather, include our alternative measure of fuel export dependence.

We include Fish's measures of female empowerment but also supplement them. We follow him in using the *gap between female and male literacy* rates, the *sex ratio of males to females*,[14] and the *percentage of*

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[10] A classic statement is Harold Lasswell's concept of the garrison-police state; Laswell, *National Security and Individual Freedom* (New York: McGraw Hill, 1950). There is little evidence of an "autocratic peace" corresponding to the peace between democracies. See Mark Peceny and Caroline Beer, with Shannon Sanchez-Terry, "Dictatorial Peace?" *American Political Science Review* 96, no. 1 (2002); idem, "Peaceful Parties and Puzzling Personalists," *American Political Science Review* 97, no. 2 (2003), 339–42; Dan Reiter and Allan C. Stam, "Identifying the Culprit: Democracy, Dictatorship, and Dispute," *American Political Science Review* 97, no. 2 (2003), 333–37.

[11] Huntington (fn. 6), 270–71.

[12] Przeworski et al. (fn 2); Maoz (fn. 7).

[13] Previous experience with democracy is measured as the average Polity IV Political Competition component score 1970–90. Transitional authority codes were deleted from the analysis. Zero is the lowest level of political competition and 10 is the highest. This index focuses on the presence and fairness of elections; Marshall and Jaggers (fn. 9).

[14] On how an unbalanced sex ratio for unmarried young males may disrupt civil order and encourage autocratic government, see Valerie M. Hudson and Andrea Den Boer, "A Surplus of Men, a Deficit of Peace: Security and Sex Ratios in Asia's Largest States," *International Security* 26, no. 4 (2002). Similarly, powerful men in polygamous societies control not only women but also the lower-class men who

women in government as ministerial and subministerial officials. In addition to Fish's measures we use the following: (1) *the percentage of seats held in parliament by women* as a supplement to the percentage of women in government; (2) *the ratio of female life expectancy at birth to that of males;* (3) *the ratio of female to male enrollment in primary, secondary, and tertiary education combined*; and (4) the *ratio of economically active females fifteen years and above to males*.[15] Together these seven measures cover major aspects of women's rights (indeed of all people, as recognized by the Universal Declaration of Human Rights),[16] with economic activity and two each for education, health (and life), and representation in politics; this reduces the reliance on a single, possibly misleading measure. The measure for female economic activity may underreport unpaid labor, but it is uncorrelated with per capita GDP and so may be especially influenced by religious and other cultural values.

The fourth addition to the set of explanatory variables concerns whether the lack of democracy is more a phenomenon characteristic of Arab states in particular than of Islamic countries in general. Certainly in the years 1999–2001 no Arab state reached a score of better than 3 (Jordan) on the Freedom House scale or −2 (Yemen) on the Polity scale, whereas a number of non-Arab states with majority Islamic populations did so. The principal cultural explanation is that Arab patriarchal family structure is reproduced in authoritarian government and civil society.[17] Yet a recent analysis offers several perceptive political

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have no wives; see Laura Betzig, *Despotism and Differential Reproduction* (New York: Aldine, 1986). Our analysis below, however, does not find that an imbalanced sex ratio produces authoritarian government generally.

[15] Women in parliament is an imperfect measure, since some states with rubber-stamp parliaments have high female participation. We drop the Gender Empowerment Index, which was available to Fish for only 92 countries, of which just 20 are Islamic, as compared with 153 to 156 (up to 47 of them Islamic) for the other empowerment variables. Moreover, we think it preferable to assess the effect of specific women's rights rather than of such an aggregated measure. It performed less well in Fish's Table 10 and not better than specific measures in his Table 9. Similarly we do not use the Gender Development Index in United Nations Development Programme, *Human Development Report 2002* (New York: Oxford University Press, 2002). An indicator of violence against women would be desirable, but we know of no adequate cross-national database. Low fertility rates might be used as an indicator of female reproductive rights, but they could also reflect coercive population policies enforced on women. Our data are primarily from the *Human Development Report*. See the appendix for precise definitions and information about missing data. We have changed some signs for consistency, so that all measures of the status of women equate higher values with higher status.

[16] "Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory"; rights "to a standard of living adequate for . . . health and well-being [and] medical care"; "to take part in the government"; and "to just and favorable remuneration insuring an existence worth of human dignity." The declaration, reflecting the usage of 1948, frequently refers to persons with the masculine pronoun.

[17] See Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society* (Oxford: Oxford University Press, 1988) and others cited in Fish's fn. 34 (p. 24). See also Elizabeth Fernea, *In Search of Islamic Feminism: One Woman's Global Journey* (New York: Doubleday, 1998); and essays in Charles Kurzman, ed., *Liberal Islam: A Sourcebook* (Oxford: Oxford University Press, 1998).

rather than cultural explanations: low nation-state identity due to pan-Arabism, the weakness of nationalism in states with rather arbitrary borders following the collapse of the Ottoman Empire, and the international security tensions deriving from the extended Arab-Israeli conflict.[18] Another political interpretation stresses historical experience, arguing that the defeat of Arab states in the 1967 war with Israel strengthened radical Islamic movements as the best organized opposition to authoritarian Arab governments—and that this in turn frightened many secular liberals into supporting those governments' efforts to exclude and suppress the Islamists.[19] We cannot sort out these competing explanations for a particular low level of democracy in Arab states here, but we can at least test whether, while controlling for the possible other influences, adding a variable for states that are members of the *Arab League* makes an empirical difference.[20]

For a separate measure of international tensions we add the number of *fatal militarized disputes* in which each state was involved during the years 1991–2000. Our measure includes all involved countries, regardless of who initiated the dispute, and uses only relatively severe disputes on the principle that sustained multiyear involvement with some casualties is especially likely to place constraints on democracy for the purported goal of enhancing national security.[21]

A final improvement is the use of a lag structure that more accurately captures the possibly causal relationships in question. After first reproducing column 4 from Fish's Table 5 (below) using his measure of democracy for 1991–2000, we then switch to a shorter and later period for democracy, the years 1998–99 through 2000–2001, as the dependent variable in the rest of our Table 1. This change is especially important because the indicators of women's status that Fish (and we) employ are taken from the mid-1990s.

