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# The Global Divergence of Democracies

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# DEMOCRACY AS
# A UNIVERSAL VALUE

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In the summer of 1997, I was asked by a leading Japanese newspaper what I thought was the most important thing that had happened in the twentieth century. I found this to be an unusually thought-provoking question, since so many things of gravity have happened over the last hundred years. The European empires, especially the British and French ones that had so dominated the nineteenth century, came to an end. We witnessed two world wars. We saw the rise and fall of fascism and Nazism. The century witnessed the rise of communism, and its fall (as in the former Soviet bloc) or radical transformation (as in China). We also saw a shift from the economic dominance of the West to a new economic balance much more dominated by Japan and East and Southeast Asia. Even though that region is going through some financial and economic problems right now, this is not going to nullify the shift in the balance of the world economy that has occurred over many decades (in the case of Japan, through nearly the entire century). The past hundred years are not lacking in important events.

Nevertheless, among the great variety of developments that have occurred in the twentieth century, I did not, ultimately, have any difficulty in choosing one as the preeminent development of the period: the rise of democracy. This is not to deny that other occurrences have

also been important, but I would argue that in the distant future, when people look back at what happened in this century, they will find it difficult not to accord primacy to the emergence of democracy as the preeminently acceptable form of governance.

The idea of democracy originated, of course, in ancient Greece, more than two millennia ago. Piecemeal efforts at democratization were attempted elsewhere as well, including in India.[1] But it is really in ancient Greece that the idea of democracy took shape and was seriously put into practice (albeit on a limited scale), before it collapsed and was replaced by more authoritarian and asymmetric forms of government. There were no other kinds anywhere else.

Thereafter, democracy as we know it took a long time to emerge. Its gradual—and ultimately triumphant—emergence as a working system of governance was bolstered by many developments, from the signing of the Magna Carta in 1215, to the French and the American Revolutions in the eighteenth century, to the widening of the franchise in Europe and North America in the nineteenth century. It was in the twentieth century, however, that the idea of democracy became established as the "normal" form of government to which any nation is entitled—whether in Europe, America, Asia, or Africa.

The idea of democracy as a universal commitment is quite new, and it is quintessentially a product of the twentieth century. The rebels who forced restraint on the king of England through the Magna Carta saw the need as an entirely local one. In contrast, the American fighters for independence and the revolutionaries in France contributed greatly to an understanding of the need for democracy as a general system. Yet the focus of their practical demands remained quite local—confined, in effect, to the two sides of the North Atlantic, and founded on the special economic, social, and political history of the region.

Throughout the nineteenth century, theorists of democracy found it quite natural to discuss whether one country or another was "fit for democracy." This thinking changed only in the twentieth century, with the recognition that the question itself was wrong: A country does not have to be deemed fit *for* democracy; rather, it has to become fit *through* democracy. This is indeed a momentous change, extending the potential reach of democracy to cover billions of people, with their varying histories and cultures and disparate levels of affluence.

It was also in this century that people finally accepted that "franchise for all adults" must mean *all*—not just men but also women. When in January of this year I had the opportunity to meet Ruth Dreyfuss, the president of Switzerland and a woman of remarkable distinction, it gave me occasion to recollect that only a quarter century ago Swiss women could not even vote. We have at last reached the point of recognizing that the coverage of universality, like the quality of mercy, is not strained.

I do not deny that there are challenges to democracy's claim to universality. These challenges come in many shapes and forms—and from different directions. Indeed, that is part of the subject of this essay. I have to examine the claim of democracy as a universal value and the disputes that surround that claim. Before I begin that exercise, however, it is necessary to grasp clearly the sense in which democracy has become a dominant belief in the contemporary world.

In any age and social climate, there are some sweeping beliefs that seem to command respect as a kind of general rule—like a "default" setting in a computer program; they are considered right *unless* their claim is somehow precisely negated. While democracy is not yet universally practiced, nor indeed uniformly accepted, in the general climate of world opinion, democratic governance has now achieved the status of being taken to be generally right. The ball is very much in the court of those who want to rubbish democracy to provide justification for that rejection.

This is a historic change from not very long ago, when the advocates of democracy for Asia or Africa had to argue for democracy with their backs to the wall. While we still have reason enough to dispute those who, implicitly or explicitly, reject the need for democracy, we must also note clearly how the general climate of opinion has shifted from what it was in previous centuries. We do not have to establish afresh, each time, whether such and such a country (South Africa, or Cambodia, or Chile) is "fit for democracy" (a question that was prominent in the discourse of the nineteenth century); we now take that for granted. This recognition of democracy as a universally relevant system, which moves in the direction of its acceptance as a universal value, is a major revolution in thinking, and one of the main contributions of the twentieth century. It is in this context that we have to examine the question of democracy as a universal value.

## The Indian Experience

How well has democracy worked? While no one really questions the role of democracy in, say, the United States or Britain or France, it is still a matter of dispute for many of the poorer countries in the world. This is not the occasion for a detailed examination of the historical record, but I would argue that democracy has worked well enough.

India, of course, was one of the major battlegrounds of this debate. In denying Indians independence, the British expressed anxiety over the Indians' ability to govern themselves. India was indeed in some disarray in 1947, the year it became independent. It had an untried government, an undigested partition, and unclear political alignments, combined with widespread communal violence and social disorder. It was hard to have faith in the future of a united and democratic India.

And yet, half a century later, we find a democracy that has, taking the rough with the smooth, worked remarkably well. Political differences have been largely tackled within the constitutional guidelines, and governments have risen and fallen according to electoral and parliamentary rules. An ungainly, unlikely, inelegant combination of differences, India nonetheless survives and functions remarkably well as a political unit with a democratic system. Indeed, it is held together by its working democracy.

India has also survived the tremendous challenge of dealing with a variety of major languages and a spectrum of religions. Religious and communal differences are, of course, vulnerable to exploitation by sectarian politicians, and have indeed been so used on several occasions, causing massive consternation in the country. Yet the fact that consternation greets sectarian violence and that condemnation of such violence comes from all sections of the country ultimately provides the main democratic guarantee against the narrowly factional exploitation of sectarianism. This is, of course, essential for the survival and prosperity of a country as remarkably varied as India, which is home not only to a Hindu majority, but to the world's third largest Muslim population, to millions of Christians and Buddhists, and to most of the world's Sikhs, Parsis, and Jains.

## Democracy and Economic Development

It is often claimed that nondemocratic systems are better at bringing about economic development. This belief sometimes goes by the name of "the Lee hypothesis," due to its advocacy by Lee Kuan Yew, the leader and former president of Singapore. He is certainly right that some disciplinarian states (such as South Korea, his own Singapore, and postreform China) have had faster rates of economic growth than many less authoritarian ones (including India, Jamaica, and Costa Rica). The "Lee hypothesis," however, is based on sporadic empiricism, drawing on very selective and limited information, rather than on any general statistical testing over the wide-ranging data that are available. A general relation of this kind cannot be established on the basis of very selective evidence. For example, we cannot really take the high economic growth of Singapore or China as "definitive proof" that authoritarianism does better in promoting economic growth, any more than we can draw the opposite conclusion from the fact that Botswana, the country with the best record of economic growth in Africa, indeed with one of the finest records of economic growth in the whole world, has been an oasis of democracy on that continent over the decades. We need more systematic empirical studies to sort out the claims and counterclaims.

There is, in fact, no convincing general evidence that authoritarian governance and the suppression of political and civil rights are really

beneficial to economic development. Indeed, the general statistical picture does not permit any such induction. Systematic empirical studies (for example, by Robert Barro or by Adam Przeworski) give no real support to the claim that there is a general conflict between political rights and economic performance.[2] The directional linkage seems to depend on many other circumstances, and while some statistical investigations note a weakly negative relation, others find a strongly positive one. If all the comparative studies are viewed together, the hypothesis that there is no clear relation between economic growth and democracy in *either* direction remains extremely plausible. Since democracy and political liberty have importance in themselves, the case for them therefore remains untarnished.[3]

The question also involves a fundamental issue of methods of economic research. We must not only look at statistical connections, but also examine and scrutinize the *causal* processes that are involved in economic growth and development. The economic policies and circumstances that led to the economic success of countries in East Asia are by now reasonably well understood. While different empirical studies have varied in emphasis, there is by now broad consensus on a list of "helpful policies" that includes openness to competition, the use of international markets, public provision of incentives for investment and export, a high level of literacy and schooling, successful land reforms, and other social opportunities that widen participation in the process of economic expansion. There is no reason at all to assume that any of these policies is inconsistent with greater democracy and had to be forcibly sustained by the elements of authoritarianism that happened to be present in South Korea or Singapore or China. Indeed, there is overwhelming evidence to show that what is needed for generating faster economic growth is a friendlier economic climate rather than a harsher political system.

To complete this examination, we must go beyond the narrow confines of economic growth and scrutinize the broader demands of economic development, including the need for economic and social security. In that context, we have to look at the connection between political and civil rights, on the one hand, and the prevention of major economic disasters, on the other. Political and civil rights give people the opportunity to draw attention forcefully to general needs and to demand appropriate public action. The response of a government to the acute suffering of its people often depends on the pressure that is put on it. The exercise of political rights (such as voting, criticizing, protesting, and the like) can make a real difference to the political incentives that operate on a government.

I have discussed elsewhere the remarkable fact that, in the terrible history of famines in the world, no substantial famine has ever occurred in any independent and democratic country with a relatively free press.[4]

We cannot find exceptions to this rule, no matter where we look: the recent famines of Ethiopia, Somalia, or other dictatorial regimes; famines in the Soviet Union in the 1930s; China's 1958–61 famine with the failure of the Great Leap Forward; or earlier still, the famines in Ireland or India under alien rule. China, although it was in many ways doing much better economically than India, still managed (unlike India) to have a famine, indeed the largest recorded famine in world history: Nearly 30 million people died in the famine of 1958–61, while faulty governmental policies remained uncorrected for three full years. The policies went uncriticized because there were no opposition parties in parliament, no free press, and no multiparty elections. Indeed, it is precisely this lack of challenge that allowed the deeply defective policies to continue even though they were killing millions each year. The same can be said about the world's two contemporary famines, which are occurring in North Korea and Sudan.

Famines are often associated with what look like natural disasters, and commentators often settle for the simplicity of explaining famines by pointing to these events: the floods in China during the failed Great Leap Forward, the droughts in Ethiopia, or crop failures in North Korea. Nevertheless, many countries with similar natural problems, or even worse ones, manage perfectly well, because a responsive government intervenes to help alleviate hunger. Since the primary victims of a famine are the indigent, deaths can be prevented by recreating incomes (for example, through employment programs), which makes food accessible to potential famine victims. Even the poorest democratic countries that have faced terrible droughts or floods or other natural disasters (such as India in 1973, or Zimbabwe and Botswana in the early 1980s) have been able to feed their people without experiencing a famine.

Famines are easy to prevent if there is a serious effort to do so, and a democratic government, facing elections and criticisms from opposition parties and independent newspapers, cannot help but make such an effort. Not surprisingly, while India continued to have famines under British rule right up to independence (the last famine, which I witnessed as a child, was in 1943, four years before independence), they disappeared suddenly with the establishment of a multiparty democracy and a free press.

I have discussed these issues elsewhere, particularly in my joint work with Jean Drèze, so I will not dwell further on them here.[5] Indeed, the issue of famine is only one example of the reach of democracy, though it is, in many ways, the easiest case to analyze. The positive role of political and civil rights applies to the prevention of economic and social disasters in general. When things go fine and everything is routinely good, this instrumental role of democracy may not be particularly missed. It is when things get fouled up, for one reason or

another, that the political incentives provided by democratic governance acquire great practical value.

There is, I believe, an important lesson here. Many economic technocrats recommend the use of economic incentives (which the market system provides) while ignoring political incentives (which democratic systems could guarantee). This is to opt for a deeply unbalanced set of ground rules. The protective power of democracy may not be missed much when a country is lucky enough to be facing no serious calamity, when everything is going quite smoothly. Yet the danger of insecurity, arising from changed economic or other circumstances, or from uncorrected mistakes of policy, can lurk behind what looks like a healthy state.

The recent problems of East and Southeast Asia bring out, among other things, the penalties of undemocratic governance. This is so in two striking respects. First, the development of the financial crisis in some of these economies (including South Korea, Thailand, Indonesia) has been closely linked to the lack of transparency in business, in particular the lack of public participation in reviewing financial arrangements. The absence of an effective democratic forum has been central to this failing. Second, once the financial crisis led to a general economic recession, the protective power of democracy—not unlike that which prevents famines in democratic countries—was badly missed in a country like Indonesia. The newly dispossessed did not have the hearing they needed.

A fall in total gross national product of, say, 10 percent may not look like much if it follows in the wake of a growth rate of 5 or 10 percent every year over the past few decades, and yet that decline can decimate lives and create misery for millions if the burden of contraction is not widely shared but allowed to be heaped on those—the unemployed or the economically redundant—who can least bear it. The vulnerable in Indonesia may not have missed democracy when things went up and up, but that lacuna kept their voice low and muffled as the unequally shared crisis developed. The protective role of democracy is strongly missed when it is most needed.

## The Functions of Democracy

I have so far allowed the agenda of this essay to be determined by the critics of democracy, especially the economic critics. I shall return to criticisms again, taking up the arguments of the cultural critics in particular, but the time has come for me to pursue further the positive analysis of what democracy does and what may lie at the base of its claim to be a universal value.

What exactly is democracy? We must not identify democracy with majority rule. Democracy has complex demands, which certainly

include voting and respect for election results, but it also requires the protection of liberties and freedoms, respect for legal entitlements, and the guaranteeing of free discussion and uncensored distribution of news and fair comment. Even elections can be deeply defective if they occur without the different sides getting an adequate opportunity to present their respective cases, or without the electorate enjoying the freedom to obtain news and to consider the views of the competing protagonists. Democracy is a demanding system, and not just a mechanical condition (like majority rule) taken in isolation.

Viewed in this light, the merits of democracy and its claim as a universal value can be related to certain distinct virtues that go with its unfettered practice. Indeed, we can distinguish three different ways in which democracy enriches the lives of the citizens. First, political freedom is a part of human freedom in general, and exercising civil and political rights is a crucial part of good lives of individuals as social beings. Political and social participation has *intrinsic value* for human life and well-being. To be prevented from participation in the political life of the community is a major deprivation.

Second, as I have just discussed (in disputing the claim that democracy is in tension with economic development), democracy has an important *instrumental value* in enhancing the hearing that people get in expressing and supporting their claims to political attention (including claims of economic needs). Third—and this is a point to be explored further—the practice of democracy gives citizens an opportunity to learn from one another, and helps society to form its values and priorities. Even the idea of "needs," including the understanding of "economic needs," requires public discussion and exchange of information, views, and analyses. In this sense, democracy has *constructive importance*, in addition to its intrinsic value for the lives of the citizens and its instrumental importance in political decisions. The claims of democracy as a universal value have to take note of this diversity of considerations.

The conceptualization—even comprehension—of what are to count as "needs," including "economic needs," may itself require the exercise of political and civil rights. A proper understanding of what economic needs are—their content and their force—may require discussion and exchange. Political and civil rights, especially those related to the guaranteeing of open discussion, debate, criticism, and dissent, are central to the process of generating informed and considered choices. These processes are crucial to the formation of values and priorities, and we cannot, in general, take preferences as given independently of public discussion, that is, irrespective of whether open interchange and debate are permitted or not.

In fact, the reach and effectiveness of open dialogue are often underestimated in assessing social and political problems. For example, public discussion has an important role to play in reducing the high

rates of fertility that characterize many developing countries. There is substantial evidence that the sharp decline in fertility rates in India's more literate states has been much influenced by public discussion of the bad effects of high fertility rates on the community at large, and especially on the lives of young women. If the view has emerged in, say, the Indian state of Kerala or of Tamil Nadu that a happy family in the modern age is a small family, much discussion and debate have gone into the formation of these perspectives. Kerala now has a fertility rate of 1.7 (similar to that of Britain and France, and well below China's 1.9), and this has been achieved with no coercion, but mainly through the emergence of new values—a process in which political and social dialogue has played a major part. Kerala's high literacy rate (it ranks higher in literacy than any province in China), especially among women, has greatly contributed to making such social and political dialogue possible.

Miseries and deprivations can be of various kinds, some more amenable to social remedies than others. The totality of the human predicament would be a gross basis for identifying our "needs." For example, there are many things that we might have good reason to value and thus could be taken as "needs" if they were feasible. We could even want immortality, as Maitreyee, that remarkable inquiring mind in the *Upanishads*, famously did in her 3,000-year-old conversation with Yajnvalkya. But we do not see immortality as a "need" because it is clearly unfeasible. Our conception of needs relates to our ideas of the preventable nature of some deprivations and to our understanding of what can be done about them. In the formation of understandings and beliefs about feasibility (particularly, *social* feasibility), public discussions play a crucial role. Political rights, including freedom of expression and discussion, are not only pivotal in inducing social responses to economic needs, they are also central to the conceptualization of economic needs themselves.

## Universality of Values

If the above analysis is correct, then democracy's claim to be valuable does not rest on just one particular merit. There is a plurality of virtues here, including, first, the *intrinsic* importance of political participation and freedom in human life; second, the *instrumental* importance of political incentives in keeping governments responsible and accountable; and third, the *constructive* role of democracy in the formation of values and in the understanding of needs, rights, and duties. In the light of this diagnosis, we may now address the motivating question of this essay, namely the case for seeing democracy as a universal value.

In disputing this claim, it is sometimes argued that not everyone agrees on the decisive importance of democracy, particularly when it

competes with other desirable things for our attention and loyalty. This is indeed so, and there is no unanimity here. This lack of unanimity is seen by some as sufficient evidence that democracy is not a universal value.

Clearly, we must begin by dealing with a methodological question: What is a universal value? For a value to be considered universal, must it have the consent of everyone? If that were indeed necessary, then the category of universal values might well be empty. I know of no value—not even motherhood (I think of *Mommie Dearest*)—to which no one has ever objected. I would argue that universal consent is not required for something to be a universal value. Rather, the claim of a universal value is that people anywhere may have reason to see it as valuable.

When Mahatma Gandhi argued for the universal value of nonviolence, he was not arguing that people everywhere already acted according to this value, but rather that they had good reason to see it as valuable. Similarly, when Rabindranath Tagore argued for "the freedom of the mind" as a universal value, he was not saying that this claim is accepted by all, but that all do have reason enough to accept it—a reason that he did much to explore, present, and propagate.[6] Understood in this way, any claim that something is a universal value involves some counterfactual analysis—in particular, whether people might see some value in a claim that they have not yet considered adequately. All claims to universal value—not just that of democracy—have this implicit presumption.

I would argue that it is with regard to this often *implicit* presumption that the biggest attitudinal shift toward democracy has occurred in the twentieth century. In considering democracy for a country that does not have it and where many people may not yet have had the opportunity to consider it for actual practice, it is now presumed that the people involved would approve of it once it becomes a reality in their lives. In the nineteenth century this assumption typically would have not been made, but the presumption that is taken to be natural (what I earlier called the "default" position) has changed radically during the twentieth century.

It must also be noted that this change is, to a great extent, based on observing the history of the twentieth century. As democracy has spread, its adherents have grown, not shrunk. Starting off from Europe and America, democracy as a system has reached very many distant shores, where it has been met with willing participation and acceptance. Moreover, when an existing democracy has been overthrown, there have been widespread protests, even though these protests have often been brutally suppressed. Many people have been willing to risk their lives in the fight to bring back democracy.

Some who dispute the status of democracy as a universal value base

their argument not on the absence of unanimity, but on the presence of regional contrasts. These alleged contrasts are sometimes related to the poverty of some nations. According to this argument, poor people are interested, and have reason to be interested, in bread, not in democracy. This oft-repeated argument is fallacious at two different levels.

First, as discussed above, the protective role of democracy may be particularly important for the poor. This obviously applies to potential famine victims who face starvation. It also applies to the destitute thrown off the economic ladder in a financial crisis. People in economic need also need a political voice. Democracy is not a luxury that can await the arrival of general prosperity.

Second, there is very little evidence that poor people, given the choice, prefer to reject democracy. It is thus of some interest to note that when an erstwhile Indian government in the mid-1970s tried out a similar argument to justify the alleged "emergency" (and the suppression of various political and civil rights) that it had declared, an election was called that divided the voters precisely on this issue. In that fateful election, fought largely on this one overriding theme, the suppression of basic political and civil rights was firmly rejected, and the Indian electorate—one of the poorest in the world—showed itself to be no less keen on protesting against the denial of basic liberties and rights than on complaining about economic deprivation.

To the extent that there has been any testing of the proposition that the poor do not care about civil and political rights, the evidence is entirely against that claim. Similar points can be made by observing the struggle for democratic freedoms in South Korea, Thailand, Bangladesh, Pakistan, Burma, Indonesia, and elsewhere in Asia. Similarly, while political freedom is widely denied in Africa, there have been movements and protests against such repression whenever circumstances have permitted them.

## The Argument from Cultural Differences

There is also another argument in defense of an allegedly fundamental regional contrast, one related not to economic circumstances but to cultural differences. Perhaps the most famous of these claims relates to what have been called "Asian values." It has been claimed that Asians traditionally value discipline, not political freedom, and thus the attitude to democracy must inevitably be much more skeptical in these countries. I have discussed this thesis in some detail in my Morganthau Memorial Lecture at the Carnegie Council on Ethics and International Affairs.[7]

It is very hard to find any real basis for this intellectual claim in the history of Asian cultures, especially if we look at the classical traditions of India, the Middle East, Iran, and other parts of Asia. For example,

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one of the earliest and most emphatic statements advocating the tolerance of pluralism and the duty of the state to protect minorities can be found in the inscriptions of the Indian emperor Ashoka in the third century B.C.

Asia is, of course, a very large area, containing 60 percent of the world's population, and generalizations about such a vast set of peoples is not easy. Sometimes the advocates of "Asian values" have tended to look primarily at East Asia as the region of particular applicability. The general thesis of a contrast between the West and Asia often concentrates on the lands to the east of Thailand, even though there is also a more ambitious claim that the rest of Asia is rather "similar." Lee Kuan Yew, to whom we must be grateful for being such a clear expositor (and for articulating fully what is often stated vaguely in this tangled literature), outlines "the fundamental difference between Western concepts of society and government and East Asian concepts" by explaining, "when I say East Asians, I mean Korea, Japan, China, Vietnam, as distinct from Southeast Asia, which is a mix between the Sinic and the Indian, though Indian culture itself emphasizes similar values."[8]

Even East Asia itself, however, is remarkably diverse, with many variations to be found not only among Japan, China, Korea, and other countries of the region, but also *within* each country. Confucius is the standard author quoted in interpreting Asian values, but he is not the only intellectual influence in these countries (in Japan, China, and Korea for example, there are very old and very widespread Buddhist traditions, powerful for over a millennium and a half, and there are also other influences, including a considerable Christian presence). There is no homogeneous worship of order over freedom in any of these cultures.

Furthermore, Confucius himself did not recommend blind allegiance to the state. When Zilu asks him "how to serve a prince," Confucius replies (in a statement that the censors of authoritarian regimes may want to ponder), "Tell him the truth even if it offends him."[9] Confucius is not averse to practical caution and tact, but does not forgo the recommendation to oppose a bad government (tactfully, if necessary): "When the [good] way prevails in the state, speak boldly and act boldly. When the state has lost the way, act boldly and speak softly."[10]

Indeed, Confucius provides a clear pointer to the fact that the two pillars of the imagined edifice of Asian values, loyalty to family and obedience to the state, can be in severe conflict with each other. Many advocates of the power of "Asian values" see the role of the state as an extension of the role of the family, but as Confucius noted, there can be tension between the two. The Governor of She told Confucius, "Among my people, there is a man of unbending integrity: When his father stole a sheep, he denounced him." To this Confucius replied, "Among my people, men of integrity do things differently: A father covers up for his

son, a son covers up for his father—and there is integrity in what they do."[11]

The monolithic interpretation of Asian values as hostile to democracy and political rights does not bear critical scrutiny. I should not, I suppose, be too critical of the lack of scholarship supporting these beliefs, since those who have made these claims are not scholars but political leaders, often official or unofficial spokesmen for authoritarian governments. It is, however, interesting to see that while we academics can be impractical about practical politics, practical politicians can, in turn, be rather impractical about scholarship.

It is not hard, of course, to find authoritarian writings within the Asian traditions. But neither is it hard to find them in Western classics: One has only to reflect on the writings of Plato or Aquinas to see that devotion to discipline is not a special Asian taste. To dismiss the plausibility of democracy as a universal value because of the presence of some Asian writings on discipline and order would be similar to rejecting the plausibility of democracy as a natural form of government in Europe or America today on the basis of the writings of Plato or Aquinas (not to mention the substantial medieval literature in support of the Inquisitions).

Due to the experience of contemporary political battles, especially in the Middle East, Islam is often portrayed as fundamentally intolerant of and hostile to individual freedom. But the presence of diversity and variety *within* a tradition applies very much to Islam as well. In India, Akbar and most of the other Moghul emperors (with the notable exception of Aurangzeb) provide good examples of both the theory and practice of political and religious tolerance. The Turkish emperors were often more tolerant than their European contemporaries. Abundant examples can also be found among rulers in Cairo and Baghdad. Indeed, in the twelfth century, the great Jewish scholar Maimonides had to run away from an intolerant Europe (where he was born), and from its persecution of Jews, to the security of a tolerant and urbane Cairo and the patronage of Sultan Saladin.