For the dependent variable we follow Fish's use, in his Tables 3 and 10, of Freedom House data with the most free coded at 7 and the least at 1. These data are slightly more complete than Polity's, particularly

[18] Alfred Stepan, with Graeme Robertson, "An 'Arab' More Than 'Muslim' Electoral Gap?" *Journal of Democracy* 14 (July 2003).

[19] Ellen Lust-Okar, "Why the Failure of Democratization? Explaining Middle East Exceptionalism" (Manuscript, New Haven, Yale University Political Science Department, May 2004).

[20] Arab League members are Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, and Yemen.

[21] See Rafael Reuveny and Quan Li, "The Joint Democracy-Dyadic Conflict Nexus: A Simultaneous Equations Model," *International Studies Quarterly* 47, no. 3 (2003). Pevehouse (fn. 8) finds that *internal* violence often precedes transitions to democracy. Arab and MID involvement are only moderately correlated (.43). For data source, see the appendix. The period corresponds to that used for democracy in the neighborhood.

Table 1
Regression of Freedom House Scores on Hypothesized Determinants

Variable	Model 1: Fishs Table 3	Model 2: New D.V.	Model 3: Arab League	Model 4: MID Involvement	Model 5: Literacy Gap	Model 6: Sex Ratio	Model 7: Women in Govt.	Model 8: Women in Parliament	Model 9: Education Ratio	Model 10: Life Expectancy	Model 11: Economic Activity
Constant	−.319	1.583**	1.340**	1.455**	1.966**	2.554	1.181*	1.455**	1.573**	−.513	1.106*
	(.591)	(.528)	(.538)	(.548)	(.757)	(2.490)	(.560)	(.551)	(.668)	(3.989)	(.613)
Islamic religious tradition Dummy variable	−1.288***										
	(.262)										
Economic development	1.530***	.750***	.824**	.826***	.695**	.829***	.811***	.826***	.863***	.764***	.820***
	(.163)	(.186)	(.188)	(.197)	(.239)	(.225)	(.197)	(.198)	(.224)	(.237)	(.199)
OPEC membership	−1.574***										
	(.464)										
Islamic population		−1.233***	−.912**	−.783*	−.784*	−.782*	−.750*	−.783*	−.812*	−.780*	−.766*
		(.307)	(.371)	(.375)	(.378)	(.378)	(.384)	(.374)	(.385)	(.382)	(.381)
Fuel exports		−2.976***	−2.723**	−2.624**	−2.489**	−2.479*	−2.507**	−2.620**	−2.618**	−2.620**	−2.464**
		(.935)	(.916)	(1.007)	(0.02)	(1.185)	(1.000)	(1.032)	(1.010)	(1.018)	(1.028)
Neighborhood		.084***	.082***	.078***	.079***	.079***	.056*	.078***	.079***	.075**	.081***
		(.025)	(.024)	(.0239)	(.024)	(.025)	(.024)	(.024)	(.024)	(.0243)	(.023)
Previous experience with democracy		.143***	.135***	.132***	.134***	.137**	.118**	.132**	.130**	.144**	.139***
		(.039)	(.04)	(.041)	(.042)	(.045)	(.040)	(.043)	(.042)	(.049)	(.042)
Arab League			−.599*	−.677*	−.562	−.590	−.530	−.677*	−.669*	−.621*	−.582
			(.341)	(.339)	(.350)	(.369)	(.322)	(.349)	(.337)	(.358)	(.364)
MID involvement				−.222**	−.200*	−.220**	−.201**	−.222**	−.221**	−.222**	−.211**
				(.086)	(.102)	(.086)	(.084)	(.085)	(.086)	(.087)	(.087)
Measure of female empowerment[a]					.010	.011	.039**	.00001	−.244	1.977	.005
					(.012)	(.024)	(.017)	(.015)	(.741)	(3.953)	(.005)
R-squared	.543	.652	.657	.669	.671	.666	.682	.670	.670	.670	.670
N	157	156	156	156	153	154	156	156	156	156	155

In a one-tailed test, *p < .05; **p < .01; ***p < .001; robust standard errors in parentheses

[a] All variables of female empowerment are measured such that higher values indicate a higher status of women.

for the 1990s, and in any case Fish found his results robust to the two indicators. Both Polity and Freedom House essentially measure liberal democracy, with an emphasis largely on institutions in the former and greater attention to civil liberties in the latter. Because neither gives much attention to gender equality per se, we are able to assess how much they are impacted by our independent indicators of women's rights.[22]

Our full set of explanatory variables now includes level of development, OPEC membership, percentage of population Islamic, fuel exports, level of democracy in the neighborhood, previous experience of democracy, MID involvement, and lagged measures of female empowerment. With this more complete specification, better lag structure, and the revised measures, we hypothesized as follows:

> —H1. The net effect of the revised and additional variables will be to sharply reduce the explanatory contribution of Islam to regime type, making it no longer statistically significant.

Table 1 presents these analyses, with the coefficient for each independent variable and the standard error directly below it. Statistically significant results are indicated with asterisks. Significance is calculated for one-tailed tests, since our hypotheses and controls indicate the expected direction of association. Model 1 shows Fish's equation with his data (from his Table 5, column 4), and model 2 modifies that with our shorter and later period for measuring democracy as the dependent variable, as well as our continuous measures for Islamic tradition and fuel export dependence[23] and neighbors' democracy and previous experience of democracy. There are some differences in the coefficients for the key variables identified by Fish (economic development, Islam, and OPEC/fuel exports), but all of those coefficients remain quite significant. The added variables of neighborhood effects and previous experience of democracy are also highly significant. Despite the additions, the importance of Islam is only moderately reduced and is still strongly evident. Previous experience of democracy somewhat diminishes the effect of Islamic tradition; but since Islamic tradition surely also affected pre-

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[22] The Freedom House civil liberties checklist does include the following item (D.4): "Are there personal social freedoms, including gender equality, choice of marriage partners, and size of family?" But it is only one item out of the fourteen that constitute the civil liberties scale, which in turn is only half of the total freedom score, so it does not seriously contaminate use of that score as a dependent variable. We retain Fish's preference for measuring regime as a continuous rather than a dichotomous variable—as Przeworski et al. (fn. 2) do—despite some reservations about the truly interval character of Freedom House and Polity scores; see James Vreeland, "A Continuous Shumpeterian Conception of Democracy" (Manuscript, New Haven, Yale University, Political Science Department, April 2003).

[23] He surprisingly omits OPEC membership from this table.

vious levels of democracy, the difference is not very meaningful.[24] So far our hypothesis is rejected and Fish's is supported.

Model 3 modifies the last equation by adding membership in the Arab League. The only material change is to reduce somewhat the influence of Islamic population in general, but even so the coefficient for Islam is statistically more significant than that for Arab. Arab states are even more likely than other Islamic countries to be governed autocratically, but the additional effect is not strong. The same is true in model 4 when the measure of MID involvement is added. Islamic population retains its significantly negative coefficient, but being Arab and engaged in extended high-level international confrontations adds to a low probability of democracy.

The next seven columns of Table 1 (models 5–11) add, one by one, Fish's three measures of women's rights and then our four additional ones. Islamic population and MID involvement always remain negatively and significantly related to democracy. Arab is also significantly negative in three of the equations, and virtually so (p < .06) in the other four. This is a reasonably robust result for an effect of Arab culture or political experience, beyond that from Islam in general and the other influences found to affect democracy.[25]

Contrary to the results found by Fish, in our more complete equations the measures for women's rights almost always exert insignificant effects and add little or nothing to the explanatory power of the equations.[26] The one exception is Fish's measure of the proportion of women in government, suggesting plausibly that democratic govern-

[24] This was a hard test, and even if Islam proved insignificant here it might well be that Islam had reduced democracy in the earlier period.

[25] Another variant of the MID measure—uses of military force over a longer preceding period (1970–90)—leaves Islam statistically insignificant and Arab statistically significant in all equations, but that analysis omits many successor states to Yugoslavia and the Soviet Union. To lean against our own hypothesis and in favor of Fish's, we do not present it in the main text.

[26] A correlation matrix at the end of the appendix includes most variables. Many variables of female empowerment not shown are highly correlated with one another (but only one appears in any equation) and with Islamic population (as Fish hypothesizes). To check for mulicollinearity we entered the independent variables in this sequence: economic development, Islamic population, a measure of female empowerment, fuel exports, neighborhood, previous democracy, Arab League, and MID. Four female-empowerment measures (sex ratio, women in parliament, education ratio, and life expectancy) were insignificant in the presence of only economic development and Islamic population. Economic activity ratio became insignificant when fuel exports were added, as did literacy when Arab League was added. Only women in government stayed significant in the full model. A more systematic check computed the Variance Inflation Factor (VIF) for each model of our tables. It increases our confidence that multicollinearity is not distorting coefficient estimates. The mean VIF for the models of Table 1 did not exceed 2.09, nor 1.79 in Table 2; the highest VIF for an individual variable never exceeded 2.32. In Table 3 only economic development possibly warranted concern, with a VIF ranging from 5.52 to 5.56 (but well below 10.0 for a definite problem). To be sure, we reran those equations without economic development and found few changes. The effects of Islamic population and Arab League remained the same; democracy became nonsignificant for the sex ratio after being marginally significant in Table 3.

ments more equitably involve women in the political process. But that still leaves open the question, which we address below, of whether a large female representation at high levels promotes democracy or is a consequence of democracy. Furthermore, in an equation not shown, our measure of women in government, taken from the same source as Fish's but with a slightly different definition,[27] is not significant.

These results mostly confirm Fish's hypothesis about the effect of Islam per se on regime but leave it intensified by characteristics of Arab states and states frequently engaged in serious international disputes. They also challenge his interpretation of the rather bare-bones equations in his Table 10, as *women's rights exhibit virtually no independent influence on democracy*.

As for the effects of culture, Huntington recognizes how cultural attitudes toward democracy can shift markedly. Catholicism was long regarded as a culture antithetical to democracy, until the third wave discredited this conventional wisdom. Reversing vigorous nineteenth- and twentieth-century opposition to democracy by the Catholic hierarchy, in the 1960s the Second Vatican Council joined intellectuals and activists among the ordinary clergy and laity in endorsing democratic structures and the principle of religious freedom for all. From early in his now twenty-six-year reign Pope John Paul II traveled the world proclaiming the value of democracy as a protector of justice and human rights, most prominently in his 1991 encyclical, *Centesimus Annus*. The wave swept through Catholic countries beginning in Iberia, then spreading widely in Latin America and ultimately, with the collapse of communism, in Eastern Europe.[28]

To test whether the impact of the cultural variables changes over time, Table 2 repeats as much as possible the analysis in model 4 of Table 1, but does it by decades.[29] Model 1 for each of the periods in-

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[27] Our variable measures the percentage of women serving in government at the ministerial level in 1996. See the appendix to compare our measure with that of Fish.

[28] Huntington (fn. 6), 72–85. See also Scott Mainwaring, *The Catholic Church and Politics in Brazil, 1916–1985* (Stanford, Calif.: Stanford University Press, 1986); idem, "Democratic Survivability in Latin America," in Howard Handelman and Mark Tessler, eds., *Democracy and Its Limits: Lessons from Asia, Latin America and the Middle East* (Notre Dame, Ind.: University of Notre Dame Press, 1999); Eric Hanson, *The Catholic Church in World Politics* (Princeton: Princeton University Press, 1987); and Daniel Philpott, "The Catholic Wave," *Journal of Democracy* 15 (April 2004): 32–36.

[29] It is impossible to reproduce the full model from column 4 of Table 1, because not all the necessary data are available and sufficiently reliable. For democracy we use Polity scores (averaged over the decade in question), since Freedom House began its coding only in 1974. Measures of economic development and MID involvement are readily available for the earlier decades. So is previous experience with democracy, except we omit it for the 1960s because there were so many recently independent former colonies. Economic development and previous experience are averaged over each decade to maximize the number of observations. MID involvement is taken as a count over each decade. Lacking data on fuel exports we revert to OPEC membership as a proxy. Islamic and Catholic population percent-

cludes our measure of Islamic population. In this table the negative relationship between Islamic population and democracy is statistically significant only in the 1980s (and just short of significance, p < .06, in the 1990s). Arab League, however, was always negative and very strongly so in every decade except the 1980s.