Diversity is a feature of most cultures in the world. Western civilization is no exception. The practice of democracy that has won out in the *modern* West is largely a result of a consensus that has emerged since the Enlightenment and the Industrial Revolution, and particularly in the last century or so. To read in this a historical commitment of the West—over the millennia—to democracy, and then to contrast it with non-Western traditions (treating each as monolithic) would be a great mistake. This tendency toward oversimplification can be seen not only in the writings of some governmental spokesmen in Asia, but also in the theories of some of the finest Western scholars themselves.

As an example from the writings of a major scholar whose works, in many other ways, have been totally impressive, let me cite Samuel

Huntington's thesis on the clash of civilizations, where the heterogeneities *within* each culture get quite inadequate recognition. His study comes to the clear conclusion that "a sense of individualism and a tradition of rights and liberties" can be found in the West that are "unique among civilized societies."[12] Huntington also argues that "the central characteristics of the West, those which distinguish it from other civilizations, antedate the modernization of the West." In his view, "The West was West long before it was modern."[13] It is this thesis that—I have argued—does not survive historical scrutiny.

For every attempt by an Asian government spokesman to contrast alleged "Asian values" with alleged Western ones, there is, it seems, an attempt by a Western intellectual to make a similar contrast from the other side. But even though every Asian pull may be matched by a Western push, the two together do not really manage to dent democracy's claim to be a universal value.

## Where the Debate Belongs

I have tried to cover a number of issues related to the claim that democracy is a universal value. The value of democracy includes its *intrinsic importance* in human life, its *instrumental role* in generating political incentives, and its *constructive function* in the formation of values (and in understanding the force and feasibility of claims of needs, rights, and duties). These merits are not regional in character. Nor is the advocacy of discipline or order. Heterogeneity of values seems to characterize most, perhaps all, major cultures. The cultural argument does not foreclose, nor indeed deeply constrain, the choices we can make today.

Those choices have to be made here and now, taking note of the functional roles of democracy, on which the case for democracy in the contemporary world depends. I have argued that this case is indeed strong and not regionally contingent. The force of the claim that democracy is a universal value lies, ultimately, in that strength. That is where the debate belongs. It cannot be disposed of by imagined cultural taboos or assumed civilizational predispositions imposed by our various pasts.

### NOTES

1. In Aldous Huxley's novel *Point Counter Point,* this was enough to give an adequate excuse to a cheating husband, who tells his wife that he must go to London to study democracy in ancient India in the library of the British Museum, while in reality he goes to see his mistress.

2. Adam Przeworski et al., *Sustainable Democracy* (Cambridge: Cambridge University Press, 1995); Robert J. Barro, *Getting It Right: Markets and Choices in a Free Society* (Cambridge, Mass.: MIT Press, 1996).

3. I have examined the empirical evidence and causal connections in some detail in my book *Development as Freedom* (New York: Alfred A. Knopf, 1999).

4. See my "Development: Which Way Now?" *Economic Journal* 93 (December 1983); *Resources, Values, and Development* (Cambridge, Mass.: Harvard University Press, 1984); and my "Rationality and Social Choice," presidential address to the American Economic Association, published in *American Economic Review* in March 1995. See also Jean Drèze and Amartya Sen, *Hunger and Public Action* (Oxford: Clarendon Press, 1987); Frances D'Souza, ed., *Starving in Silence: A Report on Famine and Censorship* (London: Article 19 International Centre on Censorship, 1990); Human Rights Watch, *Indivisible Human Rights: The Relationship between Political and Civil Rights to Survival, Subsistence and Poverty* (New York: Human Rights Watch, 1992); and International Federation of Red Cross and Red Crescent Societies, *World Disaster Report 1994* (Geneva: Red Cross, 1994).

5. Drèze and Sen, *Hunger and Public Action.*

6. See my "Tagore and His India," *New York Review of Books,* 26 June 1997.

7. Amartya Sen, "Human Rights and Asian Values," Morgenthau Memorial Lecture (New York: Carnegie Council on Ethics and International Affairs, 1997), published in a shortened form in *The New Republic,* 14–21 July 1997.

8. Fareed Zakaria, "Culture is Destiny: A Conversation with Lee Kuan Yew," *Foreign Affairs* 73 (March–April 1994): 113.

9. *The Analects of Confucius,* Simon Leys, trans. (New York: Norton, 1997), 14.22, 70.

10. *The Analects of Confucius,* 14.3, 66.

11. *The Analects of Confucius,* 13.18, 63.

12. Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon and Schuster, 1996), 71.

13. Huntington, *The Clash of Civilizations,* 69.

# The Limits of Democratization

## Climate, Intelligence, and Resource Distribution

Tatu Vanhanen

# Theoretical Arguments

Political systems vary greatly from the perspective of democracy. They range from stabilized democracies, in which people can elect and remove their rulers by free and honest elections, to autocracies, in which people do not have any legal opportunities to elect or dismiss their rulers. In democracies, people are relatively free to express their opinions, to establish associations to pursue their ideological or economic interests, and to select their way of life. In autocracies, freedoms are more strictly limited; people are not allowed to establish independent political or other interest organizations, and in extreme cases they are suppressed, jailed, and even killed arbitrarily. So democracy matters. In autocracies, many people dream of freedom and democracy and they are willing to struggle for political rights and liberties, but the fact is that all nations have not been able to establish democratic political systems; in many countries the established democratic institutions have more or less failed, or the quality of democracy has remained much less than expected. Why? That is the problem. First of all, why do countries differ so greatly in the degree and quality of democracy? And second, where do the ultimate causal roots of this differentiation lie, and hence of the limits of democratization?

Philosophers and social scientists have provided various answers to the first question since the days of Aristotle. Some of these answers have been reviewed in my previous studies (see Vanhanen 1979, 1984,

1990, 1997, 2003). My own explanation is based on the evolutionary resource distribution theory of democratization, according to which the variation in the level of democratization is causally related to the differences in resource distribution within societies. Such an explanation is derived from a Darwinian interpretation of politics, according to which politics is a forum where the general struggle for existence and scarce resources takes place. In this struggle, we have evolved to resort to all available resources. Consequently, it is reasonable to hypothesize that political power tends to become distributed among the many in societies in which important power resources are widely distributed, and that it tends to become concentrated in the hands of the few in societies in which relevant power resources are highly concentrated. This regularity is assumed to explain the variation of political systems from democracies to autocracies. In my latest study (Vanhanen 2003), the index of power resources (IPR) explained 72 percent of the global variation in the Index of Democratization (ID–2001) in a group of 170 contemporary countries. This finding represents a quite satisfactory level of explanation.

Thus my answer to the first question is that countries differ in their degree of democratization because there is significant variation in the extent to which important economic, intellectual, and other power resources are distributed among the many or concentrated in the hands of the few. The Darwinian interpretation of politics formulated in the same book explains why this must be so. I do not have anything to add to the explanation given in my previous studies, but it should be noted that I have not explained why power resources are much more widely distributed in some countries than in others. In short, my explanation of democratization does not answer the second question concerning the roots of differences in the degree of resource distribution: Where do the ultimate roots of differences in resource distribution lie and thence in the level of democratization? That is the principal question I try to tackle in this study.

I think that we should seek an answer to the second question from among the factors which clearly preceded contemporary social conditions and political systems. What might such factors be? It is evident that differences in geographical and climatic conditions preceded the emergence of contemporary societies, social structures, and political institutions. Therefore, it is justified to assume that some causal paths lead from differences in geographical and climatic conditions. But how?

### Montesquieu's idea

Montesquieu (1748, 1989) was the first to pay serious attention to the impact of climate on human nature, and thence on political and other human conditions. He argued that many variations in human conditions can be traced to great differences in geographical and climatic conditions in the world. He assumed that temperature influences the human body and the mind and passions of people, and that consequently there are many differences in people's mores, manners, and characteristics between hot and cold climates. He assumed that such differences in human nature are reflected in social and political institutions. Montesquieu, for example, argued that people are more vigorous, self-confident, and courageous in cold climates than in hot climates and that people in cold countries also tend to be freer than in hot countries. This argument implies a connection between the level of democracy and differences in climatic conditions.

It may be that Montesquieu exaggerated the effects of climate on human nature. Differences in human characteristics between cold and hot climates may not be so extreme as Montesquieu assumed, since all human populations belong to the same species, and since genetic differences between populations are relatively small, although there are measurable genetic differences between geographical populations (see Cavalli-Sforza et al. 1996; Wells 2003). The existence of genetic differences between populations implies that populations may differ not only in their physical features but also in their mental abilities and behavioral characteristics (cf. Rushton 1995, 2003; Jensen 1998; Lynn 2006). Thus Montesquieu's basic idea is still valid; he urges us to seek the roots of differences in human conditions in climatic and related geographical factors, although, of course, many more proximate environmental and social factors may also influence human conditions.

Contemporary research has disclosed the existence of some genetic differences between geographical populations. To some extent, such differences seem to be related to temperature—to the hot and cold climates—as Montesquieu assumed. My basic idea is that human populations have adapted to varying climatic and other environmental conditions through evolution by natural selection and, as a consequence, have evolved differently to some extent. The observable human diversity concerns both morphological characteristics and mental

abilities, and probably also some behavioral dispositions. Climate is the most conspicuous environmental factor that varies greatly in different geographical parts of the world. It is plausible to assume that because the survival of people in different climatic conditions required to some extent different mental abilities, people in more difficult climatic conditions evolved to have somewhat more complex mental abilities than people in less difficult climatic conditions.

It should be noted that I do not assume, nor did Montesquieu, that there is a direct causal relationship between temperature and human social and political institutions. There are intervening mechanisms which mediate the impact of temperature on social and political institutions. Montesquieu indicated the existence of such mechanisms, arguing that temperature and other climatic conditions affect human nature, and thence social and political institutions. I assume that differences in the average cognitive abilities of populations constitute the most important intervening mechanism between climatic conditions (temperature) and resource distribution. So my theoretical argument is that the great variation in the level of democratization can be traced causally first to the variation in the distribution of important power resources, further to the variation in the average mental abilities of nations, and finally to the variation in climatic conditions. It is possible to test this theoretical argumentation by empirical evidence if we find suitable operationally defined measures of democracy, resource distribution, average mental abilities of nations, and climatic conditions.

Because I assume that the impact of climate on the degree of resource distribution and democratization takes place through the mental abilities of nations, we have to start by exploring how to measure differences in the average mental abilities of nations and how to explain the emergence of those differences.

## Mental abilities of nations measured by national IQ

People have always been conscious that individuals differ from each other in many respects, not only in morphological characteristics, health, and physical strength, but also in personal characteristics, skills, and mental abilities. It has been difficult to agree, however, on the causes of such differences and to measure them, especially differences in mental abilities, including intelligence. From the perspective

of this study, intelligence is the most important aspect of mental abilities. Intelligence can be assumed to be causally related to resource distribution in such a way that economic and intellectual power resources tend to become more widely distributed in countries in which the average intelligence of the population is high than in countries in which it is low.

Intelligence has been measured by intelligence tests since 1905. The results of measurements are quantified by the intelligence quotient (IQ). Measurements are based on the idea that intelligence is largely a single entity. Charles Spearman showed in the beginning of the 20th century that all cognitive abilities are positively intercorrelated. He invented the statistical method of factor analysis to show that the efficiency of performance on all cognitive tasks is partly determined by a common factor, which he designated $g$ for "general intelligence." There are a number of specific abilities in addition to $g$, but all are related to that single general factor. We cannot measure $g$ directly, but the scores obtained from intelligence tests and expressed as IQs are approximate measures of $g$ (Lynn and Vanhanen 2002, pp. 20–21, 2006, pp. 29–31; cf. Jensen 1998, pp. 73–91; Lynn 2006).

Ever since the publication of Charles Spearman's seminal writings on intelligence, "the almost universally accepted assumption among many psychologists, educators, and even popular writers has been that there does indeed exist a single general factor of intelligence" and that there are individual differences in intelligence (Carroll 2003, p. 5). It has also become generally accepted that individual differences in IQ scores are substantially due to genetic differences. Robert Plomin notes that the "case for substantial genetic influence on $g$ is stronger than for any other human characteristic." According to him, all "the data converge on the conclusion that the heritability of '$g$' is about 50%; that is, genes account for about half of the variance in '$g$' scores" (Plomin 2003, pp. 107–108).

Arthur R. Jensen says about the heritability of intelligence: "The broad heritability of IQ is about 0.40 to 0.50 when measured in children, about 0.60 to 0.70 in adolescents and young adults, and approaches 0.80 in later maturity" (Jensen 1998, p. 169). Jensen emphasizes that "the heritability of $g$ increases throughout development and the importance of shared environmental factors that make family members similar decreases" (Plomin 2003, p. 109; cf. Jensen 1998, pp. 169–197). J. Philippe Rushton (2003, p. 167) argues that the general factor $g$ is a

product of human evolution and that "massive evidence indicates that *g* is related to the size and functioning of the brain."

Richard Lynn (2006, pp. 3–4) notes that there "is a widespread consensus that intelligence is a unitary construct that determines the efficiency of problem solving, learning, and remembering." He refers to Linda S. Gottfredson's definition of intelligence published in the *Wall Street Journal* in 1997:

> Intelligence is a very general mental capacity which, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do (Gottfredson 1997, p. 13).

Of course, there are researchers who deny the existence of intelligence differences, or at least the idea that such differences and especially the existence of intelligence differences between racial groups are substantially due to genetic differences (for the debate about intelligence differences, see, for example, Gould 1981; Rose et al. 1984; Herrnstein and Murray 1994; Jacoby and Glauberman 1995; Nyborg 2003b; Rindermann 2007).

Richard Lynn and Tatu Vanhanen have in their recent books *IQ and the Wealth of Nations* (2002) and *IQ and Global Inequality* (2006) measured differences in the average mental abilities of nations by national IQ. In this study, my intention is to use those data on national IQ to indicate differences in the average mental abilities of nations. National IQ is assumed to function as an intervening mechanism between climatic conditions (principally temperature) and the degree of resource distribution.

## The impact of climate on human diversity and intelligence

It is reasonable to argue that human diversity at the level of populations emerged as a consequence of the adaptation of human populations to greatly varying climatic conditions during the evolutionary history of our species. The fact is that contemporary human populations live in greatly varying climatic conditions and that there are evolved genetic differences between geographical populations (see

Ritter 1981; Jones 1992a; Cavalli-Sforza et al. 1996, Oppenheimer 2003; Wells 2003; Wade 2006). Because various morphological differences between human populations are based on their genetic differences, it is justified to assume that there are also evolved differences in the mental abilities of populations, including differences in the average intelligence between geographical populations, racial groups, and nations. It is highly improbable that mental abilities of all human populations have remained the same, although populations as a consequence of evolution by natural selection differ genetically from each other in many other respects.

Jensen was the first to pay scientifically grounded attention to intelligence differences between "whites" and "blacks" in the United States in his 1969 article "How Much Can We Boost I.Q. and Scholastic Achievement?" (Nyborg 2003a, pp. xiv–xv). He argued that this difference and other intelligence differences between racial groups are substantially due to genetic differences (*g*) between populations. Jensen (1998: 419–530) emphasizes that races should not be regarded as discrete, mutually exclusive categories. According to his definition, races are "breeding populations that differ from one another in gene frequencies and that vary in a number of intercorrelated visible features that are highly heritable." Lynn presents a similar definition of race:

> a race is a breeding population that is to some degree genetically different from neighboring populations as a result of geographical isolation, cultural factors, and endogamy, and which shows observable patterns of genotypic frequency differences for a number of intercorrelated, genetically determined characteristics, compared with other breeding populations. (Lynn 2006, p. 7)

In this study, I use the term "race" in the same sense. Rushton (1995) emphasizes that racial differences extend to many types of behavioral differences between the three main racial groups, Negroids, Caucasoids, and Mongoloids. Despite extensive evidence, some researchers still believe that there cannot be any differences between populations in their intelligence. Anthony Giddens (1995, p. 442) argues that differences "in average IQ scores between blacks and whites are almost certainly the results of social and cultural influences, not of differences in genetic inheritance." Steve Olson (2002, pp. 62–63) claims: "People are too genetically similar to have developed the kinds of intelligence differences cited by hereditarians" (see also Jared Diamond 1998, pp. 18–22;

Brody 2003). Jensen notes that given "the variation in allele frequencies between populations for virtually every known polymorphic gene, it is exceedingly improbable that populations do not differ in the alleles that affect the structural and functional basis of heritable behavioral traits" (Jensen 1998, p. 433). I agree with this argument. There are enough evolved allele differences to provide material basis for intelligence differences both between individuals and between populations.

Richard Lynn (1991a, 1991b, 1997, 2003, 2006) has extensively studied geographical variation in intelligence. He argues that differences in IQ "must have developed together with differences in skin color, morphology and resistance to diseases as adaptations to the environment in which the races evolved" (Lynn 2003, p. 141). Climatic differences have had crucial significance. According to his explanation, *Homo sapiens* (modern humans) appeared about 150,000 years ago in equatorial Africa. They began to migrate into other regions of the world approximately 100,000 years ago, and they had colonized most of the globe by around 30,000 years ago.

Lynn argues that when people migrated from tropical and subtropical Africa into North Africa, Asia, Europe, and America, they faced the problem of survival during the winter and spring in temperate and cold climates. They had to learn to hunt large animals for food, to keep themselves warm, to build shelters, and to make fires and clothing. Temperate and cold climates exerted selection pressure for higher intelligence: "The colder the winters the stronger this selection pressure would have been and the higher the intelligence that evolved." This explains the broad association between the coldness of winter temperatures and the intelligence of the races (Lynn 2006, pp. 205–209).

Lynn describes the evolution of racial groups—Africans, Bushmen, South Asians and North Africans, Southeast Asians, Pacific Islanders, Australian Aborigines, Europeans, East Asians, Arctic peoples, and Native Americans—and explains how race differences in intelligence evolved during the last 100,000 years when human populations became adapted to different climatic and other environmental conditions. The last ice age began about 28,000 years ago and lasted until around 10,000 years ago. It made survival more difficult and exerted further selection pressure for enhanced intelligence. He estimates that this selection pressure was sufficient to raise the IQ of the South Asians and North Africans to the present-day level of about 84. The Native Americans' IQ

is only slightly higher (86). They migrated into America before the onset of the last ice age. Climatic conditions were more severe in Europe and even more severe in North East Asia, and consequently the IQs of the Europeans rose to 99 and the IQs of East Asians up to the present-day level of 105 (Lynn 2006, pp. 223–244; see also Lynn 2007).

It should be noted that researchers are not quite sure when modern humans migrated out of Africa. Stephen Oppenheimer (2003) estimates that the successful migration out of Africa took place approximately 80,000 years ago. Spencer Wells (2003) argues that it occurred only 50,000 years ago. Nicholas Wade (2006) also assumes that the successful migration out of Africa took place approximately 50,000 years ago. He estimates that the departing group was very small, perhaps just 150 people. This disagreement about the time of out of Africa migration does not affect Lynn's argumentation, for he assumes that the most important differences in intelligence between racial groups evolved during the last 50,000 years.

J. Philippe Rushton (1995, 2000) presents similar arguments about the evolution of racial differentiation as a consequence of migrations and adaptation to different climatic conditions. The first split took place about 100,000 years ago between groups that remained in Africa and those who left. The next major split took place about 40,000 years ago when the group that had left Africa divided once again, into the ancestors of today's Whites and Orientals. The Caucasoid and Mongoloid peoples "were subjected to pressures for improved intelligence to deal with the problems of survival in the cold northern latitudes" (Rushton 1995, p. 228).

Rushton explains that obtaining food and keeping warm was much more difficult in the cold northern latitudes than in tropical Africa. Peoples in tropical and subtropical latitudes were largely gatherers, whereas in the cold climatic conditions they had to hunt and fish. For hunting and fishing purposes they had to learn to manufacture a variety of tools from stone, wood, and bones. They needed also a variety of sophisticated cutting and skinning tools. They had to solve the problems of making fires, clothes, and shelters in order to keep warm. Clothing and shelters were unnecessary in sub-Saharan Africa.

These differences in climatic conditions explain why natural selection improved general intelligence in the northern latitudes. Rushton shows that evolved differences between major racial groups are not limited to intelligence. There are also several morphological and behavioral

differences. The brain size of Caucasoids and Mongoloids is larger than that of Negroids (cf. Lynn 2006, pp. 205–222). There are also race differences in r–K strategies, which differences are reflected in some biological and behavioral characteristics.

Jensen (1998) refers to climate as the most important causal factor behind racial differences in mental abilities. He notes that racial differences are a product of the evolutionary process working on the human genome, which consists of about 100,000 polymorphic genes. The extent of genetic distance "between separated populations provides an approximate measure of the amount of time since their separation and of the geographical distance between them" (p. 424). He continues that the "environmental forces that contributed to the differentiation of major populations and their gene pools through natural selection were mainly climatic" (p. 435). Extreme seasonal changes and the cold climate of the northern regions demanded more complex mental abilities than the hot climate of the sub-Saharan Africa. In the cold northern climate people needed "the ingenuity and skills for constructing more permanent and sturdy dwellings and designing substantial clothing to protect against the elements."

This selection pressure markedly intensified during the last glaciation, which occurred approximately 30,000 to 10,000 years ago. During this long period, "the north Eurasian winters were far more severe than they have ever been for over 10,000 years" (p. 436). Climate also influenced the evolution of brain size differences between the major races. They are related to IQ differences. Jensen comes to the conclusion: "It is exceedingly improbable that racial populations, which are known to differ, on average, in a host of genetically conditioned physical characteristics, would not differ in any of the brain characteristics associated with cognitive abilities, when half of all segregating genes in the human genome are involved with the brain" (p. 445; see also Itzkoff 2000).

Cavalli-Sforza et al. (1996) have analyzed the genetic history of world populations by calculating genetic distances between geographical populations on the basis of gene frequencies. Their interest is limited to aboriginal populations, which are defined as those already living in the area of study in A.D. 1492. According to their findings, there are clear geographical differences in gene frequencies. The first split took place between Africans and non-Africans, with the exception of Berbers in North Africa, who join the Caucasoid cluster. Consequently, the

greatest genetic difference within the human species is between Africans and non-Africans.

Later on, the peoples that migrated out of Africa became separated into several clusters. One partition separates Caucasoids from all Asian, Oceanian, and Amerindian populations, and another partition separates New Guineans and Australians from all other non-African populations. They found nine major clusters: Africans (sub-Saharan), Caucasoids (European), Caucasoids (extra-European), Northern Mongoloids (excluding Arctic populations), Northeast Asian Arctic populations, Southern Mongoloids (mainland and insular Southeast Asia), New Guineans plus Australians, inhabitants of minor Pacific islands, and Amerinds. There are clear genetic distances between all of these clusters, although, of course, all "population clusters overlap when single genes are considered, and in almost all populations, all alleles are present but in different frequencies."

Cavalli-Sforza (1996) note that the cluster formed by Caucasoids, northern Mongoloids, and Amerinds is reasonably compact in all analyses, whereas there are uncertainties concerning the similarities between Southeast Asians and Australians plus New Guineans (pp. 29, 73–83). It should be noted that their main purpose was to calculate differences in gene frequencies between population clusters, not to explain differences in human characteristics, including mental abilities. However, they pay attention to correlations between gene frequencies and climate and latitude. They found that some individually tested genes were correlated with distance from the equator, indicating a climatic effect. So their results to some extent support the assumption about the impact of climate on human diversity. As an example they refer to skin color, on which climate acts in many ways, and they assume that, as a consequence of the migration of farmers from the Middle East to Northern Europe, the white skin color of Northern Europeans evolved in the last 5,000 years from a light-brown color characteristic of Caucasoids from West Asia and North Africa (pp. 142–145).

Steve Olson (2002) describes in detail the human migration from Africa to other parts of the world and the divergence of modern humans, but he pays only little attention to the impact of climatic differences. He argues that the climate was an important factor that contributed to the cultural efflorescence of Stone Age Europe. The summers were warm, but the winters were brutal. He admits that such a climate "must

have posed severe challenges to modern humans, whose long limbs are more adapted to the warmth of the tropics." These challenges intensified during the height of the Ice Age, between about 20,000 and 16,000 years ago, when the weather became even colder, and "glaciers pushed south until they were within a hundred miles of modern-day Stonehenge, Amsterdam, and Moscow." He assumes that Europeans responded to these challenges by retreating into the warmer areas around the Pyrenees and the Balkans and north of the Black Sea (Olson 2002, pp. 161–162). According to Olson, the cold northern climate had an impact on the culture of Europeans, but not any impact on their mental abilities.

However, he admits that there is a relationship between skin color and climate. Dark skin is a great advantage in equatorial regions because it is less susceptible to damage by the sun's ultraviolet rays. Because dark skin can be a liability in parts of the world where sunlight is less intense, the skin color, through beneficial mutations, became lighter among the people in the north (pp. 40–41). Otherwise, Olson believes, people remained similar in all parts of the world despite enormous differences in climatic and other environmental conditions. He emphasizes that there cannot be any group differences in genetic capabilities of people, particularly not in IQ scores; the mental abilities of peoples have not changed since they migrated from Africa (Olson 2002, pp. 60–63). It is a really strange argument that there cannot be any differences in the mental abilities and intelligence of populations, although it is an established fact that there are genetic differences between populations which affect their other characteristics.