Model 2 for each decade repeats the analysis but substitutes for percentage Islamic another cultural/religious variable, *percentage of population Catholic*. The percentages of Catholic and Islamic populations are very highly and negatively correlated (−.90, see appendix table), so both cannot be used in the same equation. Within each decade, the coefficients for all the other variables are extremely similar in both columns. But the Catholic population variable switched from a negative association with democracy in the 1960s and 1970s to an even stronger positive association in the 1980s,[30] while the Arab variable was always negative. Although the Catholic endorsement of democracy was not enthusiastic everywhere, the reversal and resilience of democracy in many Catholic countries leads us to reject a "strongly culturalist" view that Catholic culture is inherently incompatible with democracy, and suggests skepticism toward the application of such a strongly culturalist view to Islamic culture.

Overall, these results support what Przeworski, Cheibub, and Limongi call a "weakly culturalist" view, which holds that while certain elements of a democratic culture are required for democracy to take hold, this political culture is not incompatible with any particular religious tradition, since such traditions are malleable or at least subject to reinterpretation.[31]

DOES ISLAMIC TRADITION DIMINISH WOMEN'S RIGHTS?

This leads back to the other major focus of Fish's article—his analysis of influences on various measures of female empowerment. Aside from problems with the lag structure, including a measurement of literacy

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ages are relatively constant. Arab League membership changes, but the 2000 membership is still appropriate as a proxy for Arab population. We drop democratic neighborhood because it would require too much new data gathering on changes of borders and sovereign status. Measures of female empowerment in these years suffer from too many problems of data availability and quality—and they show hardly any impact in Table 1 anyway.

[30] The relationship remained positive in the 1990s, but only at p < .05 as democracy spread to Asia and elsewhere.

[31] See Adam Przeworski, José Cheibub, and Fernando Limongi, "Culture and Democracy," *World Culture Report: Culture, Creativity and Market* (Paris: UNESCO Publishing, 1998). The authors identify three sets of views on whether democracy requires certain cultural preconditions: nonculturalist, weakly culturalist, and strongly culturalist.

TABLE 2
REGRESSION OF POLITY SCORES ON HYPOTHESIZED DETERMINANTS

	1960s		1970s		1980s		1990s	
Variable	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*	*Model 8*
Constant	-17.523***	-17.644***	-17.181***	-16.058***	-13.040***	-14.231***	-4.789*	-6.621***
	(3.123)	(2.681)	(2.186)	(1.811)	(1.771)	(1.596)	(2.163)	(1.995)
Economic development	2.484***	2.710***	1.320***	1.398***	1.006***	.907***	1.963***	2.199***
	(.403)	(.342)	(.341)	(.315)	(.287)	(.255)	(.720)	(.705)
Islamic population	-.652		1.695		-2.187**		-2.707	
	(2.617)		(1.189)		(.911)		(1.692)	
Catholic population		-3.631*		-3.107**		3.436***		1.845*
		(1.754)		(1.124)		(.939)		(1.034)
OPEC membership	-3.577	-4.175	-1.520	-1.334	-1.281	-1.538*	-4.091***	-4.623***
	(2.333)	(2.521)	(1.372)	(1.357)	(.933)	(.913)	(1.062)	(1.035)
Previous experience with democracy			1.329***	1.297***	1.411***	1.466***	.761***	.756***
			(.152)	(.152)	(.119)	(.109)	(.134)	(.139)
Arab League	-6.513*	-8.187***	-4.891***	-4.967***	-1.529	-1.740*	-4.047**	-5.365***
	(3.201)	(2.522)	(1.225)	(1.047)	(1.188)	(.996)	(1.542)	(1.194)
MID involvement	.263**	.204**	.118	.030	.318***	.374***	-.850*	-.867**
	(.103)	(.099)	(.248)	(.250)	(.087)	(.086)	(.363)	(.362)
R-squared	.396	.423	.732	.748	.813	.830	.590	.586
	96	96	104	104	124	124	156	156

In a one-tailed test, * p < .05; ** p < .01; *** p < .001; robust standard errors in parentheses

gap in 1990 as the dependent variable, we believed this portion of Fish's analysis also to be underspecified in a way that exaggerates the influence of Islamic religious tradition. In it he uses only two independent variables, Islamic tradition and level of economic development. A more appropriate equation might include at least these additional variables:

   —*Average level of education in the population,* rather than ratio of female to male enrollment, on the hypothesis that generally more educated populations are likely to accord greater rights to women.[32]
   —*Percentage of the population living in urban areas,*[33] on the expectation that women are likely to have more rights and opportunities in an urban society than in the isolation of rural society.[34]
   —*Income inequality,* on the hypothesis that a more unequal distribution of income is likely to reflect inequality of rights across the spectrum of the population, not just gender-specific inequality. For example, the cross-national analysis of Ghobarah, Huth, and Russett finds income inequality to be a significant predictor of such equality-sensitive outcomes as public expenditures on health and the level of healthy life expectancy in the population.[35] As a measure we use the Gini index of income distribution in 1997 they derived from the World Health Organization.
   —*Democracy,* on the expectation that in democratic political systems women are more likely to have a wide variety of rights, not only the right to vote and otherwise participate in politics as is now assumed in contemporary definitions of democracy but also the entitlement to economic rights that reduce male exploitation of their labor. Fish himself discusses the likelihood that democracy supports women's rights but does not include democracy in his Table 9 analysis. We do, continuing with the Freedom House indicator averaged over the 1990s.

With these additions we test the following hypothesis:

   —H 2. The effect of the revised and additional variables will sharply reduce the explanatory contribution of Islam to women's rights, perhaps making it no longer statistically significant. In particular, democracy will emerge as a stronger explanatory variable than Islamic tradition.

Table 3 shows our more fully specified results for each of nine different measures of women's rights (Fish's three, followed by our four and

[32] Level of education is measured by the combined primary, secondary, and tertiary gross enrollment rates as percentage of population for 1999. The source is United Nations Development Programme (fn. 15); missing observations filled in with 1996 data from World Bank (fn. 4).

[33] Percentage of population living in urban areas in 1997. The source is United Nations Development Programme (fn. 15); missing data filled in from World Bank (fn. 4). Education and urbanization are highly correlated with development and each other (see appendix table), though not with democracy. We include all for the sake of identifying any remaining contribution of Islam, even though it may be hard to identify from the separate contributions.

[34] While we suggest this possibility, its correctness is not obvious. Agrarian production often requires women's full participation in the fields with men, getting them out of the house in ways that may be less available in urban society.

[35] Hazem Ghobarah, Paul Huth, and Bruce Russett, "The Comparative Political Economy of Human Misery and Well-Being," *International Studies Quarterly* 48, no. 1 (2004).

TABLE 3

REGRESSION OF STATUS OF WOMEN ON HYPOTHESIZED DETERMINANTS

	Dependent Variables								
Variable	Fish's Literacy Gap (1990)	Fish's Sex Ratio	Fish's Women in Government[a]	Women in Parliament[a]	Women in Government[a] (2000)	Education Ratio	Literacy Gap (2000)	Life Expectancy Ratio	Economic Activity Ratio
Constant	43.440***	−90.110***	−1.493	12.475*	−8.346	.652***	18.414***	1.074***	115.877***
	(6.369)	(4.271)	(4.472)	(6.744)	(7.100)	(.092)	(4.37)	(.024)	(9.995)
Economic development	5.029*	−3.962*	−.125	−.015	3.818	−.126	−1.528	−.007	−2.736
	(2.299)	(1.648)	(1.668)	(2.060)	(2.570)	(.034)	(1.834)	(.008)	(3.377)
Level of democracy	.974*	.660*	1.475***	.506	1.817***	.0006	.359	−.001	.419
	(.578)	(.350)	(.307)	(.523)	(.557)	(.007)	(.443)	(.002)	(.849)
Islamic population	−1.086	−1.382	−1.152	−4.433*	.504	−.106**	−2.617	−.01	−3.485
	(2.637)	(1.317)	(1.499)	(2.436)	(2.861)	(.036)	(2.520)	(.010)	(4.669)
Arab League	−9.984***	−6.65***	−3.213**	−5.44**	−4.796*	.060	−2.516	−.026**	−24.825***
	(3.110)	(2.068)	(1.304)	(2.156)	(2.558)	(.049)	(2.573)	(.011)	(5.376)
Education level	.087	.074*	.029	.103*	.089*	.004***	.269***	.0003	−.073
	(.059)	(.035)	(.029)	(.051)	(.050)	(.0006)	(.043)	(.0002)	(.089)
Income inequality	4.988	−9.170*	10.238*	−19.172*	3.375	.017	−31.176***	−.069*	−71.185***
	(7.144)	(4.375)	(6.145)	(8.463)	(12.063)	(.107)	(6.267)	(.036)	(13.178)
Urbanization	.102**	.019	.003	.004	−.094	.001*	.107**	.0007***	−.123*
	(.043)	(.027)	(.033)	(.048)	(.065)	(.0006)	(.039)	(.0002)	(.072)
R-squared	.607	.329	.347	.348	.283	.563	.654	.262	.447
N	153	153	155	155	155	155	149	155	154

In a one-tailed test, * p < .01; ** p < .01; *** p < .001; robust standard errors in parentheses

[a] All dependent variables of women's status are measured such that positive values correlate with a higher status for women.

our more appropriately lagged data for Fish's on female literacy and women in government). Each of general education, income inequality, and percentage of population urban makes a significant contribution in five of the nine equations for explaining women's rights. Islam has a significant negative impact in just two—but Arab is significant in all but our two measures of women's educational attainment and literacy. *Fish's emphasis on the negative impact of Islamic culture is generally supported only for the Arab variant, not for Islam generally.*[36]

Fish makes the valid point that Islamic countries are not necessarily less secular than those deriving from other religious traditions. Nor are they necessarily more patriarchal and antithetic to women's rights than some others. His discussion of the disadvantaged position of women in China and India (pp. 34–36) makes this point well, as might a discussion of the position of women in much of Africa. His comparison (pp. 25–28) of Islamic countries with Catholic ones—many of which are also known for patriarchy and, at least until recent decades, a less than rigorous separation of church and state—also addresses the question of whether the effects of Islamic tradition are especially strong. But he does not use a measure for *Catholic population* in his full equations for all countries, and it is important to do so.

When we substitute Catholic for Islamic in equations not shown here, the results are the same with only three exceptions: Catholic population shows a significant negative impact on the female economic activity ratio (where Islamic population did not) but has no impact on women in parliament or the female education ratio (where Islamic population did). This is an even more underwhelming effect for a cultural variable.

Table 3 also shows that the effect of including democracy in the explanatory model is very inconsistent.[37] It is moderately significant in

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[36] As military conflict seems to be bad news for democracy, it may also be bad news for women's rights, as much feminist writing suggests. See Cynthia Enloe, *The Morning After: Sexual Politics at the End of the Cold War* (Berkeley and Los Angeles: University of California Press, 1993); Ann Tickner, *Gendering World Politics: Issues and Approaches in the Post–Cold War Era* (New York: Columbia University Press, 2001); V. Spike Peterson and Anne Sisson Runyon, *Global Gender Issues*, 2nd ed. (Boulder, Colo.: Westview Press, 1999); Melvin Ember, Carol Ember, and Bruce Russett, "Inequality and Democracy in the Anthropological Record," in Manus Midlarsky, ed., *Inequality, Democracy, and Economic Development* (Cambridge: Cambridge University Press, 1997); Joshua Goldstein, *War and Gender* (Cambridge: Cambridge University Press, 2001); and Mary Caprioli, "Gendered Conflict," *Journal of Peace Research* 37, no. 1 (2000). But when we added MIDs to the equations for women's rights, it was never significant (equations not shown here).