Stephen Oppenheimer (2003) provides an excellent description on the peopling of the world in his book Out of Eden, but he does not say anything about the impact of climatic conditions on the mental abilities of populations, although he pays attention to evolved physical differences between racial groups and connects some of these differences to climate. The racial terms used by him are Africans, Negritos, Caucasoids, Australoids, Melanesians, Southern Mongoloids, and Northern Mongoloids. Spencer Wells (2003) avoids saying anything about the impact of climatic differences on human mental abilities.

W.W. Howells (1992) analyzes the dispersion of modern humans and pays attention to many physical differences and genetic distances between Caucasoids, Negroids, Mongoloids, and Australoids, but he does not say anything on the impact of climatic differences on the

mental abilities of geographical populations (see also Jones 1992a). Steve Jones (1992b) argues that most physical differences between geographical populations are connected with climate. He notes, for example, that most "tropical peoples have slim bodies and long limbs, whereas those from colder climates are more compact" (p. 284). His analysis is limited to the impact of climate on physical differences between tropical peoples and those from colder climates.

Philip M. Parker's book *Physioeconomics* (2000) is highly interesting from the perspective of this study. He refers to Montesquieu and argues that the closer a country is to the equator, the more likely it will have lower than average consumption per capita. Montesquieu "correctly predicted the higher levels of economic development of temperate countries (e.g. northern Europe) than warmer countries (southern Europe), versus hotter countries (India and Africa)" (p. 25). Parker notes that when "a single exogenous variable, in this case a country's absolute latitude, explains up to 70 percent of the cross-country variances in income per capita, some explanation is required" (pp. 2–3). He explains this equatorial paradox by certain physics-based physiological mechanisms.

His basic argument is that man is a species of tropical mammal and that there is "a limited degree to which human anatomic physiological mechanisms can adjust to nontropical conditions" (p. 116). Man can maintain body temperature in hot climates without difficulty, whereas he has to have artificial means of insulation in cold climates. Consequently, in cold climates people had to invent various means (including shelters and warm clothes) to create a "comfortable" or "tropical" environment: "The farther the environment deviates from our tropically evolved set point, the laws of physics require that the more compensation be made to a thermally comfortable zone" (pp. 120–121). Thus inventions and technologies were driven by the need to maintain physiologically comfortable body temperature.

Such an adaptation was most important for those living farthest from the tropics with the greatest seasonal variation. The body strives for homeostasis or comfort, which is defined as the maintenance of a body's constant state, within narrow limits (pp. 122–132). According to Parker's interpretation, this body's striving for homeostasis explains why most technological inventions have been made in the northern latitudes and why the level of economic development correlates with

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latitude. Parker does not pay any attention to climate's impact on the diversification of human mental abilities, but his findings do not contradict the hypothesis that differences in national IQs are causally related to differences in climatic conditions, principally in temperature (cf. Kanazawa 2007).

Nearly all researchers agree that there are significant evolved genetic differences between geographical populations or major racial groups and that these differences are related to climatic conditions, but it has been much more difficult to agree on the significance and nature of human diversity. Some researchers tend to limit the effects of genetic diversity to physical characteristics, especially to skin color, whereas some others emphasize that there are also differences in the average mental abilities of populations and that these differences are partly based on genetic differences between populations. Olson (2002) emphasizes the genetic unity of the human species and limits the impact of climate on skin color. He denies the existence of any significant differences in the mental abilities of populations. Cavalli-Sforza et al. (1996) measure genetic distances between populations, but they do not present any assumptions about the impact of genetic differences on mental abilities or behavioral traits of populations. Oppenheimer (2003) recognizes the impact of genetic differences on physical characteristics of major racial groups. Parker (2000) emphasizes the crucial importance of climatic differences and notes the strong connection between latitude and the level of economic development. Lynn, Jensen, and Rushton argue that human adaptation to varying climatic conditions led to the enhancement of intelligence and other mental abilities in the regions of cold climate. Their arguments about the impact of climate on intelligence are in harmony with Montesquieu's idea.

I think that the adaptation of a "tropical animal" to colder environmental conditions caused strong selection pressure for enhanced intelligence.

## Hypotheses to be tested

Montesquieu's idea about the impact of climate on human nature and through human nature on social and political institutions and conditions leads me to argue that it is possible to trace the roots of democratization to climatic conditions, principally to differences in annual mean temperature. The problem is how to connect differences in climatic and

geographical circumstances to differences in human conditions. What are the intervening mechanisms? I think that there are two intervening mechanisms in the causal path from climate to democracy: differences in the average intelligence of populations and differences in the degree of resource distribution within societies. The survival in cold climates presupposed more intelligence and other mental abilities than the survival in tropical climates. As a consequence, the average intelligence of populations is expected to vary in such a way that populations adapted to survive in cold climates tend to be somewhat more intelligent than populations adapted to life in tropical climates. The national IQ variable is intended to measure national differences in average intelligence (Lynn and Vanhanen 2002, 2006). Further, because all people tend to use all of their abilities, including intelligence, in the continual struggle for scarce resources, it is plausible to assume that important resources become more widely distributed in countries where the population's average intelligence is relatively high than in countries where it is low. In this way my theoretical argumentation connects differences in climatic conditions to differences in resource distribution via one crucial intervening variable measuring differences in the average mental abilities of nations.

Thus my theoretical argument is that differences in the level of democratization can be causally traced first to the variation in the distribution of important power resources, further to the variation in the average mental abilities of nations, and finally to the variation in climatic conditions. There are four variables: the level of democratization (ID), the index of power resources (IPR), the variation of mental abilities of nations (national IQ), and the variation in climatic conditions (annual mean temperature, MT). It is possible to test the theoretical argument on the causal path from climate to democracy by empirical evidence on these four variables.

It is justified to assume that temporal sequence determines the causal relationships between these four variables. The cause must precede the effect (see Manheim and Rich 1986, p. 22). It is obvious that differences in climatic and other geographical conditions have temporally preceded the characteristics of the three other variables and that differences in national IQs have preceded contemporary social and political conditions measured by IPR and ID. It is also justified to assume that in the relationship between resource distribution (IPR) and the level of democratization (ID) IPR is a more independent variable than ID,

although their relationship may be partly interactive. The assumption about the causal priority of resource distribution is based on the fact that it is much more difficult to change most of the conditions measured by IPR than to change a country's political institutions. Differences in resource distribution have nearly always preceded significant changes in political systems (cf. Vanhanen 2003, pp. 101–102). Briefly stated, the relation of cause and effect can be assumed to extend from MT to national IQ and further from national IQ to IPR and from IPR to ID. MT is the independent factor in its relation to IQ, IPR, and ID, which are dependent variables in this relationship. National IQ is the independent variable in its relation to IPR and ID, whereas in its relation to MT it is a dependent variable. IPR is the independent variable in its relation to ID, but in its relation to national IQ and MT it is a dependent variable. Finally, ID is the dependent variable in its relation to the other three variables.

This kind of causal argumentation leads to the following three hypotheses about the causal roots of differences in resource distribution (IPR) and in the level of democratization (ID):

1. The higher the annual mean temperature (MT) of a country, the lower the values of national IQ, the Index of Power Resources (IPR), and the Index of Democratization (ID).

2. The higher the average intelligence of a nation (national IQ), the more widely power resources (IPR) are distributed and the higher the level of democratization (ID) in a country.

3. The higher the degree of resource distribution (IPR), the higher the level of democratization in a country.

The third hypothesis has already been tested several times by empirical evidence in my previous studies (Vanhanen 1984, 1990, 1997, 2003). In this study, I extend the causal analysis by attempting to explore to what extent differences in the distribution of power resources (IPR), and through it in the level of democratization (ID), can be traced to differences in average mental abilities of nations (national IQ) and ultimately to differences in climatic and other geographical conditions. I assume that the ultimate limits of democratization are in those factors which are nearly completely outside conscious human control, and that, therefore it will never be possible to achieve the same level and quality of democracy throughout the world.

Yemen), I have to predict democratization. There is sufficient intellectual potential for democratization in the Middle East. In principle, democratization could take place through constitutional reforms, but more abrupt breakthroughs are also possible. I do not think that Islamic culture could permanently prevent democratization in the Arab world (cf. Brynen et al. 1995), although it seems to have hampered it.

## East Asia

The six East Asian countries in the study are at the highest national IQ category (100–108). They are hypothesized to be highly democratic countries on the basis of national IQ, but in fact two (China and North Korea) are nondemocracies. Recent democratization in South Korea, Taiwan, and Mongolia was in harmony with my hypothesis, but China and North Korea still contradict the hypothesis. My argument is that special local factors, principally their socialist economic and political system, explain the lack of democracy in these countries. However, because the national IQs of these countries are the highest in the world, they have human potential for democratization, and I expect them to democratize in the future. But this presupposes a fundamental transformation of their political and economic systems; such a transformation is already taking place in China.

## Other Asian and Oceanian countries

Nearly all 27 Central Asian, South Asian, Southeast Asian, and Oceanian countries are in national IQ categories 3, 4, and 5 (80–94). On the basis of national IQ, these countries could be above the minimum threshold of democracy, and the countries at national IQ level 5 (90–94) should be well-functioning democracies. Yet in fact, only 11 of these 27 countries (Afghanistan, Bangladesh, India, Indonesia, Malaysia, Nepal, Papua New Guinea, the Philippines, Singapore, the Solomon Islands, and Sri Lanka) were above the threshold of democracy in 2006. Of these 11 democracies, Afghanistan, Nepal, and Singapore had been above the threshold for only one or two years. Bangladesh dropped below the threshold in 2007, whereas Fiji and Thailand had been democracies one or two years earlier. Political systems fluctuated in some countries and varied from democracies to autocracies. This

great variation emphasizes the significance of specific local conditions.

Positive residuals based on MT and national IQ were large for India, Indonesia, Papua New Guinea, and Sri Lanka, indicating that their measured level of democratization was significantly higher than expected. These four countries are all ethnically very heterogeneous, and their political systems have more or less adapted to ethnic heterogeneity. Such countries indicate that "it is possible to achieve democratic sustainability even in highly diverse societies" (Reilly 2006, p. 5). Singapore was a large negative outlier on the basis of national IQ. Its level of democratization should be much higher. For the five other democracies, residuals were smaller than one standard deviation in 2006.

Of the 16 nondemocracies, 14 were large negative outliers in 2006 (Bhutan, Brunei, Burma, Cambodia, Fiji, Kazakhstan, Kyrgyzstan, Laos, Maldives, Pakistan, Thailand, Turkmenistan, Uzbekistan, and Vietnam). How do we explain why so many countries contradict the hypothesis? Specific local factors may explain part of these deviations. Seven of the 14 large negative outliers are socialist or former socialist countries, and some of the other seven have suffered from civil wars or serious ethnic violence (Bhutan, Burma, Fiji, and Pakistan). Brunei is an autocratic oil-producing country in which economic power resources are highly concentrated in the hands of the government. Thailand is probably a large negative outlier only temporarily. I do not have any special explanation for the Maldives.

The message of this study for the autocratically ruled contemporary and former socialist countries of Asia is that all have intellectual potential to establish and stabilize more democratic political systems. The socialist concentration of economic power resources and striving to control intellectual resources has held back democratization by depriving potential opposition groups of independent economic power resources. It would be possible to improve environmental conditions for democratization by economic reforms intended to further a market economy and by guaranteeing rights to private property. Some of these countries have already established democratic institutions, but there are serious deficits in their functioning. Their future depends on the ability of political leaders to make appropriate choices, but also on popular pressure from below. As in the case of the Middle East autocracies, the residuals based on IPR are for these countries small or only moderate, whereas negative residuals based

on national IQ are large. I have to predict democratization because the constraining factors presuppose a much higher level of democracy in all these countries. They are latecomers to the global pattern of democratization (cf. Friedman 1994; Marsh et al. 1999).

## The significance of constraining factors

The central message of this study is that we are bound to live in the world in which the nature of political systems varies considerably and in which it is not possible to establish and maintain equally democratic political systems in all countries. Significant differences in the quality of democracy will persist. If democratization were based only on the degree of resource distribution, as argued in my previous studies, it might in principle, be possible to achieve the same level of democratization in all countries because the components of the index of power Resources (IPR) seem to be under human control. By appropriate policies it would be possible modify the values of all components of IPR.

Now, however, the results of this study imply that human chances to change the relative differences in the degree of resource distribution between countries are significantly limited by the more fundamental factors which explain a considerable part of the present variation in IPR. As noted above, the differences in the average intelligence of populations (national IQ) explain nearly 60 percent of the variation in IPR. Human possibilities to equalize national IQs throughout the world are quite limited for the reason that differences in IQs are partly based on small genetic differences between individuals and populations. The evolved genetic diversity of individuals is outside conscious human control. Therefore, I have to conclude that the variation in IPR seems to depend to a significant extent on a causal factor which is not under conscious human control.

Further, the results of this study show that the variation in national IQ is strongly related (43%) to the variation in the annual mean temperature (MT). This relationship is causal. Significant differences in climatic conditions seem to have caused the evolution of intelligence differences between human populations. Climatic conditions are even more outside human control than intelligence differences between populations. The present intelligence differences between populations (national IQ) emerged probably thousands and tens of thousands of

years ago when modern humans migrated from Africa to other parts of the world (cf. Kanazawa 2007). We should understand that it is not possible to revoke evolved human diversity and its consequences.

My point is that because the contemporary variation in the level and quality of democracy can be partly traced back through the degree of resource distribution to the differences in national intelligence and further to the differences in climatic conditions, it is highly improbable that we could ever achieve a similar level and quality of democracy throughout the world. We have to accept that because of human diversity, we live in a world of many kinds of disparities and inequalities, including inequalities in the quality of democracy and in the possibilities to enjoy similar political rights and civil liberties (cf. Lynn and Vanhanen 2006). Political systems adapt to environmental constraints in the continual process of natural selection in politics, and this process of adaptation produces different institutional arrangements and behavior patterns. People in countries with low national IQs are not as able to organize themselves, to take part in national politics, and to defend their interests and rights against those in power as people in countries with higher national IQs. This difference is reflected in the quality of democracy.

However, because the observed relationship between the level of democracy and explanatory and constraining variables is incomplete, there is always plenty of room for human choices that affect social conditions, political institutions, governance, and the quality of democracy. It is worthwhile to explore how to adapt political institutions to environmental constraints and to further democratization within such constraints. The present variation in the level of democratization at the same level of IPR and constraining variables indicates that human choices matter. In the previous chapters, I referred to various factors that seem to explain some variation in the level of democratization independently from my explanatory variables. The enormous research literature tackling these problems includes plenty of material which illustrates the significance of policy choices and individual political leaders. In other words, I do not argue that human choices are unimportant and that the constraining variables automatically determine the nature of political systems and the extent of democratic deficits without human choices to affect the results. Human choices matter, but my argument is that constraining factors limit the

range of feasible choices.

According to the Inter-Parliamentary Union's Universal Declaration on Democracy, democracy "is a political system that enables people to freely choose an effective, honest, transparent and accountable government" (UNDP's *Human Development Report 2002*, p. 55). It is evident, on the basis of the results of this study, that there is and will be significant variation between countries in the extent to which these noble democratic aims have been achieved and can be achieved in practice.

There is enormous variation in the extent to which a political system "enables people" to choose a government. My participation threshold of democracy for contemporary elections presupposes that at least 20 percent of the total population votes in elections. In many countries the percentage of people who have taken part in elections is much smaller. I have excluded such countries from the category of democracies. The percentage of participation varies also above the 20 percent threshold and can in extreme cases rise above 60 percent.

Political systems vary greatly in the extent to which people can "freely choose" a government. In extreme cases there is no opportunity to choose freely because there are no alternatives, sometimes not even an alternative to abstain from election. In the countries in which there are alternatives in elections, the possibilities to choose freely may still vary in many important respects. The nature of an electoral system may discriminate against some parties or social groups and favor some others, for example, by effectively preventing minority parties from getting their candidates elected. The party system of a country may be regulated in such a way that certain types of parties are prohibited, which takes away from many people the opportunity to choose freely. I think that "freely choose" presupposes the freedom to establish parties and competition between candidates and parties. Therefore my competition threshold of democracy presupposes that the share of the largest party or of the winning candidate in executive elections should not rise to 70 percent or higher, because a higher percentage implies that opportunities to choose freely between alternatives have been seriously restricted.

Political systems vary greatly in the extent to which people can choose an "effective" government. Democracy presupposes that those in power, or most of them, are elected, or that they are responsible to elected political institutions. In this respect political systems vary greatly,

and it is often difficult to measure to what extent the most powerful ones are really elected. There are systems in which elections concern institutions that are without effective power. In such systems power centers are outside elected institutions, but even among democracies the relative importance of elected institutions and rulers varies greatly.

There is variation also in the extent to which people can choose an "honest" government. The honesty of governments varies from relatively honest to extremely corrupt and dishonest. In democracies people are expected to trust their governments and the actions and promises of their governments. At the opposite end of the honesty dimension are extremely dishonest and corrupted governments that deceive people. In practice there may be deficiencies in the honesty of all governments, but the extent of dishonesty varies. It is difficult to measure the honesty of governments. Transparency International's corruption perception index 2007 is a variable that measures one aspect of the honesty of governments.

The variation among governments extends to "transparency" of governments, which varies from relatively open to highly secretive governments. The actions and policies of open governments are clearly stated and open for examination and discussion, whereas highly secretive governments conceal their actions and their reasons from people. Democracy presupposes a relatively transparent government, but the actual transparency of governments may vary considerably among democracies too. In democracies the media check the transparency of government actions day by day. In autocracies the chances of the press to check the transparency of government actions are strictly limited.

Finally, the "accountability" of governments varies from constitutionally accountable democratic governments to autocratic and dictatorial governments which are not accountable to anybody, or only to the closed group of their supporters. In democracies, governments are accountable to citizens in elections, and also, if necessary, to judicial bodies, which can examine the legality of particular governmental actions and decisions made by ministers or other executive officers. In practice the accountability of democratic governments varies considerably. Disagreements on the accountability of governments may lead to illegal actions and unconstitutional changes of governments. In nondemocracies the lack of accountability may lead to arbitrary actions against people, highly irrational policies, nepotism, and large-scale theft

of state funds.

All the criteria of democracy stated in the Inter-Parliamentary Union's declaration can be regarded as measuring the quality of democracy, and as noted above, there can be considerable variation from country to country. Each criterion constitutes a continuum, from countries in which political practice is in harmony with the criterion to countries in which political practice does not satisfy the criterion. So the continuum extends from highly democratic to less democratic and nondemocratic countries. Depending on the extent to which a country satisfies these criteria, the quality of democracy also varies greatly within the group of countries above the minimum threshold of democracy.

Because the level of democratization as measured by the index of democratization (ID) and the gender-weighted index of democratization (GID) is moderately or strongly correlated with the ultimate constraints of democratization (national IQ and annual mean temperature, MT), I hypothesize that *the extent to which countries fulfill those criteria of democracy would be moderately or strongly correlated with national IQ and MT.* In principle, all these criteria for democracy are measurable, although the indicators used in this study measure only some aspects of those criteria. By appropriate indicators it would be possible to test the hypothesis with empirical evidence covering all criteria for democracy. My argument is that the quality of democracy remains uneven in the world because the variation in the quality of democracy is constrained by the differences in the average intelligence of populations and in the annual mean temperature. Because these ultimate constraining factors remain outside human control, it does not seem possible to equalize the quality of democracy in the world. We should learn to live with the consequences and all the problems caused by this inequality, but at the same time we should think over how to mitigate the consequences of democratic deficits and how to improve the quality of democracy, especially in countries in which it is lower than expected on the basis of the ultimate limiting variables.

I fully agree with the argument of the United Nations Development Program's *Human Development Report 2002*, p. 51) that many persistent development problems reflect failures of governance and that good governance is democratic governance. The report describes the meaning and practical consequences of democratic governance very well. I only have to point out on the basis of the results of this study

that good democratic governance as described in the report seems to be unattainable for most developing countries for the reason that the variation in the quality of democracy is to a significant extent constrained by the ultimate explanatory factors discussed in this study. Therefore it is not reasonable to expect that tropical developing countries could attain the targets of democratic governance and then become able to solve many persistent development problems. It would be useful to think over how to further development despite persistent failures of governance.

The limits of democratization discussed in this study reflect the evolved diversity of life. This means that all nations do not have equal chances to establish and maintain democratic systems. Therefore it would be immoderate to blame people for failures of democratic governance in countries for which the constraining factors do not predict a high level and quality of democracy. It would be more justified to blame people for failures of democratic governance in countries with large negative residuals. In such countries the failures and defects of democracy depend more on political choices than on the ultimate constraining factors discussed in this study. From the perspective of democracy, it is encouraging to note that people strive to establish democracy and to improve the quality of democratic governance everywhere in the world, even in countries for which MT and national IQ do not predict a democratic system or only a low level of democratization. We should understand that in such countries it is enormously more difficult to establish democracy and to maintain a high quality of democracy than in countries for which MT and national IQ predict a high level of democratization.

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# DOES OIL HINDER DEMOCRACY?

## By MICHAEL L. ROSS*

### INTRODUCTION

POLITICAL scientists believe that oil has some very odd proper-
ties. Many studies show that when incomes rise, governments tend
to become more democratic. Yet some scholars imply there is an excep-
tion to this rule: if rising incomes can be traced to a country's oil
wealth, they suggest, this democratizing effect will shrink or disappear.
Does oil really have antidemocratic properties? What about other min-
erals and other commodities? What might explain these effects?

The claim that oil and democracy do not mix is often used by area
specialists to explain why the high-income states of the Arab Middle
East have not become democratic. If oil is truly at fault, this insight
could help explain—and perhaps, predict—the political problems of oil
exporters around the world, such as Nigeria, Indonesia, Venezuela, and
the oil-rich states of Central Asia. If other minerals have similar prop-
erties, this effect might help account for the absence or weakness of de-
mocracy in dozens of additional states in sub-Saharan Africa, Latin
America, and Southeast Asia. Yet the "oil impedes democracy" claim
has received little attention outside the circle of Mideast scholars;
moreover, it has not been carefully tested with regression analysis, ei-
ther within or beyond the Middle East.

I use pooled time-series cross-national data from 113 states between
1971 and 1997 to explore three aspects of the oil-impedes-democracy
claim. The first is the claim's validity: is it true? Although the claim has
been championed by Mideast specialists, it is difficult to test by examining
only cases from the Middle East because the region provides scholars with

## TABLE 1
### INDEX OF OIL-RELIANT STATES[a]

| | |
|---|---|
| 1. Brunei (1994) | 47.58 |
| 2. Kuwait | 46.14 |
| 3. Bahrain | 45.60 |
| 4. Nigeria (1991) | 45.38 |
| 5. Congo, Dem. Rep. | 45.14 |
| 6. Angola (1996) | 45 |
| 7. Yemen | 38.58 |
| 8. Oman | 38.43 |
| 9. Saudi Arabia | 33.85 |
| 10. Qatar (1994) | 33.85 |
| 11. Libya (1988) | 29.74 |
| 12. Iraq (1983) | 23.48 |
| 13. Algeria | 21.44 |
| 14. Venezuela | 18.84 |
| 15. Syria | 15.00 |
| 16. Norway | 13.46 |
| 17. Iran (1983) | 11.95 |
| 18. Ecuador | 8.53 |
| 19. Malaysia | 5.91 |
| 20. Indonesia | 5.69 |
| 21. Cameroon | 5.63 |
| 22. Lithuania | 4.48 |
| 23. Kyrgyz Republic (1996) | 4.25 |
| 24. Netherlands | 3.14 |
| 25. Colombia | 3.13 |

[a]Oil reliance is measured by the value of fuel-based exports divided by GDP. Most figures are based on data for 1995 from World Bank (fn. 71).Figures for Brunei, Nigeria, Qatar, Libya, Iraq, and Iran are the most recent available. Since 1995 figures for Angola and Kyrgyz Republic are not available, 1996 figures are reported.

little variation on the dependent variable: virtually all Mideast governments have been authoritarian since gaining independence. Moreover, there are other plausible explanations for the absence of democracy in the Mideast, including the influence of Islam and the region's distinct culture and colonial history. Does oil have a consistently negative influence on democracy once one accounts for these and other variables?

Second, I examine the claim's generality along two dimensions. One is geographic. For obvious reasons the oil-impedes-democracy claim has been explored most carefully by Mideast specialists: ten of the fifteen states most reliant on oil wealth are in the Middle East region (see Table 1). But is oil an obstacle to democracy only in the Mideast, or does it harm oil exporters everywhere? If the hypothesis is true for all oil-rich

## TABLE 2
### INDEX OF MINERAL-RELIANT STATES[a]

| | |
|---|---|
| 1. Botswana | 35.11 |
| 2. Zambia | 24.97 |
| 3. Bahrain | 16.39 |
| 4. Chile | 12.63 |
| 5. Angola (1996) | 11.5 |
| 6. Papua New Guinea | 10.13 |
| 7. Togo (1991) | 7.79 |
| 8. Bolivia | 5.53 |
| 9. Congo, Dem. Rep. (1983) | 7.00 |
| 10. Jordan | 5.28 |
| 11. Peru | 3.84 |
| 12. Central African Republic | 3.16 |
| 13. Iceland | 3.11 |
| 14. Zimbabwe | 3.00 |
| 15. Norway | 2.49 |
| 16. Belgium | 2.23 |
| 17. Canada | 2.22 |
| 18. Australia | 2.20 |
| 19. Lithuania | 1.96 |
| 20. Jamaica | 1.87 |
| 21. Slovak Republic | 1.74 |
| 22. South Africa | 1.69 |
| 23. Morocco | 1.65 |
| 24. Cameroon | 1.62 |
| 25. Kyrgyz Republic | 1.56 |

[a]Mineral reliance is measured by the value of nonfuel mineral exports divided by GDP. Most figures are for 1995 based on data from World Bank (fn. 71). The figures for Congo and Togo are the most recent available; the 1996 figure is reported for Angola, since no figure for 1995 is available.

states, then its importance has been underappreciated by other political scientists. If it holds only for states in the Mideast, why is this so?

The other dimension is sectoral: do other types of minerals and other types of commodities have similar effects on governments? While oil exporters tend to be concentrated in the Middle East, exporters of nonfuel minerals are more geographically dispersed (see Table 2). Have these states, too, been rendered less democratic because of resource wealth? Or does petroleum have antidemocratic properties that are not found in other commodities?

Finally, I explore the question of causality: if oil does have antidemocratic effects, what is the causal mechanism? I test three possible explanations: a "rentier effect," which suggests that resource-rich

governments use low tax rates and patronage to relieve pressures for greater accountability; a "repression effect," which argues that resource wealth retards democratization by enabling governments to boost their funding for internal security; and a "modernization effect," which holds that growth based on the export of oil and minerals fails to bring about the social and cultural changes that tend to produce democratic government.

I also have two broader aims. The first is to encourage scholars who study democracy to incorporate the Middle East into their analyses. Many "global" studies of democratization have avoided the Mideast entirely.[1] Influential studies by Przeworski and Limongi and Przeworski, Alvarez, Cheibub, and Limongi simply drop the oil-rich Mideast states from their database.[2] There is, however, no sound analytical reason for scholars of democracy to exclude these states from their research, and doing so can only weaken any general findings. It also tends to marginalize the field of Middle East studies.

My second aim is to address the literature on the "resource curse." Many of the poorest and most troubled states in the developing world have, paradoxically, high levels of natural resource wealth. There is a growing body of evidence that resource wealth itself may harm a country's prospects for development. States with greater natural resource wealth tend to grow more slowly than their resource-poor counterparts.[3] They are also more likely to suffer from civil wars.[4] This article suggests as well that there is a third component to the resource curse: oil and mineral wealth tends to make states less democratic.

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[1] See, for example, Guillermo O'Donnell, Philippe C. Schmitter, and Lawrence Whitehead, eds., *Transitions from Authoritarian Rule: Prospects for Democracy* (Baltimore: Johns Hopkins University Press, 1986); D. Larry Diamond, Juan J. Linz, and Seymour Martin Lipset, eds., *Democracy in Developing Countries* (Boulder, Colo.: Lynne Rienner, 1988); Ronald Inglehart, *Modernization and Postmodernization* (Princeton: Princeton University Press, 1997).

[2] Adam Przeworski and Fernando Limongi, "Modernization: Theories and Facts," *World Politics* 49 (January 1997); Adam Przeworski, Michael Alvarez, José Antonio Cheibub, and Fernando Limongi, "What Makes Democracies Endure?" *Journal of Democracy* 7 (January 1996); idem, *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990* (New York: Cambridge University Press, 2000).

[3] Jeffrey D. Sachs and Andrew M. Warner, "Natural Resource Abundance and Economic Growth," Development Discussion Paper no. 517a (Cambridge: Harvard Institute for International Development, 1995); idem, "The Big Push, Natural Resource Booms and Growth," *Journal of Development Economics* 59 (February 1999); Carlos Leite and Jens Weidmann, "Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth," IMF Working Paper, WP/99/85 (1999); Michael L. Ross, "The Political Economy of the Resource Curse," *World Politics* 51 (January 1999); R. M. Auty, *Resource Abundance and Economic Development* (Oxford: Oxford University Press, 2001).

[4] Paul Collier and Anke Hoeffler, "On Economic Causes of Civil War," *Oxford Economic Papers* 50 (October 1998); Indra de Soysa, "The Resource Curse: Are Civil Wars Driven by Rapacity or Paucity?" in Mats Berdal and David M. Malone, eds., *Greed and Grievance: Economic Agendas in Civil Wars* (Boulder, Colo.: Lynne Rienner, 2000).

I begin by outlining the oil-impedes-democracy claim and the limitations of previous work on the topic. I then draw on earlier case studies of oil-rich states to specify three causal mechanisms that might explain how oil makes governments more authoritarian. The next section presents a model of regime types and describes the research design. I then present the results of the validity and generality tests and follow that with a discussion of the results of tests on the causal mechanisms and a conclusion.

## THE CONCEPT OF THE "RENTIER STATE"

Area specialists often describe most of the governments of the Mideast and North Africa as "rentier states," since they derive a large fraction of their revenues from external rents.[5] More than half of the government's revenues in Saudi Arabia, Bahrain, the United Arab Emirates, Oman, Kuwait, Qatar, and Libya have, at times, come from the sale of oil. The governments of Jordan, Syria, and Egypt variously earn large locational rents from payments for pipeline crossings, transit fees, and passage through the Suez Canal. Workers' remittances have been an important source of foreign exchange in Egypt, Yemen, Syria, Lebanon, Tunisia, Algeria, and Morocco, although these rents go (at least initially) to private actors, not the state. The foreign aid that flows to Israel, Egypt, and Jordan may also be considered a type of economic rent.

Economists in the early twentieth century used the term "rentier state" to refer to the European states that extended loans to non-European governments.[6] Mahdavy is widely credited with giving the term its current meaning: a state that receives substantial rents from "foreign individuals, concerns or governments."[7] Beblawi later refined this definition, suggesting that a rentier state is one where the rents are paid by foreign actors, where they accrue directly to the state, and where "only a few are engaged in the generation of this rent (wealth), the majority being only involved in the distribution or utilization of it."[8]

[5] Throughout this article I use the term "Middle East" to include North Africa. I adopt the World Bank's definition of this region: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen.

[6] According to Lenin, "The rentier state is a state of parasitic, decaying capitalism, and this circumstance cannot fail to influence all the socio-political conditions of the countries concerned." V. I. Lenin, "Imperialism, the Highest Stage of Capitalism," in Robert C. Tucker, ed., *The Lenin Anthology* (New York: W. W. Norton, 1975).

[7] Hussein Mahdavy, "The Patterns and Problems of Economic Development in Rentier States: The Case of Iran," in M. A. Cook, ed., *Studies in Economic History of the Middle East* (London: Oxford University Press, 1970), 428.

[8] Hazem Beblawi, "The Rentier State in the Arab World," in Hazem Beblawi and Giacomo Luciani, eds., *The Rentier State* (New York: Croom Helm, 1987), 51. Note that this definition excludes

Claims about the rentier state can be sorted into two categories: those that suggest oil wealth makes states less democratic and those that suggest oil wealth causes governments to do a poorer job of promoting economic development. Often the two are conflated. This article focuses on the first claim.

According to Anderson, "The notion of the rentier state is one of the major contributions of Middle East regional studies to political science."[9] Indeed, some scholars of democracy now use a version of this argument to account for the otherwise puzzling states of the Middle East. Huntington, for example, suggests that the democratic trend may bypass the Middle East since many of these states "depend heavily on oil exports, which enhances the control of the state bureaucracy."[10] Others have adapted the "rentier state" idea to oil-rich countries outside the Middle East.[11]

The claim that oil wealth per se inhibits democratization has not been subjected to careful statistical tests, however, as most quantitative studies of democracy simply overlook it as an explanatory variable. And the handful that even acknowledge that oil-rich states have odd properties do little to explain why. Przeworski and his collaborators, for example, drop countries from their database if their "ratio of fuel exports to total exports in 1984–1986 exceeded fifty percent"—an eccentric criterion that excludes six oil-rich states, all of which are located on the Arabian Peninsula.[12] Barro's study of democracy includes a dummy variable for states "whose net oil exports represent a minimum of two-thirds of total exports and are at least equivalent to approximately one percent of world exports of oil."[13] The Barro oil dummy is statistically significant and negatively correlated with democracy. But as in the analyses of Przeworski et al., the dummy variable uses an arbitrary cut-

workers' remittances. As Chaudhry notes, large flows of remittances have different political implications than do large oil rents. See Kiren Aziz Chaudhry, *The Price of Wealth: Economies and Institutions in the Middle East* (Ithaca, N.Y.: Cornell University Press, 1997).

[9] Lisa Anderson, "The State in the Middle East and North Africa," *Comparative Politics* 20 (October 1987), 9.

[10] Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century* (Norman: University of Oklahoma Press, 1991), 31–32.

[11] See, for example, Olle Törnquist, "Rent Capitalism, State, and Democracy: A Theoretical Proposition," in Arief Budiman, ed., *State and Civil Society in Indonesia*, Monash Papers on Southeast Asia, no. 22 (1990); Douglas A. Yates, *The Rentier State in Africa: Oil Rent Dependency and Neocolonialism in the Republic of Gabon* (Trenton, N.J.: Africa World Press, 1996); Terry Lynn Karl, *The Paradox of Plenty: Oil Booms and Petro-States* (Berkeley: University of California Press, 1997); John Clark, "Petro-Politics in Congo," *Journal of Democracy* 8 (July 1997); idem, "The Nature and Evolution of the State in Zaire," *Studies in Comparative International Development* 32 (Winter 1998).

[12] See Przeworski et al. (fn. 2, 2000), 77.

[13] Robert J. Barro, "Determinants of Democracy," *Journal of Political Economy* 107 (December 1999).

point to distinguish between "oil states" and "non–oil states" and implies that oil has little or no influence on regime type until some threshold is reached.

Qualitative studies of the oil-impedes-democracy hypothesis also have important limitations. The vast majority have been country-level case studies of oil-rich states in the Mideast. Although many have been empirically rich and analytically nuanced, the Mideast is nevertheless a difficult place to test this claim, since virtually all oil-rich Mideast governments have been highly authoritarian since gaining independence. The absence of variation on the dependent variable—as well as on Islam, an important control variable—has made testing difficult. It has also allowed Mideast specialists to neglect tasks that would help sharpen and refine the oil-impedes-democracy claim—defining the key variables better, specifying the causal arguments in falsifiable terms, and outlining the domain of relevant cases to which their arguments apply. As a result, the notion of the rentier state has suffered from a bad case of conceptual overstretch: assertions about the influence of oil on Middle East politics have become so general that their validity has been diluted. As Okruhlik observes, "The idea of the rentier state has come to imply so much that it has lost its content."[14]

One way to restore the usefulness of an overstretched concept is by testing it statistically. I thus evaluate one core facet of the rentier state concept—the oil-impedes-democracy claim—with three questions. First, is there a statistically valid correlation between oil and authoritarianism once other germane variables are accounted for? Second, can the claim be generalized both beyond the Middle East and beyond the case of oil? Finally, if oil thwarts democracy, what is the causal mechanism?

Proponents of the oil-impedes-democracy hypothesis naturally suggest both that it is valid and that it can be generalized to oil exporters outside the Middle East. Some also imply that other types of commodities have similar effects. Nothing in Beblawi's definition, which is widely accepted among Mideast specialists, restricts the set of rentier states to oil exporters. In fact, the definition appears to cover many mineral exporters on the grounds that (1) minerals tend to generate rents, (2) the rents are largely captured by states via export taxes, corporate taxes, and state-owned enterprises, and (3) mineral extraction employs relatively little labor. The same definition, however, implies that exporters of agricultural commodities will not be rentier states.

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[14] Gwenn Okruhlik, "Rentier Wealth, Unruly Law, and the Rise of Opposition," *Comparative Politics* 31 (April 1999), 308.

This is because (1) agricultural commodities generally do not produce rents, (2) export revenues in most cases go directly to private actors, not the state, and (3) agricultural production is more labor intensive and hence employs a larger fraction of the population for a given value of exports.[15]

## CAUSAL MECHANISMS

At least three causal mechanisms might explain the alleged link between oil exports and authoritarian rule. The first comes largely from Mideast specialists and might be called the "rentier effect." A close reading of case studies suggests a second mechanism: a "repression effect." Modernization theory implies a third possible cause, which I call the "modernization effect."

### THE RENTIER EFFECT

The first causal mechanism comes from the work of Middle East scholars, who have pondered this issue for over two decades.[16] In general they argue that governments use their oil revenues to relieve social pressures that might otherwise lead to demands for greater accountability. Case studies describe three ways this may occur.[17]

The first is through what might be called a "taxation effect." It suggests that when governments derive sufficient revenues from the sale of oil, they are likely to tax their populations less heavily or not at all, and the public in turn will be less likely to demand accountability from—and representation in—their government.[18]

The logic of the argument is grounded in studies of the evolution of democratic institutions in early modern England and France. Historians and political scientists have argued that the demand for representation in government arose in response to the sovereign's attempts to raise

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[15] Note that, by contrast, dependency theory suggests that developing states are politically constrained by their reliance on the export of *all* types of primary commodities to advanced industrialized states. See, for example, Fernando Henrique Cardoso and Enzo Faletto, *Dependency and Development in Latin America* (Berkeley: University of California Press, 1979); Peter Evans, *Dependent Development: The Alliance of Multinational, State, and Local Capital in Brazil* (Princeton: Princeton University Press, 1979); Kenneth A. Bollen, "World System Position, Dependency, and Democracy: The Cross-National Evidence," *American Sociological Review* 48 (August 1983).

[16] Perhaps they have thought about it too carefully. Chaudhry (fn. 8), notes that "theories of the rentier state far outstrip detailed empirical analysis of actual cases" (p. 187).

[17] Case studies often conflate these three effects. I treat them here as separate mechanisms to clarify their logic.

[18] Giacomo Luciani, "Allocation vs. Production States: A Theoretical Framework," in Beblawi and Luciani (fn. 8).

taxes.[19] Some Mideast scholars have looked for similar correlations between variations in tax levels and variations in the demand for political accountability. Crystal found that the discovery of oil made the governments of Kuwait and Qatar less accountable to the traditional merchant class.[20] Brand's study of Jordan argued that a drop in foreign aid and remittances in the 1980s led to greater pressures for political representation.[21] Yet not all Middle East specialists have been persuaded: Waterbury argues that "neither historically nor in the twentieth century is there much evidence [in the Middle East] that taxation has evoked demands that governments account for their use of tax monies. Predatory taxation has produced revolts, especially in the countryside, but there has been no translation of tax burden into pressures for democratization."[22]

A second component of the rentier effect might be called the "spending effect": oil wealth may lead to greater spending on patronage, which in turn dampens latent pressures for democratization.[23] Entelis, for example, argues that the Saudi Arabian government used its oil wealth for spending programs that helped reduce pressures for democracy.[24] Vandewalle makes a similar argument about the Libyan government.[25] And Kessler and Bazdresch and Levy find that the Mexican oil boom of the 1970s helped prop up—and perhaps prolong—one-party rule.[26] While all authoritarian governments may use

[19] Charles Tilly, ed., *The Formation of National States in Western Europe* (Princeton: Princeton University Press, 1975); Robert Bates and Da-Hsiang Donald Lien, "A Note on Taxation, Development, and Representative Government," *Politics and Society* 14 (January 1985); Philip T. Hoffman and Kathryn Norberg, eds., *Fiscal Crises, Liberty, and Representative Government, 1450–1789* (Stanford, Calif.: Stanford University Press, 1994).

[20] Jill Crystal, *Oil and Politics in the Gulf: Rulers and Merchants in Kuwait and Qatar* (New York: Cambridge University Press, 1990).

[21] Laurie A. Brand, "Economic and Political Liberalization in a Rentier Economy: The Case of the Hashemite Kingdom of Jordan," in Iliya Harik and Denis J. Sullivan, eds., *Privatization and Liberalization in the Middle East* (Bloomington: Indiana University Press, 1992).

[22] John Waterbury, "Democracy without Democrats? The Potential for Political Liberalization in the Middle East," in Ghassan Salamé, ed., *Democracy without Democrats? The Renewal of Politics in the Muslim World* (New York: I. B. Tauris, 1994), 29.

[23] Lam and Wantchekon develop a formal model that makes a similar point, that resource wealth can impede democracy by enhancing the distributive influence of an elite. Ricky Lam and Leonard Wantchekon, "Dictatorships as a Political Dutch Disease" (Manuscript, Department of Political Science, Yale University, January 1999).

[24] John P. Entelis, "Oil Wealth and the Prospects for Democratization in the Arabian Peninsula: The Case of Saudi Arabia," in Naiem A. Sherbiny and Mark A. Tessler, eds., *Arab Oil: Impact on the Arab Countries and Global Implications* (New York: Praeger, 1976).

[25] Dirk Vandewalle, *Libya since Independence: Oil and State-Building* (Ithaca, N.Y.: Cornell University Press, 1998).

[26] Carlos Bazresch and Santiago Levy, "Populism and Economic Policy in Mexico, 1970–82," in Rudiger Dornbusch and Sebastian Edwards, eds., *The Macroeconomics of Populism in Latin America* (Chicago: University of Chicago Press, 1991); Timothy P. Kessler, *Global Capital and National Politics: Reforming Mexico's Financial System* (Westport, Conn.: Praeger, 1999).

their fiscal powers to reduce dissent, these scholars imply that oil wealth provides Middle East governments with budgets that are exceptionally large and unconstrained.[27] Rulers in the Middle East may follow the same tactics as their authoritarian counterparts elsewhere, but oil revenues could make their efforts at fiscal pacification more effective.

The third component might be called a "group formation" effect. It implies that when oil revenues provide a government with enough money, the government will use its largesse to prevent the formation of social groups that are independent from the state and hence that may be inclined to demand political rights. One version of this argument is rooted in Moore's claim that the formation of an independent bourgeoisie helped bring about democracy in England and France.[28] Scholars examining the cases of Algeria, Libya, Tunisia, and Iran have all observed oil-rich states blocking the formation of independent social groups; all argue that the state is thereby blocking a necessary precondition of democracy.[29]

A second version of the group-formation effect draws on Putnam's argument that the formation of social capital—civic institutions that lie above the family and below the state—tends to promote more democratic governance.[30] Scholars studying the cases of Algeria, Iran, Iraq, and the Arab Gulf states have all suggested that the government's oil wealth has impeded the formation of social capital and hence blocked a transition to democracy.[31]

Whether Mideast states use their oil revenues to *deliberately* inhibit group formation is a matter of some disagreement. In the case of Libya, First suggests "there is not a consistent policy against the development of

[27] Lisa Anderson, "Peace and Democracy in the Middle East: The Constraints of Soft Budgets," *Journal of International Affairs* 49 (Summer 1995).

[28] Barrington Moore, *Social Origins of Dictatorship and Democracy* (Boston: Beacon Press, 1966).

[29] On Algeria, see Clement Henry Moore, "Petroleum and Political Development in the Maghreb," in Sherbiny and Tessler (fn. 24); on Libya, see Ruth First, "Libya: Class and State in an Oil Economy," in Petter Nore and Terisa Turner, eds., *Oil and Class Struggle* (London: Zed Press, 1980); also on Libya, see Vandewalle (fn. 25); on Tunisia, see Eva Bellin "The Politics of Profit in Tunisia: Utility of the Rentier Paradigm?" *World Development* 22 (March 1994); and on Iran, see Hootan Shambayati, "The Rentier State, Interest Groups, and the Paradox of Autonomy: State and Business in Turkey and Iran," *Comparative Politics* 26 (April 1994).

[30] Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton: Princeton University Press, 1993).

[31] On Algeria, see John P. Entelis, "Civil Society and the Authoritarian Temptation in Algerian Politics," in Augustus Richard Norton, ed., *Civil Society in the Middle East*, vol. 2 (Leiden: E. J. Brill, 1995); on Iran, see Farhad Kazemi, "Civil Society and Iranian Politics," in Norton; on the Gulf states, see Jill Crystal, "Civil Society in the Arab Gulf States," in Norton; on Iraq, see Zuhair Humadi, "Civil Society under the Ba'th in Iraq," in Jillian Schwedler, ed., *Toward Civil Society in the Middle East?* (Boulder, Colo.: Lynne Rienner, 1995). Other scholars have argued that the weakness of civil society in the Middle East has hampered a transition to democracy, without suggesting that oil wealth is the source of this weakness.

an indigenous bourgeoisie, but the growth of this class is in practice constrained by the state's own economic ventures and its links with international capital."[32] Chaudhry, by contrast, argues that in the 1970s the Mideast governments used their oil revenues to develop programs that were "explicitly designed to depoliticize the population. . . . In all cases, governments deliberately destroyed independent civil institutions while generating others designed to facilitate the political aims of the state."[33]

Collectively, the taxation, spending, and group-formation effects constitute the rentier effect. Together they imply that a state's fiscal policies influence its regime type: governments that fund themselves through oil revenues and have larger budgets are more likely to be authoritarian; governments that fund themselves through taxes and are relatively small are more likely to become democratic.

## THE REPRESSION EFFECT

A close reading of case studies from the Mideast, Africa, and Southeast Asia suggests that oil wealth and authoritarianism may also be linked by repression. Citizens in resource-rich states may want democracy as much as citizens elsewhere, but resource wealth may allow their governments to spend more on internal security and so block the population's democratic aspirations. Skocpol notes that much of Iran's pre-1979 oil wealth was spent on the military, producing what she calls a "rentier absolutist state."[34] Clark, in his study of the 1990s oil boom in the Republic of Congo, finds that the surge in revenues allowed the government to build up the armed forces and train a special presidential guard to help maintain order.[35] And Gause argues that Middle East democratization has been inhibited in part by the prevalence of the *mukhabarat* (national security) state.[36]

There are at least two reasons why resource wealth might lead to larger military forces. One may be pure self-interest: given the opportunity to better arm itself against popular pressures, an authoritarian government will readily do so. A second reason may be that resource wealth causes ethnic or regional conflict; a larger military might reflect the government's response. Mineral wealth is often geographically con-

[32] First (fn. 29), 137.

[33] Kiren Aziz Chaudhry, "Economic Liberalization and the Lineages of the Rentier State," *Comparative Politics* 27 (October 1994), 9.

[34] Theda Skocpol, "Rentier State and Shi'a Islam in the Iranian Revolution," *Theory and Society* 11 (April 1982).

[35] Clark (fn. 11, 1997).

[36] F. Gregory Gause II, "Regional Influences on Experiments in Political Liberalization in the Arab World," in Rex Brynen, Bahgat Korany, and Paul Noble, eds., *Political Liberalization and Democratization in the Arab World*, vol. 1, *Theoretical Perspectives* (Boulder, Colo.: Lynne Rienner, 1995).

centrated. If it happens to be concentrated in a region populated by an ethnic or religious minority, resource extraction may promote or exacerbate ethnic tensions, as federal, regional, and local actors compete for mineral rights. These disputes may lead to larger military forces and less democracy in resource-rich, ethnically fractured states such as Angola, Burma, the Democratic Republic of Congo, Indonesia, Nigeria, Papua New Guinea, Sierra Leone, and South Africa. This mechanism would be consistent with the research of Collier and Hoeffler and de Soysa, who find that natural resource wealth tends to make civil war more likely.[37]

## THE MODERNIZATION EFFECT

Finally, a third explanation can be derived from modernization theory, which holds that democracy is caused by a collection of social and cultural changes—including occupational specialization, urbanization, and higher levels of education—that in turn are caused by economic development.[38] Different scholars emphasize different clusters of social and cultural changes. Perhaps the most carefully shaped position comes from Inglehart, who argues that two types of social change have a direct impact on the likelihood that a state will become democratic:

> 1. Rising education levels, which produce a more articulate public that is better equipped to organize and communicate, and
> 2. Rising occupational specialization, which first shifts the workforce into the secondary sector and then into the tertiary sector. These changes produce a more autonomous workforce, accustomed to thinking for themselves on the job and having specialized skills that enhance their bargaining power against elites.[39]

Although modernization theory does not address the question of resource wealth per se, an implicit corollary is that if economic development does not produce these cultural and social changes, it will not result in democratization. As Inglehart notes: "Is the linkage between development and democracy due to wealth per se? Apparently not: if democracy automatically resulted from simply becoming wealthy, then Kuwait and Libya would be model democracies."[40] In other words, if resource-led growth does not lead to higher education levels and

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[37] See Collier and Hoeffler (fn. 4); de Soysa (fn. 4).

[38] Seymour Martin Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy," *American Political Science Review* 53 (March 1959); Karl W. Deutsch, "Social Mobilization and Political Development," *American Political Science Review* 55 (September 1961); Inglehart (fn. 1).

[39] Inglehart (fn. 1), 163.

[40] Ibid., 161.

greater occupational specialization, it should also fail to bring about democracy. Unlike the rentier and repression effects, the modernization effect does not work through the state: it is a social mechanism, not a political one.

The rentier, repression, and modernization effects are largely complementary. The rentier effect focuses on the government's use of fiscal measures to keep the public politically demobilized; the repression effect stresses the government's use of force to keep the public demobilized; and the modernization effect looks at social forces that may keep the public demobilized. All three explanations, or any combination of them, may be simultaneously valid.[41]

## MODEL SPECIFICATION AND RESEARCH DESIGN

To test the oil-impedes-democracy claim, I present a model to predict regime types and test it using a feasible generalized least-squares method with a pooled time-series cross-national data set, which includes data on all sovereign states with populations over one hundred thousand between 1971 and 1997. The model includes five causal variables that according to previous studies are the most robust determinants of democracy. It also includes variables that measure a state's oil and mineral wealth to see if they add explanatory power.

The basic regression model is:

$$Regime_{i,t} = a_1 + b_1(Oil_{i,t-5}) + b_2(Minerals_{i,t-5}) + b_3(Log\ Income_{i,t-5})$$
$$+ b_4(Islam_i) + b_5(OECD_i) + b_6(Regime_{i,t-5}) + b_7(Year_1) \ldots + b_{33}(Year_{26})$$

where $i$ is the country and $t$ is the year.