[37] We used a Durbin-Wu-Hausman test to check for possible endogeneity of democracy to women's status and vice versa. We found indications that democracy is endogenous to three of our measures of women's status at most: women in government, education ratio, and economic activity ratio. No measures of women's status were endogenous to democracy. This weak evidence of endogeneity indicates little need to create simultaneous equation models.

the full equations using Fish's three measures of women's rights (the literacy gap, the sex ratio,[38] and women in government). But for the six we added (all measured in the year 2000)—literacy gap, women in parliament, women in government, life expectancy ratio, the educational attainment ratio, the ratio of economically active females to males—democracy exerts a significant positive effect only in the equation for women in government. Democracy's insignificance is not due to the socioeconomic variables (urbanization, income inequality, general educational level) that we added. Indeed, income level alone is sufficient to render democracy insignificant for the female education ratio, our literacy measure, and life expectancy.[39] And if democracy is dropped from the models, the results for all but one of the rights measures are substantively unchanged; that is, no signs change direction and no variables lose or materially gain statistical significance. The exception is for women in government (2000), where economic development becomes more significant.[40]

To summarize this section, when Islam is in the equations without a separate variable for Arab, it often impacts negatively on women's rights, but when a control for Arab states is in the equation it is that, not Islamic culture per se, which regularly makes the difference. Only for our measures of women's educational attainment (literacy, enrollment in educational institutions) does the Arab variable not exhibit this negative effect. Apparently many Arab states do attend to the education of women, though not necessarily in the same institutions or by providing education of the same quality or type as that received by men.

Democracy sometimes makes a significant independent contribution to the achievement of some rights for women, but not robustly across the range of rights measures. It emerges as such with Fish's three measures, but with our measures shows up only for women in government. Overall, it is important not to generalize too much about the impact of democracy on human rights for women, across different measures and

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[38] The sex imbalance may result from Arab countries' relative denial of education, health care, nutrition, and economic independence to women. It is unlikely, however, that it results from practices of infanticide or sex-selective abortion. The former is uncommon in Islamic societies, and the latter is more likely to be practiced by nontraditional secular individuals.

[39] Nor are the results different when Catholic is substituted for Islamic, except that democracy falls just short (p < .06) of the p < .05 level, which was barely reached by Islamic.

[40] The matter of women's participation in high levels of the political system is nonetheless complex. We created an interactive variable, GDP x regime score. For women in parliament and our measure of women in government, the individual terms were significantly negative and the interaction significantly positive, meaning women did worse in wealthy autocracies and low-income democracies. Nepal, Central African Republic, and Papua New Guinea are examples of low-income democracies with poor representation of women in parliament and government, and Singapore and most oil-rich Arab states are high-income autocracies with almost no government posts occupied by women.

dimensions of political, economic, health, and educational rights: the effects vary greatly across them. This inconsistent result is certainly contrary to our expectations and probably to those of other scholars of democracy who have found a positive effect for democracy on the condition of women but have not controlled for Islamic or Arab tradition.[41] It also seems to conflict with the expectations of Fish (p. 29), though he does not test for it. One possible explanation is the newness of democratic institutions in the 1990s in many formerly authoritarian countries. If democratic political institutions do indeed have a consistent positive effect on the many indicators of women's status included in our models here, it is likely that these "spillover" effects will take years to manifest themselves.

A CONTINUING PUZZLE

The causes and consequences of regime type in Islamic countries are multiple.[42] Fish's conclusion that countries with an Islamic religious tradition are substantially more autocratic and more oppressive of women's rights (as that term is customarily understood in democratic countries) warrants some important qualifications. He has identified a real problem, although it appears to be more of a problem for Arab states in particular than for those with Islamic populations in general. Moreover, authoritarian government is particularly common in states that have frequently been involved in serious international conflict. Our test suggests that international conflict is an important contributor to authoritarian government but that causal interpretation needs to be tested more systematically than we can do here.

   An additional surprise, and puzzle, is twofold in our more completely specified equations. The first part is that Islamic countries are more likely to be ruled by autocratic governments whether or not women's rights are heavily restricted. And the second is that Islamic—or more particularly Arab—countries are likely to restrict women's rights whether or not the governments are strongly autocratic. Democracy per se impacts only a few measures of women's rights, making more differentiated theory and empirical research imperative to unpack the nuances of this relationship.

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   [41] For example, Przeworski et al. (fn. 2). It is worth noting that no relationship between female empowerment and political freedom in Arab states is found in the *Arab Human Development Report 2002* (New York: United Nations Development Programme, 2002), chap. 2.
   [42] For example, Iraq in 2003 was a very unpromising field in which to plant democracy. All the negative influences in Table 1, in addition to Islamic and Arab population, were present: fuel exports, low income, bad neighborhood, no history of democracy, and many MIDs.

Islamic and Especially Arab Culture

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Demoracy ←——————————————————→ Women's Rights

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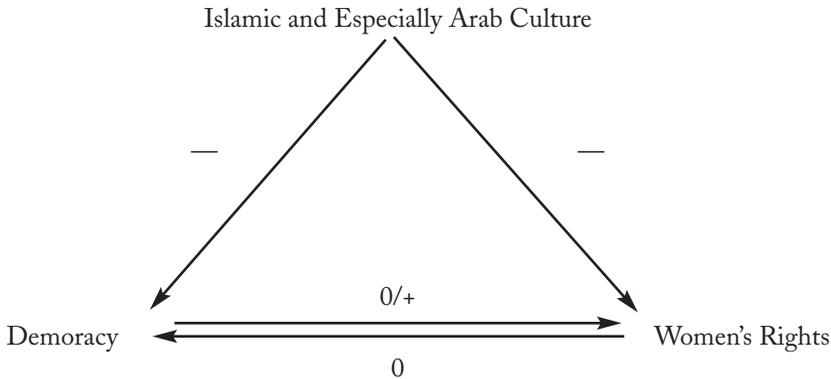
FIGURE 1[a]

[a] Arab tradition reduces democracy and women's rights, and Islamic tradition reduces democracy, but controlling for these traditions the direct connections between democracy and women's rights are tenuous.

Overall, it does not seem either that Islamic or Arab countries are autocratic because they oppress women's rights or that Islamic or Arab countries oppress women simply because their governments are autocratic. Islam and especially Arab remain key predictive variables, but the particular social and political mechanisms by which democracy or women's rights are repressed in these countries remain enigmatic to us. Figure 1 shows our findings schematically.