The dependent variable, *Regime*, is derived from the Polity98 data set constructed by Gurr and Jaggers.[42] Gurr and Jaggers compile two 0–10 interval scale variables, DEMOC and AUTOC; the former differentiates between states that are relatively democratic, while the latter variable differentiates between authoritarian states. Since the two indicators contain separate, nonoverlapping types of information about each country year, I combine them into a single measure by subtracting

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[41] A fourth explanation has been offered by U.S. vice president Richard Cheney, a political scientist by training: "The problem is that the good Lord didn't see fit to put oil and gas reserves where there are democratic governments." Cited in David Ignatius, "Oil and Politics Mix Suspiciously Well in America," *Washington Post*, July 30, 2000, A31.

[42] Each of the variables is defined more precisely in Appendix 1. Ted R. Gurr and Keith Jaggers, "Polity 98: Regime Characteristics, 1800–1998," http://www.bsos.umd.edu/cidcm/polity/, 1999 (consulted March 1, 2000).

the autocracy measure from the democracy measure.[43] I then rescale it as a 0–10 variable, with 10 representing "most democratic."

*Oil* and *Minerals* are the independent variables; they measure the export value of mineral-based fuels (petroleum, natural gas, and coal) and the export value of nonfuel ores and metals exports, as fractions of GDP. These variables capture both the importance of fuels and minerals as sources of export revenue and their relative importance in the domestic economy.[44]

The right-hand side of the equation also includes five control variables designed to capture the factors most robustly associated with regime type, for which indicators are available for most of the countries and years. The first is *Income,* measured as the natural log of per capita GDP corrected for purchasing power parity (PPP), in current international dollars. Per capita income has been widely accepted as a correlate of democracy since Lipset; its validity has been confirmed in more recent tests by Burkhart and Lewis-Beck, Londregan and Poole, Przeworski and Limongi, and Barro.[45]

The second control variable is *Islam,* which denotes the Muslim percentage of the state's population in 1970.[46] Previous studies have suggested that states with large Muslim populations tend to be less democratic than non-Muslim states.[47] Of all the religious categories tested by Barro, Islam (measured the same way with the same data set) had by far the largest and most statistically significant influence on a state's regime type.[48] Placing *Islam* in this model has special importance

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[43] Here I am following the practice of John B. Londregan and Keith T. Poole, "Does High Income Promote Democracy?" *World Politics* 49 (October 1996).

[44] *Oil* and *Minerals* are similar to the indicators used by Sachs and Warner (fn. 3, 1995) and by Leite and Weidmann (fn. 3) in their studies of the influence of resource wealth on economic performance. While Sachs and Warner combine fuels, nonfuel minerals, and agricultural goods into a single variable, I consider them as separate variables to see if their regression coefficients (and hence their influence on regime types) differ.

[45] Lipset (fn. 38); Ross E. Burkhart and Michael S. Lewis-Beck "Comparative Democracy: The Economic Development Thesis," *American Political Science Review* 88 (December 1994); Londregan and Poole (fn. 43); Przeworski and Limongi (fn. 2); Barro (fn. 13).

[46] In virtually all cases, the figure for 1980 (the only other year for which data were available) was identical to the 1970 figure.

[47] Salamé (fn. 22); Seymour Martin Lipset,"The Social Requisites of Democracy Revisited," *American Sociological Review* 59 (February1994); Manus Midlarsky, "Democracy and Islam: Implications for Civilizational Conflict and the Democratic Peace," *International Studies Quarterly* 42 (December 1998).

[48] Barro (fn. 13). Observers offer different arguments to explain the negative correlation between democracy and Islamic populations (–.38). See, for example, Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society* (New York: Oxford University Press, 1988); Bernard Lewis, "Islam and Liberal Democracy," *Atlantic Monthly* 271 (February 1993); and Michael Hudson, "The Political Culture Approach to Arab Democratization: The Case for Bringing It Back In, Carefully," in Brynen, Korany, and Noble (fn. 36). Although they are negatively correlated for the period covered by this data set (1971–97), it is not obvious that they will continue to be negatively correlated in the future. Two

because many states with great mineral wealth also have large Muslim populations, not only in the Middle East but also in parts of Asia (Indonesia, Malaysia, Brunei) and Africa (Nigeria). The simple correlation between *Oil* and *Islam* is 0.44.

The third control variable is OECD, a dummy that is coded 1 for states that are members of the Organization for Economic Cooperation and Development (excluding newer members Mexico and South Korea) and 0 for all others. Previous researchers have found that the advanced industrialized states of the OECD are significantly more likely to be democratic in the post–World War II era than the states of the developing world, even after the influence of income and other factors are accounted for.[49] There is no consensus on why this is so. It has variously been attributed to the West's unique historical trajectory;[50] the cultural influence of Protestantism;[51] the residual effects of Western colonialism on non-Western states;[52] and a "world system" that constrains the prospects of states in the non-Western "periphery."[53] Conceivably any antidemocratic effects from *Oil* and *Minerals* might be spurious and merely reflect the location of most fuel- and mineral-exporting states in the non-Western world. The OECD dummy helps account for any of these Western-specific effects, without taking a position on the mechanisms behind it.

The fourth control variable is $Regime_{t-5}$, which is the dependent variable lagged by five years. Placing it on the right-hand side of the model has three purposes. First, the most important influence on a state's regime type may often be its own peculiar history; $Regime_{t-5}$ helps capture any country-specific historical or cultural features that may be missed by the other right-hand-side variables. Second, including $Regime_{t-5}$ helps turn the equation into a change model, transforming the dependent variable from regime type to the change in a country's regime type over a given five-year period. This helps ensure that the re-

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states with large Islamic populations, Nigeria and Indonesia, have recently moved toward democracy, and some of the most important prodemocracy forces in other Islamic states (including Algeria, Egypt, Jordan, and Malaysia) are often classified as Islamic "traditionalists" or "fundamentalists." It is instructive to recall that until the "third wave" of democratization began in the mid-1970s, democracy and Catholicism were negatively correlated.

[49] See Burkhart and Lewis-Beck (fn. 45); Londregan and Poole (fn. 43); Przeworski and Limongi (fn. 2).

[50] See Moore (fn. 28).

[51] See Lipset (fn. 38); Huntington (fn. 10).

[52] See Robert A. Dahl, *Polyarchy: Participation and Opposition* (New Haven: Yale University Press, 1971).

[53] See Immanuel Wallerstein, *The Modern World-System* (New York: Academic Press, 1974); Bollen (fn. 15); Burkhart and Lewis-Beck (fn. 45).

gression will indeed measure both time-series and cross-sectional changes in regime types. Third, $Regime_{t-5}$ helps address the problem of serial correlation that tends to bedevil pooled time-series cross-sectional data sets.[54]

Finally, the model includes a set of twenty-six dummy variables, one for each year covered by the data (1971–97), less one to mitigate autocorrelation. These are designed to capture two types of time-specific effects. The first is the cold war, which may have blocked many transitions to democracy. The second are contagion effects that influenced states at different times in Southern and Eastern Europe, Latin America, and sub-Saharan Africa, where early transitions to democracy appeared to boost the likelihood of subsequent transitions in proximate states.

The tests were run with a feasible generalized least-squares process using Stata 6.0.[55] Since I include a lagged dependent variable on the right-hand side of the equation, I correct for first-order autocorrelation using a panel-specific process, which allows the degree of autocorrelation to vary from country to country.

I use a five-year lag for all independent and control variables. The lag gives more confidence that the causal arrow is pointing in the right direction; it also enables me to look for factors that have an enduring impact on regime types. As I illustrate below, using shorter lags does not change the results of the basic model, but it does increase the absolute value of the coefficient of the lagged dependent variable relative to the other explanatory variables. Hence with a one-year lag, a country's current regime type becomes overwhelmingly a function of its regime type in the previous year, while the influence of other variables is artificially suppressed.[56]

## RESULTS

For the basic model described below, Stata is able to utilize 2,183 country-year observations from 113 states, out of a possible 3,752 observations from 158 states. The data for each of the variables are summarized in Appendix 2.

[54] James A. Stimson, "Regression in Space and Time: A Statistical Essay," *American Journal of Political Science* 29 (November 1985); Nathaniel Beck and Jonathan N. Katz, "What to Do (and Not to Do) with Time-Series Cross-Section Data," *American Political Science Review* 89 (September 1995).

[55] Beck and Katz (fn. 54) recommend using ordinary least squares with "panel-corrected standard errors" when working with panel data if the number of units is less than the number of time points. In this data set the number of units (113) exceeds the number of time points (27).

[56] Christopher H. Achen, "Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables" (Paper presented at the annual meeting of the Political Methodology Section of the American Political Science Association, Los Angeles, July 20–22, 2000).

TABLE 3

RESOURCE WEALTH AND DEMOCRACY*

(DEPENDENT VARIABLE IS REGIME)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Regime | .253*** | .894*** | .25*** | .246*** |
| | (.0203) | (.00846) | (.0203) | (.0204) |
| Oil | -.0346*** | -.0078*** | -.0339*** | -.0393*** |
| | (.0051) | (.0024) | (.00506) | (.00543) |
| Minerals | -.0459*** | -.00718* | -.0438*** | -.0455*** |
| | (.00778) | (.00317) | (.0081) | (.00804) |
| Income (log) | .922*** | .119*** | .935*** | .965*** |
| | (.105) | (.0342) | (.106) | (.107) |
| Islam | -.018*** | -.0031*** | -.0178*** | -.0173*** |
| | (.00208) | (.000665) | (.0021) | (.00211) |
| OECD | 1.47*** | .176* | 1.42*** | 1.44*** |
| | (.308) | (.0781) | (.305) | (.308) |
| Food | — | — | .0244* | — |
| | | | (.0102) | |
| Agriculture | — | — | — | .042 |
| | | | | (.0239) |
| Observations | 2183 | 2498 | 2182 | 2178 |
| States | 113 | 115 | 113 | 113 |
| Log likelihood | -3133 | -3283 | -3129 | -3123 |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

ᵃAll independent and control variables are entered with five-year lags, except in column 2, where they are entered with a one-year lag. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using a panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

The results of the basic model are reported in Table 3, column 1. All of the variables are highly significant with the expected signs.[57] Both *Oil* and *Minerals* have strong antidemocratic effects; these effects are of roughly the same magnitude, although the *Minerals* coefficient is somewhat larger.[58]

[57] Most of the coefficients for the year dummies are also significant: for years 1971–89 the coefficients are negative and range from marginally to highly significant; for 1990 the coefficient is negative but not significant; and for years 1991–96 the coefficients are positive, although all but one (1994) are not significant.

[58] These results were unaffected by the inclusion of other variables that are sometimes significant in democracy regressions, including educational attainment, status as a former British colony, Catholic population, and trade openness. Only the last variable was significant. When run with a random-effects process, a Hausman test produces a chi² of 466 and a P value of 0.000. When run with a fixed-effects process, however, none of the right-hand-side variables—except for the lagged dependent variable and Log Income—are significant.
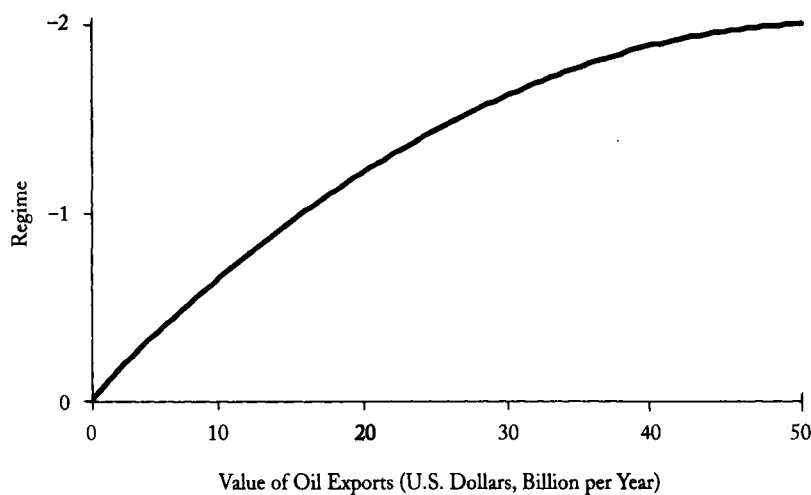
FIGURE 1
IMPACT OF OIL EXPORTS ON REGIME

ᵃ This figure shows the net predicted impact of oil exports on the 0–10 variable *Regime,* for a hypothetical country of twenty million people with a per capita income of $1,720 dollars a year, which is the sample mean. Note the scale on the Y-axis is negative.

The results suggest that the antidemocratic properties of oil and mineral wealth are substantial: a single standard deviation rise in the *Oil* variable produces a .49 drop in the 0–10 democracy index over the five-year period, while a standard deviation rise in the *Minerals* variable leads to a .27 drop. A state that is highly reliant on oil exports—at the 1995 level of Angola, Nigeria, or Kuwait—would lose 1.5 points on the democracy scale due to its oil wealth alone. A state that was equally dependent on mineral exports would lose 2.1 points.

The model also implies, however, that the impact of any new oil or mineral wealth may be partly offset by a rise in income. To complicate matters, the influence of *Oil* and *Minerals* on *Regime* is nonlinear, and the magnitude of their impact depends on the state's prior level of income.[59]

As Figure 1 shows, the marginal influence of *Oil* on *Regime* is larger when oil exports are a small fraction of the economy, and it drops as the country grows more reliant on oil. While Barro and Przeworski et al. imply that oil wealth matters only when exports reach extraordinarily

[59] These effects occur because *Income* is entered in the model as a logarithmic function and because an oil discovery will influence both the numerator and the denominator in the *Oil* variable.
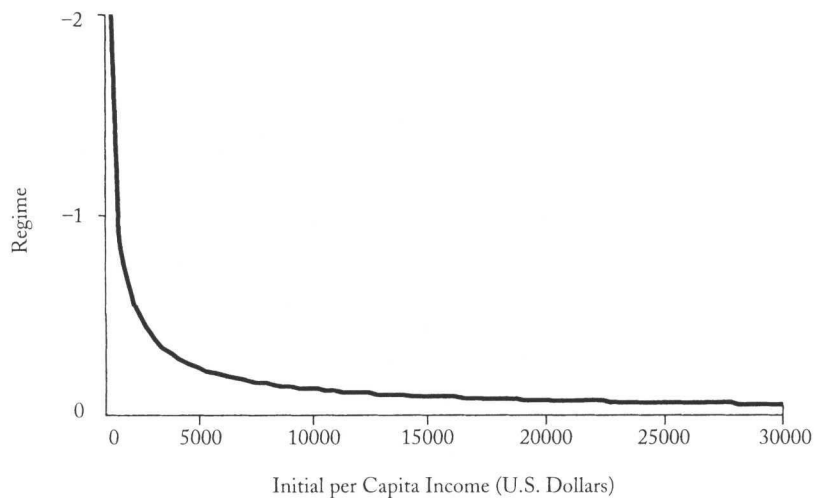
FIGURE 2
IMPACT OF $10 BILLION ANNUAL RISE IN OIL EXPORTS ON REGIME, BY INITIAL
PER CAPITA INCOME

ᵃ This figure shows the net predicted impact of a $10 billion rise in oil exports on the 0–10 variable *Regime,* by initial per capita income, for a hypothetical country with a population of twenty million, with no prior oil exports. Note the scale on the Y-axis is negative.

high levels, this test suggests the opposite: barrel for barrel, oil harms democracy more in oil-poor countries than in oil-rich ones.

The test also implies that oil and mineral wealth cause greater damage to democracy in poor countries than in rich ones (see Figure 2). Imagine a country whose per capita income is $800 a year—about the level of Chad, Mozambique, and Yemen—with a population of twenty million and no oil exports. Suppose prospectors find an oil field that produces $10 billion of petroleum each year, all of which is exported. The new oil would simultaneously boost per capita income (a prodemocratic effect) and raise the *Oil* variable (an antidemocratic effect). The model predicts that after five years the government would become less democratic, losing about .93 on the 0–10 democracy scale. A comparable discovery in a state whose initial per capita income was $1,720—the sample mean—would lose .54 points; if the per capita income were $8,000—about the level of Mexico and Malaysia—the same oil field would be associated with a drop of just .16 in *Regime.* This pattern is consistent with the observation that large oil discoveries appear

to have no discernible antidemocratic effects in advanced industrialized states, such as Norway, Britain, and the U.S., but may harm or destabilize democracy in poorer countries.

To determine how general and robust these effects are, I carry out five additional tests. First, to see whether the results are sensitive to the duration of the lag on the right-hand-side variables, I run the same model using one-year lags on all the explanatory variables (Table 3, column 2). All of the variables remain significant, although the absolute value of the coefficient on the lagged regime type variable grows, and the absolute values and significance of the coefficients on the other variables are reduced, perhaps artificially.[60]

Next, to see whether other types of commodity exports also inhibit democratization, I add two variables to the model: *Food*, which measures the value of all food exports as a fraction of GDP, and *Agriculture*, which measures the value of all nonfood agricultural exports as a fraction of GDP. As columns 3 and 4 of Table 3 show, the coefficients on *Food* and *Agriculture* are both positive—unlike *Oil* and *Minerals*, which are negative. These findings are consistent with the rentier state thesis: oil and other minerals impede democracy, but other primary commodities—which generate few or no rents, produce less export income for the state, and employ a larger fraction of the labor force—do not.

The third test is designed to see whether the model is heavily influenced by the inclusion of small states in the sample. Some of the states most dependent on oil have small populations, including Brunei and the Persian Gulf states of Bahrain, Kuwait, Qatar, and the United Arab Emirates; it would not be surprising if they had a large influence on the magnitude and significance of the *Oil* variable. To determine this, I placed a dummy variable, *Large States*, in the model; it was coded 0 if a state's population was below one million and 1 otherwise. The results are displayed in Table 4, column 1. The coefficient on the population dummy is positive and significant at the 0.05 level, indicating that small states *do* tend to be less democratic than large ones; yet its inclusion has only a tiny influence on the *Oil* and *Minerals* coefficients and leaves them highly significant.

The fourth test looks at whether the apparent effects of *Oil* and *Minerals* are caused by cultural or historical impediments to democratization that are specific to the Middle East and sub-Saharan Africa, two regions where these states are most heavily concentrated. I add two dummy variables to the regression, *Mideast* and *SSAfrica*, which were

[60] See Achen (fn. 56).

TABLE 4

RESOURCE WEALTH AND DEMOCRACY[a]

(DEPENDENT VARIABLE IS REGIME)

| | 1 | 2 | 3 |
|---|---|---|---|
| Regime | .255*** | .209*** | .227*** |
| | (.0203) | (.0205) | (.0203) |
| Oil | -.0333*** | -.0209*** | -.0138* |
| | (.00511) | (.00512) | (.00557) |
| Minerals | -.0439** | -.0265*** | -.0336*** |
| | (.00802) | (.00718) | (.00761) |
| Income (log) | .947*** | .789*** | .895*** |
| | (.105) | (.117) | (.112) |
| Islam | -.0178*** | -.00538 | -.013*** |
| | (.00209) | (.0033) | (.00238) |
| OECD | 1.41*** | 1.6*** | 1.39*** |
| | (.306) | (.31) | (.286) |
| Large States | .828* | — | — |
| | (.406) | | |
| Mideast | — | -3.65*** | — |
| | | (.386) | |
| SSAfrica | — | -1.62*** | -.998*** |
| | | (.2) | (.194) |
| Arabian Peninsula | — | — | -3.74*** |
| | | | (.49) |
| Observations | 2183 | **2183** | 2183 |
| States | 113 | **113** | 113 |
| Log likelihood | -3133 | -3086 | -3100 |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

[a] All independent and control variables are entered with five-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

coded 1 if the states were classified by the World Bank as residing in these regions and 0 otherwise. While the lagged dependent variable helps control for unspecified country-level effects—which might crudely be summarized as "the country's history"—*Mideast* and *SSAfrica* test for additional region-level effects, or "the region's history."

The results are listed in column 2 of Table 4. The coefficients for both *Mideast* and *SSAfrica* are large, negative, and highly significant. The coefficients on the *Oil* and *Minerals* variables are again reduced but remain highly significant. The *Islam* variable loses significance, due to its high correlation with the *Mideast* variable (=.65).

For the final test, I use a new dummy, *Arabian Peninsula*, in place of the *Mideast* dummy; it was coded 1 for the seven states of the Arabian Peninsula (Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, the United Arab Emirates, and Yemen) and 0 otherwise. Conceivably the *Mideast* dummy is too broad, since it attempts to capture the effects of residing in a region that is socially and geologically diverse. The antidemocratic effects of oil might be somewhat more restricted to the Arabian Peninsula, which is dominated by monarchies, sparsely populated, and endowed with spectacular oil wealth. Using *Arabian Peninsula* instead of *Mideast* reduces the problem of collinearity with *Islam*, although *Arabian Peninsula* and *Oil* remain highly collinear (simple correlation =.74). Still, while including the *Arabian Peninsula* dummy reduces the magnitude of the *Oil* coefficient by about 60 percent, *Oil* remains significant at the 0.05 level.

These tests support both the validity and the generality of the oil-impedes-democracy claim. They suggest the following: that a state's reliance on either oil or mineral exports tends to make it less democratic; that this effect is not caused by other types of primary exports; that it is not limited to the Arabian Peninsula, to the Middle East, or to sub-Saharan Africa; and that it is not limited to small states. These findings are generally consistent with the theory of the rentier state.

Area specialists might also feel vindicated in noting that in these tests the most powerful impediments to democracy include the variables $Regime_{t-1}$, *Mideast*, and *Arabian Peninsula*, which represent the accumulation of historical and cultural factors in each country, and in the Arabian Peninsula and Mideast regions, that are not captured by income, resource wealth, Islam, or non-Western status. This underscores the critical importance of case studies in explaining regime types.

## CAUSAL MECHANISMS

To test the three causal mechanisms I add to the basic model a series of intervening variables, lagged by one year. Adding new variables reduces the sample size from 2,183 observations to between 2,183 and 426 observations. As the sample shrinks, it becomes increasingly skewed toward states that are relatively wealthy, democratic, and Western, introducing a pronounced sample bias. To minimize this problem, after running each of the following regressions, I run a second regression using the same reduced sample, but without the intervening variable. I then compare the two regressions. If the intervening variable is valid, it should be statistically significant, and—if the *Oil* and *Minerals* variables

are significant in the reduced sample—its inclusion should reduce the absolute values of the *Oil* and *Minerals* coefficients. This provides at least a crude test of some of the causal mechanisms.

## RENTIER EFFECT

To test the rentier hypothesis, I use three indicators. For the taxation effect I use the variable *Taxes*, which is the percentage of government revenue collected through taxes on goods, services, income, profits, and capital gains. The taxation effect implies that states that fund themselves through these assorted personal and corporate taxes (and hence have higher values on the *Taxes* variable) should be more democratic; conversely, states that fund themselves through other means (such as trade taxes, parastatals, external grants, and right-of-way fees) should be more authoritarian. The variable is constructed from data collected by the International Monetary Fund and covers 104 of the 113 states in the basic model.

To test the spending effect I use *Government Consumption,* which measures government consumption as a percentage of GDP; this includes all current spending for purchases of goods and services (including wages and salaries) by all levels of government. If the spending effect is valid, higher levels of government spending should result in less democracy. The data cover 104 states and are compiled by the World Bank, which in turn collects information from the OECD, national statistical organizations, central banks, and World Bank missions.

The third variable is *Government/GDP,* which measures the share of GDP accounted for by government activity, in 1985 international prices; the data are from Summers and Heston.[61] This final indicator is one way to look for a group-formation effect. Proponents of this effect imply that as governments increase in size (relative to the domestic economy) they are more likely to prevent the formation of civic institutions and social groups that are independent from the government, and that the absence of these groups will hinder a transition to democracy.[62] Without good indicators for civic institutions or social groups, this hypothesis cannot be tested directly with regression analysis. Still, the *Government/GDP* variable offers an indirect test: the greater the government's size (as a fraction of GDP), the less likely that independent social groups will form.

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[61] Robert Summers and Alan Heston, "Penn World Tables, Version 5.6," http://cansim.epas. utoronto.ca;5680/pwt/pwt.htm/, 1999 (consulted March 1, 2000).

[62] Of course, a larger budget may not be the only cause of such government actions, but it is the only cause that can be linked to resource wealth in an obvious way.

TABLE 5
THE RENTIER EFFECT[a]
(DEPENDENT VARIABLE IS REGIME)

|              | 1 | 2 | 3 |
|--------------|---------|---------|---------|
| Regime       | .259*** | .243*** | .251*** |
|              | (.021)  | (.0211) | (.0203) |
| Oil          | -.0223*** | -.0323*** | -.0351*** |
|              | (.00647) | (.00544) | (.00511) |
| Mineral      | -.0157  | -.0463*** | -.0369*** |
|              | (.0113) | (.00677) | (.00675) |
| Income (log) | 1.005*** | .889*** | .857*** |
|              | (.104)  | (.112)  | (.106)  |
| Islam        | -.0165*** | -.0191*** | -.0161*** |
|              | (.00205) | (.00218) | (.00212) |
| OECD         | 1.19*** | 1.57*** | 1.53*** |
|              | (.272)  | (.314)  | (.303)  |
| Taxes        | .02***  | —       | —       |
|              | (.00373) |        |         |
| Government Consumption | — | -.0305*** | — |
|              |         | (.00866) |        |
| Government/GDP | —     | —       | -.0332*** |
|              |         |         | (.00739) |
| Observations | 1698    | 2121    | 2168    |
| States       | 104     | 110     | 111     |
| Log likelihood | -2320 | -3036   | -3107   |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

[a]Independent and control variables are entered with five-year lags; intervening variables (*Taxes, Government Consumption, Government/GDP*) are entered with one-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

As Table 5 shows, the coefficient on *Taxes* is highly significant and positive: as the rentier effect implies, higher personal and corporate taxes are strongly associated with more democratic government. Moreover, the inclusion of *Taxes* produces a 17 percent drop in the *Oil* coefficient, which implies that the taxation effect may account for part of the antidemocratic influence of *Oil*.[63] While it is possible that causality also runs the other way—that regime type influences taxation—it should be in the opposite direction: more democratic governments

[63] The *Minerals* variable is not significant in this sample, making it difficult to draw inferences about the mineral-exporting states.

should be less disposed to fund themselves through personal and corporate taxes, given their unpopularity.

The effect of taxes on regime types turns out to be strictly short term: when *Taxes* is introduced into the model with a two- or three-year lag, its coefficient quickly drops in size and loses significance. This implies that tax increases have only short-term effects on democracy: people tend to respond to tax hikes right away or not at all.[64]

The *Government Consumption* variable is also highly significant in the hypothesized direction (Table 5, column 2). When *Government Consumption* is included in the model, *Oil* and *Minerals* drop slightly, by 7 and 6 percent, respectively. The spending effect appears to last longer than the taxation effect: the *Government Consumption* variable has much the same effect on regime type after three years as it does after one.

These results are not likely caused by endogeneity. While there is evidence that regime type influences levels of government consumption, it is in the opposite direction found here: democratic governments tend to favor higher levels of social spending than their authoritarian counterparts.[65]

Finally, *Government/GDP* is also highly significant with the hypothesized sign: the larger the government, the less movement toward democracy over the following five years. Its inclusion has no effect on the *Oil* variable but produces a 12 percent drop in the *Minerals* variable (Table 5, column 3).

In short, the results are consistent with all three aspects of the rentier effect.

## REPRESSION EFFECT

I use two variables to test the hypothesis that resource wealth causes governments to arm themselves more heavily against popular pressures. The first is *Military/GNP*, which measures the size of the military budget as a fraction of GNP. The data were originally collected by the Arms Control and Disarmament Agency (ACDA) of the U.S. government and

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[64] Note that other studies have found that a government's reliance on personal and corporate tax revenues is strongly and negatively influenced by per capita income: poor states tend to rely on trade taxes, rich ones on personal and corporate taxes. See William Easterly and Sergio Rebelo, "Fiscal Policy and Economic Growth," *Journal of Monetary Economics* 32 (December 1993); Howell H. Zee, "Empirics of Cross-Country Tax Revenue Comparisons," *World Development* 24 (October 1996). Since per capita income is included in the model, the actual effect of *Taxes* on regime types is probably larger than the coefficient in this regression suggests.

[65] David S. Brown and Wendy Hunter, "Democracy and Social Spending in Latin America, 1980–92," *American Political Science Review* 93 (December 1999).

cover 101 states between 1985 and 1995.[66] Since resource-rich states tend to have government budgets that are atypically large relative to the size of their economies, this is a better indicator than military spending as a fraction of government spending.

The second variable is *Military Personnel*, which measures the size of the military as a fraction of the labor force; it includes some paramilitary forces "if those forces resemble regular units in their organization, equipment, training, or mission." The data are also from ACDA and are available from 1985 to 1995 for 105 of the states in the database. Unlike the *Military/GNP* measure, this indicator helps control for variations in military wages and the presence of conscription across states.

When *Oil, Minerals*, and *Income* are regressed on *Military/GNP* directly (with a five-year lag), the behavior of oil exporters and mineral exporters diverges. Oil exports are indeed positively and significantly correlated with military spending, as the repression hypothesis suggests; but mineral exports are negatively and significantly associated with military spending. Neither variable is significantly linked with *Military Personnel*.

When *Military/GNP* is placed in the basic model of regime types, its coefficient is negative and marginally significant at the 0.10 level; its inclusion produces a 6 percent drop in the *Oil* coefficient (Table 6). The *Military Personnel* coefficient is negative and highly significant, although it paradoxically induces a 7 percent rise in *Oil*. In both samples the *Minerals* coefficient is not significant and cannot be interpreted. Overall, it appears that oil wealth may be linked to higher levels of military spending, which in turn tends to impede democracy, as the repression effect suggests. But there is no evidence of a similar pattern for mineral wealth; nor is there evidence to support the claim that oil or mineral wealth leads to higher levels of military personnel.

Why do oil-rich governments invest as much as they do on their militaries? Is it to repress popular pressures, or is it a response to higher levels of instability? To address this question I use data from the Political Risk Services Group, a private firm that uses subjective measures to gauge investment risks for its clients. It produces a 0–6 measure of *Ethnic Tensions*, which measures "the degree of tension within a country attributable to racial, nationality, or language divisions." Scores are available for 102 states between 1982 and 1997. Higher values indicate less ethnic tension. When added to the model—first separately, then

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[66] Since the data cover only eleven years, the maximum number of possible observations for these regressions drops from 3,752 to 1,642.

TABLE 6
THE REPRESSION EFFECT[a]
(DEPENDENT VARIABLE IS REGIME)

| | 1 | 2 | 3 |
|---|---|---|---|
| Regime | .414*** | .334*** | .34*** |
| | (.032) | (.0314) | (.0262) |
| Oil | -.0591*** | -.0679*** | -.0517*** |
| | (.00566) | (.00632) | (.00609) |
| Minerals | .0169 | -.00344 | -.000964 |
| | (.0272) | (.0179) | (.0201) |
| Income (log) | .848*** | .822*** | .824*** |
| | (.132) | (.145) | (.117) |
| Islam | -.0173*** | -.0158*** | -.0263*** |
| | (.00266) | (.00235) | (.00251) |
| OECD | -.071 | -.00168 | -.0957 |
| | (.332) | (.355) | (.3) |
| Military/GNP | -.0366 | — | — |
| | (.0197) | | |
| Military Personnel | — | -.09** | — |
| | | (.0304) | |
| Ethnic Tensions | — | — | -.0254 |
| | | | (.0485) |
| Observations | 841 | 874 | 1167 |
| States | 101 | 105 | 102 |
| Log likelihood | -1228 | -1293 | -1642 |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level
 [a]All independent and control variables are entered with five-year lags; intervening variables (Military/GNP, Military Personnel, Ethnic Tensions) are entered with one-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

together with Military/GNP, and finally controlling for ethnolinguistic fractionalization—the Ethnic Tensions variable is not statistically significant (Table 6, column 3). In other words, tensions caused by racial, national, or language divisions do not explain why oil-rich states spend so heavily on repression.

MODERNIZATION EFFECT

To test the modernization hypothesis I use eleven indicators to determine whether abnormally low levels of occupational specialization, education, health services, media participation, and urbanization can help

explain the dearth of democracy in the resource-rich states. The large number of indicators allows me to test both Inglehart's version of modernization theory and earlier versions described by Lerner, Deutsch, and Lipset.

According to Inglehart, occupational specialization and education are the key links between economic growth and democracy. To measure occupational specialization I look at the number of men and women in the economy's secondary (industrial) and tertiary (services) sectors as a fraction of the men and women in the economically active population. These data are drawn from the International Labor Organization and cover 76 of the 113 states used in the basic model.

For educational levels, I use figures on the enrollment of men and women in secondary school as a fraction of the corresponding age group in the population at large and figures on college enrollment as a fraction of the population. Both data sets are collected by national governments and assembled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Figures on secondary enrollment are available for forty-eight countries; figures on college enrollment are available for ninety-six countries.

Early proponents of modernization theory suggested that improvements in a population's physical health can also lead to democratization.[67] More recently Inglehart has argued that as a population's basic nutritional and health needs are satisfied, they will increasingly turn to "postmaterialist" values, including a desire for self-expression and individual freedom; this value shift, in turn, will facilitate more democratic government.[68] Earlier scholars measured the quality of a population's health by using the number of doctors per capita. Here I use life expectancy at birth, a measure that also accounts for nutrition levels and the distribution of health services across the population. The underlying data are compiled by several UN agencies and cover ninety states.

In Lipset's classic analysis, the greater a society's level of "media participation," the more likely it is to be democratic.[69] Lipset measured media participation using telephones, radios, and newspaper copies per capita. To update these indicators slightly, I measure both the number of telephone mainlines and televisions per capita. Data on telephone mainlines and televisions are collected by the International Telecom-

[67] Daniel Lerner, *The Passing of Traditional Society* (New York: Free Press, 1958); Deutsch (fn. 38).
[68] Inglehart (fn. 1).
[69] Lipset (fn. 38).

TABLE 7
THE MODERNIZATION EFFECT[a]
(DEPENDENT VARIABLE IS REGIME)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Regime | .529*** | .462*** | .513*** | .604*** |
| | (.0316) | (.0408) | (.0336) | (.0324) |
| Oil | -.0182 | -.116 | -.0187 | -.0315 |
| | (.0221) | (.0202) | (.0207) | (.0234) |
| Minerals | .146* | .112 | .0952 | .115 |
| | (.0666) | (.0635) | (.0657) | (.0714) |
| Income (log) | -.251 | .565* | -.408 | 3.8 |
| | (.305) | (.271) | (.343) | (.344) |
| Islam | -.0121 | -.0154** | -.0232*** | -.000534 |
| | (.0082) | (.00545) | (.00652) | (.0104) |
| OECD | .752* | .652 | 1.13** | .391 |
| | (.419) | (.432) | (.372) | (.419) |
| Men in | .0733*** | — | — | — |
| Industry | (.0143) | | | |
| Women in | — | .0814*** | — | — |
| Industry | | (.0166) | | |
| Men in | — | — | .0685*** | — |
| Services | | | (.0155) | |
| Women in | — | — | — | -.0185*** |
| Services | | | | (.00512) |
| Observations | 626 | 615 | 622 | 629 |
| States | 75 | 75 | 76 | 76 |
| Log likelihood | -878 | -772 | -835 | -921 |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level
[a]All independent and control variables are entered with five-year lags; intervening variables (*Men in Industry, Women in Industry, Men in Services, Women in Services*) are entered with one-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

munications Union and are available for 113 and 110 states, respectively, and cover virtually all country years in the data set.

Finally, Lipset also suggested that higher levels of urbanization will lead to higher levels of democracy. To measure urbanization I use the fraction of a state's population currently living in urban areas. The data, collected by the United Nations, are available for all 113 states.

The results from these regressions are reported in Tables 7, 8, and 9. All of the variables measuring occupational specialization are highly

## TABLE 8
## THE MODERNIZATION EFFECT[a]
### (DEPENDENT VARIABLE IS REGIME)

|                          | 1          | 2          | 3          |
|--------------------------|------------|------------|------------|
| Regime                   | .378***    | .378***    | .34***     |
|                          | (.0449)    | (.0451)    | (.0334)    |
| Oil                      | −.0158     | −.0168     | −.033***   |
|                          | (.00966)   | (.00952)   | (.00991)   |
| Minerals                 | .0251      | .0255      | .0517      |
|                          | (.0431)    | (.0433)    | (.0325)    |
| Income (log)             | .258       | .364       | .678***    |
|                          | (.296)     | (.29)      | (.19)      |
| Islam                    | −.0393***  | −.0385***  | −.0348***  |
|                          | (.00507)   | (.00479)   | (.00407)   |
| OECD                     | .159       | .187       | −.0759     |
|                          | (.345)     | (.336)     | (.436)     |
| Male Secondary           | .004       | —          | —          |
| Enrollment               | (.00856)   |            |            |
| Female Secondary         | —          | .000812    | —          |
| Enrollment               |            | (.00882)   |            |
| College Enrollment       | —          | —          | −.00289    |
|                          |            |            | (.0105)    |
| Observations             | 426        | 426        | 688        |
| States                   | 48         | 48         | 96         |
| Log likelihood           | −566       | −563       | −1109      |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

[a] All independent and control variables are entered with five-year lags; intervening variables (*Male Secondary Enrollment, Female Secondary Enrollment, College Enrollment*) are entered with one-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

significant and positively associated with democracy, as predicted by proponents of modernization theory. The evidence that oil and mineral wealth influence occupational specialization, however, is somewhat weak.[70] The variables measuring education, life expectancy, urbanization, and televisions per capita are not significant, while the measure of

[70] Neither *Oil* nor *Minerals* is significantly correlated with democracy in these reduced samples, which makes it hard to be confident about these results. When *Oil* and *Minerals* are regressed on each of the four variables for occupational specialization (with *Income* and *Islam* included as control variables), the results are mixed: *Oil* is negatively correlated with *Men in Industry* but positively correlated with *Women in Industry; Minerals* is not significantly correlated with *Men in Industry* and is negatively, but weakly, linked to *Women in Industry.*

TABLE 9

THE MODERNIZATION EFFECT[a]

(DEPENDENT VARIABLE IS REGIME)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Regime | .194*** | .196*** | .413*** | .253*** |
| | (.0232) | (.0225) | (.0516) | (.0203) |
| Oil | -.0463*** | -.04*** | .0247 | -.0346*** |
| | (.00609) | (.00551) | (.039) | (.00509) |
| Minerals | -.00929 | -.0085 | -.0376 | -.0441*** |
| | (.016) | (.0152) | (.0605) | (.008) |
| Income (log) | 1.24*** | .882*** | 1.07*** | .983*** |
| | (.119) | (.134) | (.315) | (.149) |
| Islam | -.0194*** | -.023*** | -.0104 | -.0174*** |
| | (.00214) | (.00231) | (.0168) | (.00213) |
| OECD | 2.96*** | 1.75*** | -.041 | 1.51*** |
| | (.482) | (.351) | (.412) | (.31) |
| Telephones | -.00543*** | — | — | — |
| | (.00118) | | | |
| TVs | — | -.00096 | — | — |
| | | (.00079) | | |
| Life Expectancy | — | — | .00378 | — |
| | | | (.0616) | |
| Urban | — | — | — | -.00278 |
| | | | | (.005) |
| Observations | 1830 | 1831 | 777 | 2183 |
| States | 113 | 110 | 103 | 113 |
| Log likelihood | -2830 | -2676 | -857 | -3133 |

* significant at the 0.05 level; ** significant at the 0.01 level; *** significant at the 0.001 level

[a] All independent and control variables are entered with five-year lags; intervening variables (*Telephones, TVs, Life Expectancy, Urban*) are entered with one-year lags. Standard errors are in parentheses below the coefficients. Feasible Generalized Least Squares regressions run with Stata 6.0; corrected for first-order autocorrelation using panel-specific process. Each regression is run with dummy variables for every year (but one) covered by the data.

telephones per capita is highly significant but negatively correlated with democracy.

There are at least two ways to interpret these results. One is that the modernization effect is essentially valid but that occupational specialization is the only real causal mechanism behind it, with the other correlates of modernization being epiphenomenal. A second interpretation is that in resource-rich countries both the modernization effect and the spending effect occur simultaneously: relatively few people are drawn into the industry and service sectors; yet thanks to its large revenues,

the government can generously subsidize education, health care, and other services. The result is that the public enjoys generous social services yet is politically hampered by two antidemocratic forces: a lack of occupational specialization and a government that uses its fiscal powers to dampen dissent.

The results of these tests are at least weakly consistent with each of the three causal mechanisms. Collectively, they provide quantitative backing for the rentier effects described by a generation of Mideast specialists, for the repression effects observed in the case studies above, and for a modified form of the modernization thesis. Still, the causality tests rely on data that are incomplete and potentially biased, so the results should be treated as suggestive, not conclusive.

## CONCLUSION

This article has four main findings. First, the oil-impedes-democracy claim is both valid and statistically robust; in other words, oil *does* hurt democracy. Moreover, oil does greater damage to democracy in poor states than in rich ones, and a given rise in oil exports will do more harm in oil-poor states than in oil-rich ones. Hence, oil inhibits democracy even when exports are relatively small, particularly in poor states.

Second, the harmful influence of oil is not restricted to the Middle East. Oil wealth has probably made democratization harder in states like Indonesia, Malaysia, Mexico, and Nigeria; it may well have the same affect on the oil-rich states of Central Asia.

The third finding is that nonfuel mineral wealth also impedes democratization. While the major oil exporters are concentrated in the Mideast, major mineral exporters are scattered across Africa, Asia, and the Americas; this group includes many states where progress toward democracy has been halting or elusive, including Angola, Chile, the Democratic Republic of Congo, Cambodia, and Peru.

Each of these findings runs counter to the assumptions of earlier scholars that the antidemocratic effects of oil—if they existed—were restricted to the Middle East, that they influenced only states that were almost wholly dependent on oil, and that they did not extend to the mineral-rich states.

The fourth finding is that there is at least tentative support for three causal mechanisms that link oil and authoritarianism: a rentier effect, through which governments use low tax rates and high spending to dampen pressures for democracy; a repression effect, by which governments build up their internal security forces to ward off democratic

pressures; and a modernization effect, in which the failure of the population to move into industrial and service sector jobs renders them less likely to push for democracy. The links between mineral wealth and authoritarianism are more elusive: the mineral exporters appear to suffer from a rentier effect but not a repression effect, and there is only weak evidence that they are afflicted by a modernization effect.

Collectively, these findings should help vindicate two very different theories of comparative politics: modernization theory, which after falling out of favor in the 1970s and 1980s made a strong comeback in the 1990s; and the theory of the rentier state, which has long been championed by Middle East area specialists but overlooked by scholars of democratization.

They also highlight the value of bringing cross-national quantitative studies into closer contact with area studies. Global studies of democracy have generally overlooked the Mideast, a practice that is difficult to justify methodologically (since it arbitrarily truncates the researcher's sample of states) and one that has contributed to a belief that the Middle East region is sui generis. Of course, the history and culture of the Mideast are exceptional: note the enormous coefficient on the Mideast dummy variable in Table 4. But excluding Middle Eastern states from large-N studies of democracy can only widen the gap between area studies and the rest of political science. It also deprives mainstream political science of the many insights developed by area studies scholars—insights that, like the oil-impedes-democracy claim, may turn out to have general applications.

Finally, these findings have implications for the fate of resource-rich states across the developing world. Many of the world's most troubled states have high levels of oil and mineral wealth. Earlier studies have shown that resource wealth tends to reduce economic growth and to increase the likelihood of civil war. This article suggests there is a third component to "resource curse": authoritarian rule.

These three effects may interact in pernicious ways, creating a "resource trap." Authoritarian governments may be less able to resolve domestic conflicts and hence more likely to suffer from civil war. Slow growth may make domestic unrest tougher to resolve; civil wars, in turn, wreak economic havoc. There is nothing inevitable about the resource curse: states like Malaysia, Chile, and Botswana have done relatively well despite their oil and mineral wealth. Yet most others have found—like King Midas—that their resource wealth can be an unexpected source of grief.

## Appendix 1: Definition of Variables[71]

*Regime* is a 0–10 variable indicating a country's regime type, with 0 as a perfect autocracy and 10 a full democracy. It is taken from the Polity 98 data set compiled by Gurr and Jaggers, who assign a 0–10 indicator for both level of autocracy and level of democracy.[72] Each is a composite of underlying variables that measure the way chief executives are recruited, whether they gain office through competitive elections, whether nonelites may obtain executive office, and whether they are constrained by, and accountable to, other actors. Following Londregan and Poole, I transform these two measures into a single indicator by subtracting the autocracy measure from the democracy measure and by rescaling the resulting −10 to 10 scale as a 0 to 10 scale.[73] For the six states with populations greater than one million for which Gurr and Jaggers offer no indicators (Austria, Cameroon, Democratic Republic of Congo, Libya, Sierra Leone, and Switzerland), I use data from Freedom House (1972–98) instead, summing their measures for "political rights" and "civil liberties" and converting the results to the 0–10 scale.

*Log Income* is the natural log of real per capita GDP, in current international dollars. Most of the data come from Summers and Heston; missing values have been imputed using data from the World Bank.[74]

*Oil* is the export value of mineral-based fuels as a percentage of GDP. Mineral-based fuels include petroleum, natural gas, and coal, as classified under SITC revision 1, section 3. Following the practice of Sachs and Warner, I corrected the export figures for Singapore and Trinidad to reflect *net* exports, since both states are transshipment points for raw materials extracted in nearby states.[75] The values for both states were set at 0.01.

*Minerals* is the export value of nonfuel minerals as a percentage of GDP; it includes all ores and metals classified under SITC revision 1, sections 27, 28, and 68. Following the practice of Sachs and Warner, I corrected the export figures for Singapore and Trinidad to reflect *net* exports, since both states are transshipment points for raw materials extracted in nearby states.[76] The values for both states were set at 0.01.

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[71] Unless otherwise indicated, the data below were derived from World Bank, "World Development Indicators," CD-ROM (Washington, D.C.: World Bank, 1999).

[72] Gurr and Jaggers (fn. 42)

[73] Londregan and Poole (fn. 43).

[74] Summers and Heston (fn. 61).

[75] Sachs and Warner (fn. 3, 1999).

[76] Ibid.

*Islam* is the percentage of the population whose professed religious affiliation in 1970 was Muslim.[77]

OECD is a dummy variable coded 1 for the following states and 0 for all others: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States.

*Agriculture* is the export value of all nonfood agricultural raw materials, as a percentage of GDP. This includes all commodities classified as falling in SITC revision 1, section 2 (excluding divisions 22, 27, and 28).

*Food* is the export value of all edible agricultural commodities, as a percentage of GDP. This includes all commodities classified as falling in SITC sections 0, 1, and 4, and division 22.

*Large States* is a dummy variable coded 1 for states with populations over one million at any point between 1971 and 1997, and 0 otherwise.

*Mideast* is a dummy variable coded 1 for the following states and 0 otherwise: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen.

*SSAfrica* is a dummy variable coded 1 for states classified by the World Bank as residing in sub-Saharan Africa and 0 otherwise.

*Arabian Peninsula* is a dummy variable coded 1 for the states on the Saudi Arabian peninsula (Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, the United Arab Emirates, and Yemen) and 0 otherwise.

*Men in Industry* and *Women in Industry* indicate the fraction of the total working population of each gender group working in activities defined by the ILO as "industry." This includes mining and quarrying (including oil production), manufacturing, electricity, gas and water, and construction, corresponding to major divisions 2–5 (ISIC revision 2) or tabulation categories C–F (ISIC revision 3). The data are compiled by the World Bank's Development Data Group using an ILO database corresponding to table 2a in its *Yearbook of Labour Statistics*.

*Men in Services* and *Women in Services* indicate the fraction of the total working population of each gender group working in activities defined by the ILO as "services." Services include wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services, corresponding to major divisions 6–9 (ISIC

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[77] David B Barrett, ed., *World Christian Encyclopedia* (New York: Oxford University Press, 1982).

revision 2) or tabulation categories G–P (ISIC revision 3). The data are compiled by the World Bank's Development Data Group using an ILO database corresponding to table 2a in its *Yearbook of Labour Statistics*.

*Male Secondary Enrollment* and *Female Secondary Enrollment* indicate the fraction of males and females enrolled in secondary school, relative to their numbers in the population. The data are reported to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) by national education authorities.

*College Enrollment* indicates the fraction of the population enrolled in college. The data are reported to UNESCO by national education authorities.

*Life Expectancy* indicates the life expectancy at birth of both males and females. The underlying figures are from the United Nations Department of Economic and Social Affairs, Population and Vital Statistics Report; demographic and health surveys from national sources; and United Nations Children's Fund (UNICEF), *The State of the World's Children, 1999*.

*Urban* is the midyear population of areas defined as urban in each country and reported to the United Nations, expressed as a fraction of the total population. The data are from from the United Nations, *World Urbanization Prospects: The 1996 Revision*.

*Telephones* is the number of telephone mainlines (that is, separate lines to a given household or firm) per thousand people. The data are derived from the International Telecommunication Union (ITU), *World Telecommunication Development Report*.

*TVs* is the number of televisions per thousand people, according to an annual questionnaire sent to member countries by the ITU. The data are derived from the ITU, *World Telecommunication Development Report*.

*Taxes* is the percentage of government revenue raised through taxes on goods, services, income, profits, and capital gains. The data are collected by the IMF.

*Government Consumption*, expressed as a percentage of GDP, includes "all current expenditures for purchases of goods and services by all levels of government, excluding most government enterprises. It also includes capital expenditure on national defense and security." The data are collected from the OECD and from national statistical organizations and central banks by visiting and resident World Bank missions; they are published by the World Bank.

*Government/GDP* is the share of GDP accounted for by government activity, in 1985 international prices. The data are from the Penn World Tables.

*Military/GNP* measures the size of the military budget as a fraction of

GNP. The data cover 1985–95; they were originally collected by the Arms Control and Disarmament Agency (ACDA) of the U.S. government.

*Military Personnel* measures the size of the military as a percentage of the labor force; it includes some paramilitary forces "if those forces resemble regular units in their organization, equipment, training, or mission." The data are also from ACDA and cover 1985–95.

*Ethnic Tensions* is a 0–6 interval-level variable that measures "the degree of tension within a country attributable to racial, nationality, or language divisions." The data cover 97 states between 1982 and 1997; the codings are carried out by a private firm, the Political Risk Services Group, and published in their monthly *International Country Risk Guide;* they are also available as the IRIS-3 computer database. The monthly data have been changed into annual data by taking the mean of the twelve monthly values.