If this is correct, democratic institutions alone would not appear to be the key to greatly improved status for women in Islamic and especially Arab societies, nor would improving the status of women alone promise much by way of subsequent greater democracy in those countries. Both democracy and female empowerment may be highly valued—they certainly are by the authors of this analysis. But the goal of achieving one by means of the other may prove elusive. Recall also our results in footnote 40, using the interaction of GDP per capita and regime to explain women's rights. They suggest that a high level of women's rights could be a "Western" phenomenon (that is, typical of those countries with high levels of democracy and income). Thus, some of the unsettling results showing an insignificant relationship between democracy and women's rights might best be understood as depending also on income levels. Democracy alone—which in many developing countries may have little substantive meaning beyond holding elections—cannot solve such social problems as the low status of women.

These results are not exactly what we had hoped or expected to find. We began with hypotheses that the apparent effect of Islamic culture in sustaining both autocracy and female subordination would prove to be largely an artifact of other social, political, and economic influences. Perhaps these influences would themselves be more malleable to political intervention, and Islamic or Arab culture would not be "the real problem." Our results do suggest that Islamic culture in particular may not be a major impediment to achieving women's rights, but something about Arab states is, at least in the set of explanations tapped by the variables in this analysis. Our results in Table 2, however, do reinforce the fact that countries characterized by what many viewed as an inherently antidemocratic religious tradition—Catholicism—have proved remarkably amenable to the emergence and survival of democracy. They suggest that the most fruitful direction for future research is not to focus on the intractability of religious and cultural traditions but instead to continue to identify potential paths of change in Arab and Islamic societies.

We suspect Fish knew well that he was writing a ground-breaking and provocative article that would be built upon and modified by subsequent scholars. We expect the same to follow from our analysis here. Very possibly our still-parsimonious models omit other important variables or oversimplify their functional relationships. More detailed analysis of the relationship between religious groups and the state could be productive. How secular is the state and how autonomous is it from organized religion? How radical are the country's dominant religious organizations? Do the tenets or practices of different sects of Islam have different implications for state-society relations and female repression? In addition to examining culture, the effects of other variables—international and civil conflict—on both democracy and women's rights need to be probed more deeply. Is it possible that peace is easier to achieve than is deep cultural change? Are oil-exporting Arab countries more likely than are other resource-rich countries to be authoritarian rentier states? Much more theory and research, including intensive focused case studies, is necessary.

If these results withstand further scrutiny, we expect Fish to share our dismay. He says, "Nothing could be less heartening to democratic idealists than the notion that a particular religion is inimical to democracy. Religious traditions are usually constants within societies; they are variables only across societies" (p. 37). At this stage some effect of Islamic and especially Arab culture or institutions in discouraging democracy and suppressing female empowerment seems real, and the causal mechanisms are more puzzling than ever—but the idea of culture as a constant is less solid.

APPENDIX: VARIABLES, IN ORDER OF APPEARANCE IN THE TEXT

ECONOMIC DEVELOPMENT

Log of GDP per capita in 1990 in current U.S. dollars. Sources: Data provided by Fish from United Nations Development Programme, *Human Development Report 2000* (New York: Oxford University Press, 2000). Data for Cuba, Djibouti, Eritrea, Germany, Iraq, Kuwait, Libya, Macedonia, Myanmar, and Qatar from United Nations Statistics Division, "Indicators on Income and Economic Activity," unstats.un.org (accessed April 2002). For 1961–90 averages by decade, taken from World Bank, "World Development Indicators," http://devdata.worldbank.org/dataonline/ (accessed April 2004).

OPEC MEMBERSHIP

Dummy variable indicating the eleven member states of OPEC: Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela.

FUEL EXPORTS AS PERCENTAGE OF GDP

Average of fuel exports as a percentage of GDP, 1991–2000. Earlier years data for Afghanistan, Cambodia, Chad, Democratic Republic of Congo, Cuba, Guinea-Bissau, Guyana, Iraq, Liberia, Myanmar, Rwanda, Sierra Leone, Somalia, Vietnam. Source: World Bank, "World Development Indicators."

ISLAMIC RELIGIOUS TRADITION

Dummy variable indicating forty-seven countries whose population is predominantly Islamic. Source: M. Steven Fish, "Islam and Authoritarianism," *World Politics* 55 (October 2002).

ISLAMIC POPULATION

Adherents to Islamic faith as a percentage of population. Sources: Tatu Vanhanen, "Domestic Ethnic Conflict and Ethnic Nepotism: A Comparative Analysis," *Journal of Peace Research* 36, no. 1 (1999); data for around 1990. Missing data filled in using *CIA World Factbook,* cia.gov/cia/publications/factbook/index.html (accessed May 2003).

DEMOCRACY IN THE NEIGHBORHOOD

Average Polity score of contiguous states 1991–2000. Contiguity is coded according to Correlates of War categories 1–4 (either directly contiguous by land or contiguous by sea within 150 miles). Sources:

Monte Marshall and Keith Jaggers, *Polity IV Dataset, 2000,* http: // www.cidcm.umd.edu/inscr/polity/ (accessed March 4, 2003); and Douglas Stinnett, Jaroslav Tir, Philip Schafer, Paul Diehl, and Charles Gochman, "The Correlates of War Project Direct Contiguity Data, Version 3," *Conflict Management and Peace Science* 19, no. 2 (2002).

Previous Experience with Democracy

Average of the Polity IV Political Competition component measure 1970–90. For 1961–90 (Table 2), averages taken for the previous decade. Transitional authority codes were deleted. Zero is the lowest level of competition and 10 is highest. The Political Competition index focuses on the presence and fairness of elections and is less highly correlated with key independent variables other than the Freedom House or Polity IV composite indices. Source: Marshall and Jaggers, *Polity IV Dataset, 2000,* http://www.cidcm.umd.edu/inscr /polity/ (accessed March 4, 2003).

Fish's Literacy Gap (1990)

Gap between male and female adult literacy rates in 1990. Sources: World Bank, *Genderstats,* genderstats.worldbank.org; and *CIA World Factbook 2000,* as used by Fish. Regression signs reversed to show positive correlations with higher values for women's rights.

Sex Ratio

The number of males per hundred females. Source: U.S. Census Bureau, International Database Summary Demographic Data, census .gov/ipc/ www/idbsum, as used by Fish. Regression signs reversed to show positive correlations with higher values for women's rights.

Fish's Women in Government (1998)

Percentage of women holding governmental positions at the ministerial and subministerial level. Source: *Human Development Report 2000.*

Women in Parliament

Percentage of seats in lower houses of parliament held by women in 1999 and 2000. Afghanistan, Democratic Republic of Congo, Libya, Myanmar, Oman, Qatar, Saudi Arabia, and Somalia are coded as zero because they had no parliament. Sources: *Human Development Report 2002.* Data for Bosnia, Liberia, North Korea, and Yugoslavia from Population Reference Bureau, *Women of Our World 2002,* www.prb.org (accessed July 2003).

RELATIVE LIFE EXPECTANCY

Ratio of female to male life expectancy in 1997 and 2000. Some missing values for 1997 filled in with data from 2000 and vice versa. Sources: *Human Development Report 2002*. Data for Afghanistan, Bosnia, Liberia, North Korea, Somalia, and Yugoslavia from World Bank, "World Development Indicators."

EDUCATION ENROLLMENT RATIO

Ratio of female to male combined primary, secondary, and tertiary enrollment rates in 1997 and 1999. Some missing values for 1997 filled in from 2000 and vice versa. Sources: *Human Development Report 2002*. Data for Afghanistan from Population Reference Bureau, *Women of Our World 2002*. Bosnia, Liberia, Somalia, and Yugoslavia from World Bank, "World Development Indicators."

FEMALE ECONOMIC ACTIVITY RATIO

Ratio of female to male economic activity rate in 1997 and 2000. Some missing values for 1997 filled in from 2000 and vice versa. Sources: *Human Development Report 2002*. Afghanistan, Bosnia, Liberia, North Korea, Somalia, and Yugoslavia from Population Reference Bureau, *Women of Our World 2002*.

ARAB LEAGUE

Dummy variable for the twenty-one member states of the Arab League: Algeria, Bahrein, Comoros, Djibuti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, and Yemen. Source: *CIA World Factbook*.

FATAL MID INVOLVEMENT

Number of fatal militarized international disputes (MIDs) per year by decades, 1961–2000, that the country was involved in. Fatal means one or more combat deaths. Downloaded from cow2 MID incident level 3.02 file at http://cow2.la.psu.edu/.

LEVEL OF DEMOCRACY

Average Freedom House composite score from 1991/92–2000/2001 (used for replication of Fish's analysis) or from 1998/99–2000/2001. Scores are inverted so that 7 corresponds to the highest level of democracy and 1 to autocracy. Source: Freedom House, *Freedom in the World*

1999–2000, http://www.freedomhouse.org/ratings/index .htm (accessed May 2003).

LITERACY GAP

Gap between female and male adult literacy rates in 1997 and 2000. Some missing values for 1997 filled in with data from 2000, and vice versa. Sources: *Human Development Report 2002.* Data for Afghanistan from Population Reference Bureau, *Women of Our World 2002.* Data for Iraq from World Bank, "World Development Indicators."

WOMEN IN GOVERNMENT

Percentage of women holding governmental positions at the ministerial level in 1996 and 2000. Some missing values for 1996 filled in with data from 2000 and vice versa. Sources: *Human Development Report 2002.* Data for Afghanistan, Bosnia, Liberia, Somalia, and Yugoslavia from Population Reference Bureau, *Women of Our World 2002.*

CATHOLIC POPULATION

Adherents to Catholic faith as a percentage of population. Sources: David B. Barrett, *World Christian Encyclopedia* (New York: Oxford University Press, 1982). Missing observations filled in from CIA *World Factbook.*

EDUCATION

Combined primary, secondary, and tertiary enrollment rates as a percentage of population in 1999. Ratios adjusted so that none exceeds 100. Sources: *Human Development Report 2002.* Missing observations filled in with 1996 data from World Bank, "World Development Indicators."

URBAN POPULATION

Percentage of population living in urban areas in 1997. Sources: *Human Development Report 2002.* Missing observations filled in from World Bank, "World Development Indicators."

INCOME INEQUALITY

Gini index of income inequality in 1997. Source: Hazem Ghobarah, Paul Huth, and Bruce Russett, "Civil Wars Kill and Maim People—Long after the Shooting Stops," *American Political Science Review* 97 (May 2003), originally from World Health Organization sources.

CORRELATION MATRIX FOR 1990s

Variables	Democ.	Econ. Develop.	Islamic Pop.	Fuel Exports	Neigh-borhood	Past Exper.	Arab League	MIDs	Educ. Ratio	Econ. Ratio	Catholic Pop.	OPEC	Educ. Level	Income Ineq.
Table 1 Variables														
Democracy (Freedom House)														
Economic Development	.666													
Islamic Population	-.714	-.528												
Fuel Exports	-.335	.069	.322											
Neighborhood	.673	.560	-.777	-.304										
Past Experience of Dem.	.472	.571	-.421	-.138	.448									
Arab League	-.522	-.175	.596	.428	-.547	-.371								
MID Involvement	-.442	-.131	.442	.381	-.395	-.158	.432							
Education Ratio (1997)	.469	.667	-.588	.107	.436	.244	-.063	-.230						
Econ. Activity Ratio (1997)	.365	.095	-.203	-.325	.311	-.016	-.467	-.375	-.051					
Table 2 New Variables														
Catholic Population	.669	.467	-.897	-.289	.654	.456	-.521	-.357	.567	-.044				
OPEC Membership	-.266	-.020	.336	.819	-.248	-.131	.225	.084	.048	-.237	-.283			
Table 3 New Variables														
Education Level	.494	.844	-.593	.007	.595	.479	-.189	-.284	.761	-.041	.596	-.042		
Income Inequality	-.048	-.408	-.066	-.036	-.069	-.024	-.156	-.118	-.146	-.283	.194	-.025	-.342	
Urbanization	.248	.702	-.361	.276	.358	.290	.290	-.009	.664	-.164	.343	.140	.678	-.128