## APPENDIX 2:
### SUMMARY OF VARIABLES

| Variable | Obs. | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Regime | 3752 | 4.48 | 3.79 | 0 | 10 |
| Log Income | 3316 | 7.45 | 1.2 | 4.53 | 10.43 |
| Oil | 2322 | 5.5 | 14.1 | 0 | 115.6 |
| Minerals | 2865 | 2.25 | 5.8 | 0 | 55.1 |
| OECD | 4528 | .163 | .369 | 0 | 1 |
| Islam | 4336 | 25 | 36.6 | 0 | 99.7 |
| Food | 2511 | 5.73 | 6.23 | 0 | 45.9 |
| Agriculture | 2504 | 1.68 | 2.88 | 0 | 31.6 |
| Men in Industry | 814 | 29.4 | 12.7 | .4 | 66.9 |
| Women in Industry | 798 | 15.5 | 8.99 | 0 | 50.2 |
| Men in Services | 810 | 39 | 14.3 | 5 | 69.3 |
| Women in Services | 813 | 52 | 25.6 | 9 | 100 |
| Male Secondary | 607 | 57.7 | 27.9 | 3 | 98.6 |
| Female Secondary | 607 | 58 | 29.9 | 1.3 | 98.5 |
| College | 1272 | 16.9 | 16.9 | .1 | 97.7 |
| Urban | 4372 | 46.1 | 25 | 2.24 | 100 |
| Life Expectancy | 1527 | 62.5 | 11.7 | 31.2 | 79.8 |
| Telephones | 3129 | 106 | 154 | .1 | 691 |
| TVs | 3040 | 151 | 169 | 0 | 838 |
| Taxes | 2325 | 50.9 | 18.7 | 0 | 101 |
| Govt. Consumption | 3538 | 15.2 | 6.51 | .897 | 76.2 |
| Government/GDP | 2277 | 23.8 | 11.9 | 0 | 91.2 |
| Military/GNP | 1298 | 4.36 | 6.64 | 0 | 102 |
| Military Personnel | 1440 | 1.84 | 2.6 | 0 | 29.6 |
| Ethnic Tensions | 1739 | 3.791 | 1.633 | 0 | 6 |

# ISLAM AND AUTHORITARIANISM

## By M. STEVEN FISH*

ARE predominantly Muslim societies distinctly disadvantaged in democratization? Some observers, noting what appears to be an especially high incidence of authoritarianism in the Islamic world, have held that Islam may be incompatible with open government.[1] Others have argued that Islam is not necessarily antithetical to democratization.[2] Yet few studies have attempted to establish empirically whether a democratic deficit really exists and, if so, how it can be explained.

The present article offers a straightforward cross-national examination of the relationship between Islam and regime type. After briefly sketching my conception of democracy, I conduct an empirical test of the determinants of political regime. The test provides strong support for the hypothesis that Muslim countries are democratic underachievers. The causal connection between Islam and regime type is then explored. Many conventional assumptions about Islam and politics do not

[1] Adrian Karatnycky, "Muslim Countries and the Democracy Gap," *Journal of Democracy* 13 (January 2002); John Waterbury, "Democracy without Democrats?" in Ghassan Salamé, ed., *Democracy without Democrats? The Renewal of Politics in the Muslim World* (London: I. B. Tauris, 1994); V. S. Naipaul, *Among the Believers: An Islamic Journey* (New York: Random House, 1982); Elie Kedourie, *Democracy and Arab Political Culture* (London: Frank Cass, 1994); Judith Miller, *God Has Ninety-nine Names* (New York: Touchstone, 1997); Daniel Pipes, *In the Path of God: Islam and Political Power* (New York: Basic Books, 1983).

[2] John L. Esposito and John O. Voll, *Islam and Democracy* (New York: Oxford University Press, 1996); Robert W. Hefner, *Civil Islam: Muslims and Democratization in Indonesia* (Princeton: Princeton University Press, 2000); Ali R. Abootalebi, "Islam, Islamists, and Democracy," *Middle East Review of International Affairs* 3 (March 1999); Hamid Enayat, *Modern Islamic Political Thought* (Austin: University of Texas Press, 1982); Glenn E. Robinson, "Can Islamists Be Democrats?" *Middle East Journal* 51 (Summer 1997); Mary Ann Tetreault, "Patterns of Culture and Democratization in Kuwait," *Studies in Comparative International Development* 30 (Summer 1995); Abdullahi Ahmed An-Na'im, *Toward an Islamic Reformation: Civil Liberties, Human Rights, and International Law* (Syracuse, N.Y.: Syracuse University Press, 1996); Robin Wright, "Two Visions of Reformation," *Journal of Democracy* 7 (April 1996); Charles Kurzman, ed., *Liberal Islam: A Sourcebook* (Oxford: Oxford University Press, 1998); Joel Beinin and Joe Stork, eds., *Political Islam* (Berkeley: University of California Press, 1997); François Burgat, *The Islamic Movement in North Africa* (Austin: University of Texas Press, 1997); Kevin Dwyer, *Arab Voices: The Human Rights Debate in the Middle East* (Berkeley: University of California Press, 1991).

withstand scrutiny. Muslim societies are not more prone to political violence; nor are they less "secular" than non-Muslim societies; and interpersonal trust is not necessarily lower in Muslim societies. But one factor does help explain the democratic deficit: the subordination of women. I furnish elements of a provisional theory linking the station of females and regime type and I discuss the implications of the findings for democracy. I further contend that patriarchal social order in Muslim societies has an ironic character, since it cannot be accounted for in scriptural terms.

Many definitions of democracy are available. I adopt the electoral-procedural definition offered by Robert Dahl.[3] Dahl's definition, which he labeled "polyarchy" since he regarded "democracy" as an unachievable ideal type, amounts to a list of "procedural minima." These include elections as well as provisions to ensure that major policy decisions are vested in elected officials and that practically all adults have the right to run for office. Dahl also included the communicative and associational rights necessary for the electors to be informed and capable of organizing themselves for political participation.

An essentially Dahlian conception of democracy is adopted by Freedom House (FH), the world's leading agency that evaluates countries according to the extent of political liberties and civil rights. Freedom House issues a freedom rating (hereafter FH score) on an annual basis for each of the world's countries. Scores range from 1 (most free) to 7 (least free). For a more intuitive presentation, I reversed the scale so that higher numbers represent greater openness. I use a ten-year average of FH scores (the 1991–92 to the 2000–2001 surveys). This is the dependent variable. To check the findings, I also use an alternative measure of the dependent variable, namely, the Polity scores put out annually by the Polity Project. Data are available though 1998. I use an eight-year average (the 1991–98 scores). Polity scores range from 10 (most democratic) to –10 (most autocratic). The universe of cases is countries with populations over half a million for which scores on the dependent variable are available. FH scores are available for 157 countries; Polity scores, for 154 countries.

## DETERMINANTS OF REGIME TYPE: HYPOTHESES

I test only hypotheses that are tractable to quantitative analysis and that are manifestly distinct from the dependent variable. Thus, I examine

[3] Dahl, *Dilemmas of Pluralist Democracy* (New Haven: Yale University Press, 1982).

only what are commonly regarded as structural and cultural variables, as well as several historical variables that are amenable to coding in "yes" or "no" terms. A further limitation of my study arises from the problem of case selection. Including all countries of the world with populations over half a million helps mitigate the problem, but the analysis is not free from selection bias. I test only relationships that obtain in contemporary politics. As I do not use a random sample from all of history, I cannot confidently extend inferences from my sample to the world at other times. Whether or not a study of, say, the interwar period or the late nineteenth century would turn up similar findings is an empirical problem that deserves attention, but one that cannot be addressed here. In short, this inquiry is bounded in terms of both the hypotheses it tests and the period of time to which it applies. If the present article has anything to offer at all, its contribution is provisional and temporally specific. The aim is to assess whether the hypothesis that links Islam to authoritarianism enjoys empirical support when one controls for other possible determinants of political regime.

I use a dummy variable for countries where *Islamic religious tradition* is predominant. In one country, Eritrea, each of two major confessions has an equivalent proportion of adherents. Eritrea is therefore excluded. In all other countries a majority or clear plurality of the population is associated with a single religious tradition. In forty-seven countries that tradition is Islam. Islamic countries of course cover a large portion of the globe—from Morocco to Malaysia and from Albania to Kyrgyzstan. Only a quarter of them are located in the Middle East, and in only about a third is Arabic the principal language. A "percentage Muslim" by country measure might seem to provide a superior alternative to a dummy variable, but I prefer the latter, for two reasons. First, data on religious composition differ across sources. Figures on "percentage Muslim" that are consistent across sources are available for only about half of the countries under examination. Whether the percentage of the population living in Belarus and Armenia is 0 percent or 5 percent Muslim is not something one can establish with confidence. Even the governments of these countries do not have good data—and might not publicize them if they did. Whether Macedonia is as little as one-sixth or as much as one-third Muslim is the source of bitter dispute in the country itself. In Egypt, according to official government figures, no more than about one in twenty people is Christian; but the Coptic church and some observers claim that the number is closer to one in eight.[4]

[4] *World Desk Reference* (New York: Dorling Kindersley, 2000); John Bowker, ed., *Oxford Concise Dictionary of World Religions* (New York: Oxford University Press, 2000).

Whatever the disparities in data, however, one can state with confidence that Belarus, Armenia, and Macedonia are not predominantly Muslim countries and that Egypt is predominantly Muslim. Thus, while a dummy variable is a blunter measure than a ratio variable, the former has its own advantages in terms of reliability. Second, the dummy variable better suits my theoretical purposes. I am interested in whether Islamic societies are more or less resistant to democratization than others. I am not concerned with whether a society that is one-tenth Muslim is more or less likely to have an authoritarian regime than is a society that is one-eighth Muslim. I have no reason, based on either intuition or debates in the literature, to formulate a hypothesis about such a question. I do not wish to test whether *Muslims* per se are good or bad for democracy but rather am asking whether *polities whose populations are predominantly Muslim*—crudely put, "Muslim countries"—are more or less hospitable for democracy. My working assumption, therefore, is that the tipping point, if there is one, at which Islam matters for democracy is predominance, meaning that Islam is the country's main religious tradition.

If the variable for Islam is not robust when one controls for other potentially important determinants of political regime, one cannot establish with confidence that religious tradition influences regime type. I control for six other variables.

The most widely embraced causal hypothesis in the study of political regimes posits a positive relationship between *economic development* and democratic attainment. Analysts associate higher levels of economic development with lower levels of social conflict, more sophisticated populations, and broader and deeper social support for popular rule.[5] Some recent empirical studies have found that economic development does not inexorably generate democracy but that the durability of democracy, once established, is greater in wealthier countries.[6] A standard measure of economic development is gross domestic product (GDP) per capita. I use log GDP per capita in 1990 to control for economic development. Data are available for all 157 countries.

What may be dubbed the *sociocultural division* hypothesis is em-

[5] Seymour Martin Lipset, *Political Man* (Garden City, N.Y.: Doubleday, 1960); Andrew C. Janos, *East Central Europe in the Modern World* (Stanford, Calif.: Stanford University Press, 2000); Valerie Bunce, "Comparative Democratization: Big and Bounded Generalizations," *Comparative Political Studies* 33 (August–September 2000); Andreas Schedler, "Measuring Democratic Consolidation," *Studies in Comparative International Development* 36 (Spring 2001).

[6] Adam Przeworski, Michael E. Alvarez, José Antonio Cheibub, and Fernando Limongi, *Democracy and Development* (Cambridge: Cambridge University Press, 2000).

braced almost as reflexively as the economic development hypothesis. Ethnically diverse societies are usually seen as disadvantaged and homogenous ones as fortunate.[7] According to this logic, ethnic differences divide society and make compromise and consensus difficult. Ethnic heterogeneity raises the risk of intercommunal violence, which can quickly undermine democracy. To measure sociocultural division, I use the ethnolinguistic fractionalization scores generated by the Ethnologue project:[8] 0 represents complete uniformity and 1 represents highest fractionalization. Countries range from the homogeneous Koreas (both .00) to highly fractionalized Papua New Guinea (.99). Data are available for all 157 countries.

*Economic performance* is often held to influence political regime. Strong economic performance may protect fledgling democracies. Bad performance may generate popular dissatisfaction, alienate powerful social groups, and damage the cross-class alliances that stabilize democracy.[9] Yet the stability of authoritarian regimes may also be vulnerable to economic performance, meaning that bad performance may open possibilities for democratization.[10] The legitimacy of authoritarian regimes often rests on the promise of better economic performance alone, while open regimes also enjoy the legitimacy conferred by popular selection of the rulers and the state's respect for rights. Prolonged prosperity under an authoritarian regime may have contradictory effects. It might generate good will for the regime; but it might also raise popular expectations and increase the costs of repression as populations become more sophisticated. It may thereby ultimately undermine authoritarianism. There is no logical reason to expect strong economic performance in a democracy, by contrast, ever to undermine the democratic regime.[11] The preponderance of theory therefore suggests that sustained high rates of economic growth will help democratic regimes

[7] Donald L. Horowitz, "Democracy in Divided Societies," *Journal of Democracy* 4 (October 1993); Arend Lijphart, *Democracy in Plural Societies* (New Haven: Yale University Press, 1977); Robert A. Dahl, *Polyarchy* (New Haven: Yale University Press, 1971); Alvin Rabushka and Kenneth A. Shepsle, *Politics in Plural Societies* (Columbus, Ohio: Merrill, 1972).

[8] Barbara F. Grimes, ed., *Ethnologue Languages of the World*, 14th ed. (Dallas: SIL International, 2000).

[9] Evelyne Huber, "The Future of Democracy in the Caribbean," in Jorge I. Domingez, Robert A. Pastor, and R. DeLisle Worrell, eds., *Democracy in the Caribbean* (Baltimore: Johns Hopkins University Press, 1993); Michael Wallerstein, "The Collapse of Democracy in Brazil," *Latin American Research Review* 15, no. 3 (1980).

[10] Karen L. Remmer, "The Sustainability of Political Democracy: Lessons from South America," *Comparative Political Studies* 29 (December 1996).

[11] Juan J. Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation* (Baltimore: Johns Hopkins University Press, 1996).

and may either help or hurt authoritarian regimes. On balance, one would expect strong performance to be conducive to democratization. To measure economic performance, I use average annual percentage growth of GDP per capita from 1975 to 1998, data for which are available for 150 countries. Countries range from flourishing China (7.5) to unfortunate Azerbaijan (−9.8).

*British colonial heritage* has long been considered a boon for the prospects for popular rule. Myron Weiner asserted that the most empirically persuasive explanation for democracy in the developing world is British colonial heritage. According to Weiner, "The British tradition of imposing limits on government, of establishing norms for the conduct of those who exercise power, and of creating procedures for the management of conflict has had a powerful influence on the creation of democratic systems in the Third World."[12] The British are often also credited with leaving behind the Westminster model of parliamentarism, which some analysts regard as a strong constitutional basis for democracy.[13] A dummy variable is used for British colonial heritage. Thirty-one of the countries under examination are former British colonies.

Since the beginning of the 1990s, another type of legacy has also been seen as important: a *communist heritage*. Most scholars regard the effects of communist legacy as negative. According to many, communist party rule bequeathed an antidemocratic political culture.[14] Soviet-type regimes, to a greater extent than other types of authoritarianism, destroyed political and civil society,[15] leaving behind what Juan Linz and Alfred Stepan have called a "flattened landscape," a condition that "creates problems for political representation" in the post-Soviet period.[16] I use a dummy variable for postcommunist heritage and classify the twenty-eight countries of the former USSR, Mongolia, and post-communist Eastern Europe in this category.

[12] Myron Weiner, "Empirical Democratic Theory," in Myron Weiner and Ergun Özbudun, eds., *Competitive Elections in Developing Countries* (Durham, N.C.: Duke University Press, 1987), 20.

[13] Guy Lardeyret, "The Problem with PR," in Larry Diamond and Marc F. Plattner, eds., *The Global Resurgence of Democracy*, 2d ed. (Baltimore: Johns Hopkins University Press, 1996), 175–80; Anthony Payne, "Westminster Adapted: The Political Order of the Commonwealth Caribbean," in Domingez, Pastor, and Worrell (fn. 9).

[14] Ken Jowitt, "The Leninist Legacy," in Ivo Banac, ed., *Eastern Europe in Revolution* (Ithaca, N.Y.: Cornell University Press, 1992).

[15] Marc Morjé Howard, "Free Not to Participate: The Weakness of Civil Society in Post-Communist Europe," Studies in Public Policy no. 325 (Glasgow: University of Stathclyde, 2000); M. Steven Fish, *Democracy from Scratch: Opposition and Regime in the New Russian Revolution* (Princeton: Princeton University Press, 1995).

[16] Linz and Stepan (fn. 11), 247.

Natural resource endowment has been regarded as influencing political regime. Abundance of natural resources, and particularly of oil, has often been regarded as democracy's antagonist. It may enable the state to buy off society with low taxation and high welfare spending and thereby allay popular demand for political accountability. So too may it reduce political competition to a fight over control of the agencies that manage the distribution of oil rents. It may enable the state to sustain a large and powerful internal security apparatus capable of repressing challengers. Resource abundance may also distort modernization, spurring expansion of national income without inducing the socioeconomic changes that usually accompany an increase in wealth and that may favor democracy.[17] To control for this factor, I include a dummy variable for *membership in the Organization of Petroleum Exporting Countries* (OPEC). OPEC is made up of eleven countries, ten of which are predominantly Muslim.

Table 1 shows the mean values of the dependent variable and the hypothesized predictors for Muslim and non-Muslim countries. It also provides a list of the countries whose populations are predominantly Muslim. As the table shows, predominantly Muslim countries score far worse than non-Muslim countries on the dependent variable, whether the latter is measured using FH scores or Polity scores. But so too do Muslim countries appear to have some disadvantages in terms of possible determinants of democracy that are not due to Islam per se. For example, ethnic diversity is somewhat higher in Muslim countries and a smaller percentage of Muslim countries have a history of British colonization. Analysis of the data is necessary to assess the relationship between Islam and political regime.

## ANALYSIS OF DATA

RESULTS

I use OLS regressions. In the bivariate analyses, presented in Table 2, the sign of each regression coefficient, with the exception of the postcommunist variable, is in the expected direction. Islamic countries have worse FH scores. Higher economic development is associated with better FH scores; higher ethnic fractionalization, with worse FH scores; higher economic growth rates, with better FH scores; and OPEC membership, with worse FH scores. Former British colonies have better FH

[17] Michael L. Ross, "Does Oil Hinder Democracy?" *World Politics* 53 (April 2001); Terry Lynn Karl, *The Paradox of Plenty: Oil Booms and Petro-States* (Berkeley: University of California Press, 1997).

TABLE 1

MEAN SCORES ON FREEDOM HOUSE SCORES, POLITY SCORES, AND
HYPOTHESIZED DETERMINANTS OF REGIME TYPE FOR MUSLIM AND
NON-MUSLIM COUNTRIES[a]

| Variable | Muslim Countries | Non-Muslim Countries |
|---|---|---|
| Freedom House freedom rating, 1991–92 to 2000–2001 ten-year average; 7=most free, 1=least free) | 2.61 (N=47) | 4.74 (N=109) |
| Polity score, 1991–98 (eight-year average; 10=most democratic, −10=most autocratic) | −3.11 (N=46) | 4.86 (N=107) |
| Economic development (log GDP per capita$_{1990}$; 2=lowest income, 4.66=highest income) | 3.00 (N=47) | 3.32 (N=109) |
| Sociocultural division (ethnolinguistic fractionalization index; 0=most uniform, 1=most diverse) | .55 (N=47) | .40 (N=109) |
| Economic performance (growth of GDP per capita$_{1975-98 \text{ ave annual change \%}}$) | −0.73 (N=43) | 0.78 (N=106) |
| British colonial heritage | 7 of 47 countries (15%) | 24 of 109 countries (22%) |
| Communist heritage | 8 of 47 countries (17%) | 20 of 109 countries (18%) |
| OPEC membership | 10 of 47 countries (21%) | 1 of 109 countries (1%) |

SOURCES: For Freedom House scores, "Annual Survey of Freedom, Country Ratings, 1972–73 to 2000–01" (freedomhouse.org, accessed August 2001). For Polity scores, Ted R. Gurr, Monty G. Marshall, and Keith Jaggers, Polity Data Archive (isere.colorado.edu/pub/datasets/polity98, accessed September 2001). For Islamic religious tradition, CIA World Factbook 2000 (Washington, D.C.: Brassey's, 2000); and World Desk Reference (New York: Dorling Kindersley, 2000). For economic development, United Nations Development Programme, Human Development Report 2000 (New York: Oxford University Press, 2000); except data for Cuba, Djibouti, Eritrea, Germany, Iraq, Kuwait, Libya, Libya, Macedonia, Myanmar, and Qatar, which are from United Nations Statistics Division, "Indicators on Income and Economic Activity" (unstats.un.org, accessed April 2002). For sociocultural division, Barbara F. Grimes, ed., Ethnologue Languages of the World, 14th ed. (Dallas: SIL International, 2000). For economic performance, United Nations Development Programme, Human Development Report 2000 (New York: Oxford University Press, 2000); except data for Iraq, Libya, and Myanmar, which are from World Development Indicators 2001 (Washington, D.C.: World Bank, 2001), and for Liberia, which are from African Development Report 2001 (New York: Oxford University Press, 2001) (data on economic performance for Iraq, Libya, and Myanmar are for 1965–99; for Liberia, for 1980–1990).

[a]The countries whose predominant religious tradition is Islam are Afghanistan, Albania, Algeria, Azerbaijan, Bahrain, Bangladesh, Bosnia, Burkina Faso, Chad, Comoros, Côte d'Ivoire, Djibouti, Egypt, Ethiopia, Gambia, Guinea, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Libya, Malaysia, Mali, Mauritania, Morocco, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sierra Leone, Somalia, Sudan, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, and Yemen.

TABLE 2

BIVARIATE REGRESSIONS OF FREEDOM HOUSE SCORES
ON HYPOTHESIZED DETERMINANTS[a]

| Variable | Coefficient | Adj.$R^2$ | Number of Cases |
|---|---|---|---|
| Islamic religious tradition (dummy variable) | −2.13*** | .27 | 156 |
| Economic development (log GDP per capita$_{1990}$) | 1.66*** | .34 | 157 |
| Sociocultural division (Ethnologue ethnolinguistic fractionalization index) | −1.90*** | .09 | 157 |
| Economic performance (growth of GDP per capita$_{1975-98 \text{ ave annual change \%}}$) | 0.20*** | .09 | 150 |
| British colonial heritage (dummy variable) | 0.27 | .00 | 157 |
| Communist heritage (dummy variable) | 0.28 | .00 | 157 |
| OPEC membership (dummy variable) | −1.91*** | .06 | 157 |

*p<0.05; **p<0.01; ***p<0.001
[a]Entries are unstandardized regression coefficients.

scores. There are large differences in the statistical significance of the variables. The variables for British colonial heritage and communist heritage are not statistically significant at the most undemanding level. The other variables are statistically significant.

The multivariate analyses are presented in Table 3. The first column presents the fully specified model. The other columns show trimmed models. Islam, economic development, and OPEC membership are statistically significant in all specifications. Muslim countries score well over one point worse in all specifications on a seven-point scale than do non-Muslim countries.

To check the results I used an alternative measure for the dependent variable, substituting Polity scores for FH scores. Table 4 presents the results of the bivariate regressions and Table 5 those of the multivariate regressions. The results are consistent with those obtained using FH scores as the measure for the dependent variable. Again, only the variables for Islam, economic development, and OPEC membership are statistically significant. In the final model in Table 5, a predominantly Islamic tradition is associated with a reduction of seven points—one-third of the empirical range—in Polity score.

The negative results are as interesting as the positive ones. British colonial heritage does not necessarily provide significant advantages; nor does a Soviet-type past pose insurmountable disadvantages. Economic performance is not shown to be of great importance. Greater

TABLE 3
REGRESSIONS OF FREEDOM HOUSE SCORES ON
HYPOTHESIZED DETERMINANTS[a]

| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Constant | 0.17 | -0.15 | 0.27 | -0.15 | 0.19 |
| | (0.84) | (0.70) | (0.81) | (0.60) | (0.62) |
| Islamic religious tradition | -1.24*** | -1.27*** | -1.26*** | -1.34*** | -1.68*** |
| | (0.27) | (0.27) | (0.27) | (0.27) | (0.27) |
| Economic development | 1.40*** | 1.48*** | 1.40*** | 1.50*** | 1.39*** |
| | (0.21) | (0.19) | (0.20) | (0.17) | (0.17) |
| Sociocultural division | -0.32 | | -0.30 | | |
| | (0.43) | | (0.42) | | |
| Economic performance | 0.07 | 0.06 | 0.06 | | |
| | (0.05) | (0.04) | (0.04) | | |
| British colonial heritage | 0.25 | 0.18 | | | |
| | (0.30) | (0.30) | | | |
| Communist heritage | 0.20 | | | | |
| | (0.27) | | | | |
| OPEC membership | -1.36** | -1.46** | -1.42** | -1.53** | |
| | (0.46) | (0.45) | (0.46) | (0.48) | |
| Adj. R² | .55 | .55 | .55 | .55 | .51 |
| N | 149 | 149 | 149 | 149 | 149 |

*p<0.05; **p<0.01; ***p<0.001
[a] Entries in this table and all others are unstandardized regression coefficients with White-corrected robust standard errors in parentheses.

ethnic uniformity does not provide a firmer basis for a more open political regime than does greater heterogeneity.

The strong, positive relationship between democracy and economic development is consistent with long-standing social-scientific thinking and is therefore unsurprising. The negative relationship between democracy and OPEC membership supports the hypothesis that abundance of oil may conduce authoritarianism.

Due perhaps to cultural sensitivity or to an understandable reluctance to characterize nearly one-third of the world's polities as intractably resistant to popular rule, scholars have tended to treat the relationship between Islam and democracy circumspectly and have steered clear of examining it rigorously. The evidence presented here, however, reveals a link that is too stark and robust to ignore, neglect, or dismiss.

TABLE 4
BIVARIATE REGRESSIONS OF POLITY SCORES ON
HYPOTHESIZED DETERMINANTS[a]

| Variable | Coefficient | Adj.R² | Number of Cases |
|---|---|---|---|
| Islamic religious tradition (dummy variable) | -7.97*** | .29 | 153 |
| Economic development (log GDP per capita$_{1990}$) | 4.34*** | .18 | 154 |
| Sociocultural division (Ethnologue ethnolinguistic fractionalization index) | -6.88*** | .09 | 154 |
| Economic performance (growth of GDP per capita$_{1975-98 \text{ ave annual change } \%}$) | 0.64** | .06 | 148 |
| British colonial heritage (dummy variable) | 0.33 | .00 | 154 |
| Communist heritage (dummy variable) | 1.42 | .00 | 154 |
| OPEC membership (dummy variable) | -9.01*** | .11 | 154 |

*p<0.05; **p<0.01; ***p<0.001
[a] Entries are unstandardized regression coefficients.

COMMENT ON DATA AND CONTROLS

A word is in order regarding the indicators used and the operations carried out to check the findings. In addition to substituting the Polity scores for the FH scores as a measure of the dependent variable, I also used alternative measures for two of the independent variables. The data for several of the independent variables are admittedly imperfect. Although the dummy variables and the data for economic performance are not highly problematic, the measures for economic development and sociocultural division are open to criticism.

GDP per capita is sometimes regarded as an inadequate measure of economic development. I therefore also used an alternative measure: the size of the agrarian proportion of the population. This statistic may capture socioeconomic conditions better than plain product per capita figures. I therefore used percentage of the population employed in agriculture, herding, and fishing rather than log GDP per capita in alternate specifications.[18] The findings are robust. The variable for agrarian population is substantively and statistically significant in all specifications. The regression coefficient for the Muslim variable is equally large and statistically significant when the alternative measure for development is used.

Ethnic fractionalization is even harder to measure than economic development, as ethnic identity is a notoriously slippery concept and

[18] The source of the data is CIA World Factbook 2000 (Washington, D.C.: Brassey's, 2000).

TABLE 5
REGRESSIONS OF POLITY SCORES ON HYPOTHESIZED DETERMINANTS

| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Constant | -5.20 | -6.96** | -5.07 | -7.25** | -5.83* |
| | (3.15) | (2.30) | (3.05) | (2.39) | (2.53) |
| Islamic religious tradition | -5.28*** | -5.49*** | -5.31*** | -5.63*** | -7.02*** |
| | (1.23) | (1.24) | (1.22) | (1.22) | (1.12) |
| Economic development | 3.25*** | 3.63*** | 3.31*** | 3.75*** | 3.30*** |
| | (0.78) | (0.71) | (0.76) | (0.64) | (0.69) |
| Sociocultural division | -1.93 | | -2.08 | | |
| | (1.73) | | (1.66) | | |
| Economic performance | 0.19 | 0.14 | 0.12 | | |
| | (0.21) | (0.17) | (0.17) | | |
| British colonial heritage | 0.10 | -0.26 | | | |
| | (1.22) | (1.18) | | | |
| Communist heritage | 0.95 | | | | |
| | (1.06) | | | | |
| OPEC membership | -5.52*** | -6.04** | -5.81*** | -6.19*** | |
| | (1.68) | (2.66) | (1.67) | (1.75) | |
| Adj. $R^2$ | .45 | .45 | .46 | .45 | .41 |
| N | 147 | 147 | 147 | 147 | 147 |

*$p<0.05$; **$p<0.01$; ***$p<0.001$

observing it is inescapably complicated.[19] Social science does not yet—and perhaps never will—have the benefit of uncontroversial measures of ethnic fractionalization. The Ethnologue data that I use are based on ambitious and extensive research, but in order to check the effect of ethnic fractionalization I also conducted the analysis using several alternative measures. One is what might be called an ethnic homogeneity score, which is the percentage of the population accounted for by the largest national group.[20] The second is data on ethnolinguistic fractionalization published by Charles Taylor and Michael Hudson and recently refined by Matthew Krain.[21] All the same problems of relying

[19] Henry E. Brady and Cynthia S. Kaplan, "Categorically Wrong? Nominal versus Graded Measures of Ethnic Identity," *Studies in Comparative International Development* 35 (Fall 2000); David Laitin and Daniel Posner, "The Implications of Constructivism for Constructing Ethnic Fractionalization Indices," *Newsletter of the Comparative Politics Section of the American Political Science Association* 12 (Winter 2001), 13–17.

[20] The source of the data is Freedom House, *Freedom in the World, 1999–2000* (New York: Freedom House, 2000).

[21] Taylor and Hudson, *World Handbook of Political and Social Indicators*, 2d ed. (New Haven: Yale University Press, 1972); Matthew Krain, "Ethnic Fractionalization Data" (wooster.edu/polisci/mkrain/Ethfrac, accessed September 2001); idem, "State-Sponsored Mass Murder," *Journal of Conflict Resolution* 41 (June 1997).

upon a measure of a subjective and contested concept obtain, but substituting alternative measures at least provides a check on the results. The findings are robust to the use of the other indicators. Ethnic composition does not influence regime type, and the Islam variable remains highly significant in substantive and statistical terms in all specifications.

Even given limitations in the quality of the data, it is possible to conclude from the analysis that predominantly Muslim countries may be especially prone to authoritarianism. The task ahead is to shed some light on the nature of the causal link.

THE CONNECTION BETWEEN ISLAM AND AUTHORITARIANISM:
SOME PLAUSIBLE BUT UNSATISFACTORY IDEAS

Some claims may be dispensed with based on the above analysis. One is that there is no link between democratic deficit and Islam per se but that Muslim countries are far poorer than others and that underdevelopment therefore explains the relationship between Islam and authoritarianism. Muslim countries are indeed poorer than non-Muslim countries on average, but the empirical analysis controlled for development and Muslim countries still scored much lower on both FH scores and Polity scores. So too did the analysis control for economic performance; this variable is not decisive. OPEC membership was also included. While the variable for OPEC was substantively and statistically significant, it clearly did not account for all of the effects of Islam; oil rents alone probably do not explain the democratic deficit. Ethnic fractionalization was included as well. Predominantly Muslim countries are, on average, somewhat more ethnically diverse than non-Muslim countries. But the factor is not decisive in determining political regime; Muslim countries are not less democratic because they are more heterogeneous. The dummy variable for Islam is not picking up the effects of or serving as a proxy for any other variable tested here.

Some other possible explanations for the tie between Islam and authoritarianism, however, cannot be ruled out based on the preceding quantitative analysis. Here I inspect these ideas.

ARE MUSLIM SOCIETIES MORE PRONE TO POLITICAL VIOLENCE?

Over two and a half centuries ago, Montesquieu asserted that Islam had a violent streak that predisposed Muslim societies to authoritarianism: "The Christian religion is remote from pure despotism; the gentleness so recommended in the gospel stands opposed to the despotic

fury with which a prince would mete out his own justice and exercise his cruelties. . . . The Mohammedan religion, which speaks only with a sword, continues to act on men with the destructive spirit that founded it."[22] Some scholars still embrace Montesquieu's assessment. Samuel Huntington, for example, holds that Muslim societies are especially prone to political violence. If he is right, given the hazards that violence poses to popular rule, this problem may help explain democratic under-achievement.[23]

Is Huntington right? Monty Marshall has assembled a comprehensive list of incidents of political violence in the world during the post-war period.[24] By Marshall's account, there have been 207 episodes of major intrastate political violence. All of them occurred in countries included in the universe of cases under examination here. Of these events, 72—or 35 percent of the total—took place in Muslim countries. The data show that the Muslim world has had its fair share of political violence—indeed, a bit more than its fair share. But only a bit more. Since 30 percent of the world's polities are predominantly Muslim, the evidence does not show that the Islamic world has been the site of a grossly disproportionate amount of political violence.

Another useful source of data is the set of "governance indicators" that Daniel Kaufmann and colleagues have created based on extensive surveys.[25] One of their governance indictors is "political stability/lack of violence." Scores range from about −2.5 to 2.5, with higher values corresponding to better outcomes (less violence and political instability born of violence). The data are imperfect but provide another window on the problem.

To assess Muslim countries in comparative context, I conducted an analysis of variance test (ANOVA), comparing the mean scores on the stability/lack of violence index for Muslim and Catholic countries. Here and with the other variables examined below, I compare these two groups before proceeding to examine Muslim countries versus all others. I use Catholic countries as a comparative referent in part because they, like Muslim countries, have often been characterized as resistant

[22] Charles Louis de Secondat (Montesquieu), *The Spirit of the Laws*, ed. Anne M. Cohler, Basia Carolyn Miller, and Harold Samuel Stone (Cambridge: Cambridge University Press, 1995), 461–62.

[23] Samuel P. Huntington, *The Clash of Civilizations and the Remaking of the Modern World* (New York: Simon and Schuster, 1996).

[24] Monty G. Marshall, "Major Episodes of Political Violence, 1946–1999" (members.aol.com/CSPmgm/warlist, accessed December 2001).

[25] Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobaton, "Composite Indicator Dataset," from "Governance Matters," World Bank Policy Research Department Working Paper no. 2195 (worldbank.org/wbi/governance/gov_data, accessed May 2001).

TABLE 6
DIFFERENCE IN MEAN STABILITY/LACK OF VIOLENCE AND TRUST SCORES
FOR CATHOLIC AND MUSLIM COUNTRIES[a]

| | Stability/Lack of Violence Score | Trust Score (Mean Percentage of Respondents Saying That People Can Be Trusted) |
|---|---|---|
| Muslim countries | −0.45 | 20.3 |
| Catholic countries | 0.22 | 24.9 |
| F | 11.11 | 0.80 |

SOURCES: Data for stability/lack of violence index: Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobaton, "Composite Indicator Dataset" from "Governance Matters," World Bank Policy Research Department Working Paper no. 2195 (worldbank.org/wbi/governance/gov_data, accessed May 2001). For trust scores: *World Values Survey*, data provided by Ronald Inglehart, chair of the World Values Surveys Executive Committee, 2002.

[a]Sample for stability/lack of violence analysis is 84 countries (43 Muslim); sample for trust analysis is 36 countries (7 Muslim).

to democracy (as well as to good governance, economic development, and other desirable things).[26] Furthermore, like Muslim countries, Catholic countries, which include many nations of Latin America and Africa as well as of Southern and Eastern Europe, constitute a large and extremely diverse group.

The results are shown in left-side column of numbers in Table 6. There is a statistically significant difference between the categories, with Muslim countries suffering from more violence. But when one controls for level of economic development the difference loses statistical significance. Model 1 in Table 7 shows the results of a multivariate regression using Catholic and Muslim countries as the universe of cases. It includes the dummy variable for Muslim countries; Catholic countries are the excluded category. It shows that when one controls for economic development, violence is not significantly lower/stability not greater in Catholic countries than in Muslim countries. The second regression, shown in model 2, compares Muslim countries with the rest of the world, including not only Catholic countries but also all others. Economic development is indeed related to stability/lack of violence, with higher income associated with greater stability/less violence. But the Islam variable is not statistically significant. When one controls for

[26] Lipset (fn. 5); Rafael La Porta, Florencio Lopez-De-Silanes, Andrei Shleifer, and Robert Vishney, "The Quality of Government," *Journal of Law, Economics and Organization* 15 (April 1999); Samuel P. Huntington, "Will More Countries Become Democratic?" *Political Science Quarterly* 99 (Summer 1984).

TABLE 7
REGRESSIONS OF STABILITY/LACK OF VIOLENCE AND TRUST SCORES ON
HYPOTHESIZED DETERMINANTS[a]

| | Dependent Variable: Stability/Lack of Violence | | Dependent Variable: Trust | |
|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Constant | −3.45*** | −2.94*** | −39.48* | −18.41 |
| | (0.58) | (0.34) | (16.46) | (16.91) |
| Economic development | 1.03*** | 0.89*** | 16.98*** | 12.75** |
| | (0.15) | (0.09) | (4.45) | (4.40) |
| Islamic religious tradition | −0.12 | −0.21 | 11.51 | 2.46 |
| | (0.19) | (0.15) | (6.94) | (6.24) |
| Sample | MC | all | MC | all |
| Adj. $R^2$ | .45 | .43 | .34 | .24 |
| N | 84 | 145 | 36 | 59 |

*$p<0.05$; **$p<0.01$; ***$p<0.001$

[a] MC = Muslim and Catholic countries; all = all available countries.

economic development, the evidence for a link between Islam and violence is weak at best.

How, then, does Huntington reach his conclusions, which my own findings contradict? Huntington has different standards for the evaluation of data. He arrives at "overwhelming" evidence for the greater violence of Muslim societies by totaling up "ethnopolitical conflicts" in 1993–94 and "ethnic conflicts" in 1993, then within each group dividing the site of strife into Muslim and non-Muslim societies. Huntington emphasizes "intercivilizational" violence, by which he means conflict between Muslim and non-Muslim countries. His evidence on intercivilizational strife seems unequivocal: two-thirds of conflicts (thirty-six of fifty-one cases) were between Muslim and non-Muslim countries. But Huntington takes the further step of saying that "intracivilizational" conflict is also much more common in the Muslim world. He not only argues that "Islam's borders are bloody" but also adds, "and so are its innards." Its innards are most important for our purposes. But here the data are ambiguous. In the category of "intracivilizational" strife, only eighteen of fifty-eight conflicts—or 31 percent—were in Muslim societies. Given that 30 percent of the world's polities are predominantly Muslim, Huntington's evidence is less than overwhelming. Indeed, his evidence on intracivilizational conflict provides no support for his argument, though he does not allow this detail to interfere with his generalizations. Finally, Huntington fails to con-

trol for any other variables. Simple correlation, presented in the form of unanalyzed descriptive statistics, serves as his empirical evidence.[27]

IS INTERPERSONAL TRUST LOWER IN MUSLIM SOCIETIES?

Many social scientists have linked interpersonal trust and democracy. Ronald Inglehart has found a positive correlation between the percentage of respondents who say in the World Values Surveys that people can be trusted, on the one hand, and country averages on FH scores from 1972 to 1997, on the other.[28] I used the data from the most recent available wave of World Values Surveys, which were conducted in the 1990s, to measure trust. An ANOVA test using the seven Muslim countries and the twenty-nine Catholic countries for which data are available shows that the level of trust in Muslim countries is not substantially lower than in Catholic countries, as is shown in the right-hand column of Table 6. The first multivariate regression, shown in model 3 in Table 7, uses Catholic and Muslim countries as the universe of cases. It controls for economic development and includes the dummy variable for Muslim countries with Catholic countries as the excluded category. Trust is not lower in Muslim countries than in Catholic countries. Model 4 in Table 7 presents the results of a regression that compares Muslim countries with the rest of the world; again, there is no significant difference in levels of trust.

ARE MUSLIM POLITIES LESS "SECULAR"?

A commonly embraced but rarely scrutinized argument holds that religious and secular authority are joined in Islamic societies, both in the popular imagination and in institutional practice, and that this fusion helps explain the democratic deficit. Jamal al-Suwaidi asserts that "Muslims have continued to assume that only a 'religious leader' can provide good government for the Muslim community."[29] According to Huntington, "God and Caesar, church and state, spiritual and temporal authority, have been a prevailing dualism in Western culture." In contrast, "In Islam God is Caesar."[30]

Two assumptions underlie this thinking. The first is that religion is more important to Muslims than it is to adherents of other faiths and

[27] Huntington (fn. 23), 256–58.

[28] Inglehart, "Trust, Well-Being and Democracy," in Mark E. Warren, ed., *Democracy and Trust* (Cambridge: Cambridge University Press, 1999).

[29] Al-Suwaidi, "Arab and Western Conceptions of Democracy," in David Garnham and Mark Tessler, eds., *Democracy, War, and Peace in the Middle East* (Bloomington: Indiana University Press, 1995), 87.

[30] Huntington (fn. 23), 70. For a similar argument, see Bernard Lewis, "Islam and Liberal Democracy: A Historical Overview," *Journal of Democracy* 7 (April 1996).

that this difference is reflected in political preferences and authority structures. Muslims are more Muslim than Christians are Christian, and political life in predominantly Muslim societies is far more heavily saturated with religion. The second assumption is that religiosity per se is the ally of authoritarianism, and secularism of democracy.

Brief examination leaves room for skepticism regarding both assumptions. First, the notion that Muslims are more "religious" is completely dependent on subjective perspective. To a New Yorker in Mecca or a Berliner in Teheran, the idea that Islam is more deeply ingrained in Muslim societies than Christianity is in Christian societies may seem irrefutable. But to a Mississippian in Kazakhstan, a South African in Azerbaijan, a Pole in Syria, or an Irish person in Java, the situation might not be so clear. Indeed, it may be equally unclear to a Kazakh in Mississippi, an Azeri in South Africa, a Syrian in Poland, or a Javanese in Ireland. The fundaments of one's own culture, at any rate, naturally seem less conspicuous, imposing, and exotic—indeed, less "fundamental"—than do those of other cultures. The present author, who was raised in small cities in the American South and Midwest, does not view churches blanketing the landscape or Christian television and radio networks filling the airwaves as particularly striking. While traveling in Muslim countries, however, the author regards the sight of people facing Mecca together in prayer as a formidable demonstration of mass religiosity. Some of the author's associates who grew up in predominantly Muslim societies have a different view. While in the United States, they regard what the author sees as unobtrusive manifestations of everyday social life as signs that American society is saturated with (Christian) religious influence. Their outlook is akin to that of As'ad AbuKhalil, who has rightly criticized "the mistaken association between secularism and Christianity."[31]

One may also question Huntington's notion that political and religious authority are strictly separated in the West and fused in the Muslim world. The separation of God and Caesar is far less complete in predominantly Christian countries than many Americans realize. Until 1995 all long-standing European democracies with a substantial Lutheran majority had established state churches. In Germany church and state are intertwined in education, taxation, social service provision, and finance. Nor does a rigorous separation between church and state prevail in many countries where Catholic traditions predominate. One would be hard pressed to find it in Poland, Ireland, Brazil, or Chile.

[31] AbuKhalil, "Against the Taboos of Islam," in Charles E. Butterworth and I. William Zartman, eds., *Between the State and Islam* (Cambridge: Cambridge University Press, 2001), 115.

Nor, needless to say, are religion and the state separated in Israel. What is more, the extent to which "God is Caesar" in the Muslim world is often greatly exaggerated. Religious and political power may be joined in, say, Iran and Taliban-era Afghanistan. But these polities are atypical. It is difficult to state with confidence that the fusion of sacred and temporal power is substantially and consistently greater in former Soviet Central Asia, North Africa, Muslim West Africa, Muslim Southeast Asia, Bangladesh, Iraq, Syria, Turkey, Azerbaijan, and Albania than it is in non-Muslim countries. If, moreover, al-Suwaidi is correct to say that Muslims seek a religious leader to guide the political community, one would expect most political heroes in the Islamic world to be religious leaders. But many of the Muslim world's most popular politicians—including Indonesia's Sukarno and Megawati Sukarnoputri, Pakistan's Zulfikar Ali Bhutto and Benazir Bhutto, Malaysia's Mohamad Mahathir, Senegal's Léopold Senghor, Mali's Alpha Oumar Konaré, and Egypt's Gamal Abd al-Nasir—hardly fit that profile. If by "religious leader" al-Suwaidi means not a religious authority but merely a person who professes to hold some religious belief, he is on firmer ground. But in this case, Muslims are unexceptional. What are the chances of a self-proclaimed atheist becoming president of Costa Rica, the Philippines, or the United States? Social scientists in predominantly Christian societies may ignore candidates' religion; much of the rest of the electorate does not.

In short, the assumption that religion is consistently more important to Muslims than it is to adherents of other faiths and that this difference is clearly reflected in social and political life is open to doubt.

Of course I might be wrong. The evidence I have adduced on this point is the best I can muster, but it is scarcely definitive. Rigorously assessing the weight of religion in popular consciousness is exceedingly difficult; here we truly see through a glass darkly. The shortage of data is acute. The World Values Surveys query people on their religious activities and the importance of religion in their lives. But to date there still are precious little data on Muslim countries; the data available on religion in the surveys are almost all from predominantly Christian societies. Perhaps religion is really more important in Muslim countries than it is elsewhere. Would this fact then explain the greater incidence of authoritarianism in Islamic countries? This question touches on the second assumption mentioned above—namely, that religiosity per se is the ally of authoritarianism, and secularism of democracy. In some classical theories of modernization, secularization is often portrayed as

progress itself—a claim rarely questioned and hence seldom examined in social science. But how sound is it?

Examining countries outside the advanced industrial world helps shed some light on the matter. As of 1994, 110 of the 157 countries under examination here had annual incomes per capita at purchasing power parity that did not exceed $6000. They account for about four-fifths of the world's population. Among these countries, only nine maintained FH scores in each of the ten annual surveys between 1991–92 and 2000–2001 that qualified them as "free" polities. All of them—Benin, Botswana, Bulgaria, Costa Rica, Jamaica, Lithuania, Mongolia, Namibia, and Poland—are exceptions to the "rule" that democracy is a luxury that only rich countries can afford or can sustain for longer than a fleeting spell.

This is a diverse group; its members are united by little other than their exceptionally open politics. If secularism were especially conducive to democratization, however, one would expect to find another regularity within this group: a preponderance of relatively secular societies.

But the reality is inconsistent with this expectation. Benin is the world's stronghold of Vodou, which permeates the country's social life and politics. Religion also occupies a prominent place in Botswana. As in Benin, traditional native religions are of great importance, though successful efforts by missionaries among the chiefs in the mid- and late nineteenth century established a tradition of strong Christian religiosity among the elite. Costa Rica is deeply religious; over two-thirds of the population are practicing Catholics. Jamaica is a confessional mosaic in which most people actively practice their religion. Namibia is, as Philip Steenkamp notes, "the most Christian of African countries"; an absolute majority is active in churches. Poland and Lithuania are arguably the most religious societies in the postcommunist world. Catholicism, deeply rooted in both, played a central organizational and spiritual role in the anticommunist resistance. Bulgaria and Mongolia, which are in fact relatively secular societies, are the exceptions to the pattern of high religiosity among the developing world's most open polities.[32]

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[32] Abdi Ismail Samatar, *An African Miracle* (Portsmouth, N.H.: Heinemann, 1999); John A. Booth, *Costa Rica: Quest for Democracy* (Boulder, Colo.: Westview, 1998); Hemchand Gossai and Nathaniel Samuel Murrell, eds., *Religion, Culture, and Tradition in the Caribbean* (New York: Palgrave Macmillan, 2000); Grzegorz Ekiert, *The State against Society* (Princeton: Princeton University Press, 1996); V. Stanley Vardys and Judith B. Sedaitis, *Lithuania: The Rebel Nation* (Boulder, Colo: Westview, 1997). Quoted passage from Philip Steenkamp, "The Churches," in Colin Leys and John S. Saul, eds., *Namibia's Liberation Struggle* (Athens: Ohio University Press, 1995), 94.

In sum, there are ample grounds for skepticism regarding the claim that people in predominantly Muslim societies are more observant religionists than people elsewhere; so too is there plenty of room for questioning the usual association of secularism with democracy and religiosity with authoritarianism. At the very least, it would seem wise to heed Alfred Stepan's caveat that "the concept of secularism must be radically rethought" as it relates to modernity and democracy.[33]

Thus, the question remains unanswered: how does Islam disfavor democracy?

## THE CONNECTION BETWEEN ISLAM AND AUTHORITARIANISM: A HYPOTHESIS THAT WORKS

### THE PROBLEM OF FEMALE SUBORDINATION

In one demonstrable way, Muslim societies are distinct in a manner that may affect politics: the treatment and status of women and girls. Some scholars, relying on ethnographic research and deep knowledge of specific societies, have noted what appears to be an unusual degree of subordination of women in Muslim societies. Some have suggested that this factor may affect life not only in the family and immediate community but also at higher levels as well.[34] Several scholars have begun subjecting the problem of women's status and democracy to rigorous investigation, but they have relied mostly on public opinion surveys.[35] Such studies are potentially of great value. Here, however, I rely on indicators other than those gleaned from either in-depth ethnography or opinion surveys.

I use multiple indicators to assess the station of women. The first is the difference between male and female literacy rates. I assume that a larger gap in favor of males reflects lower esteem for the education of girls and negatively affects the life chances of females relative to males.

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[33] Stepan, *Arguing Comparative Politics* (New York: Oxford University Press, 2001), 222.

[34] Jan Goodwin, *Price of Honor: Muslim Women Lift the Veil of Silence in the Islamic World* (New York: Penguin, 1995); Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society* (New York: Oxford University Press, 1988), 6–8, 32–39; Ali Zay'our, *The Psychoanalysis of the Arab Self* (Beirut: Dar al-Tali'ah, 1977), cited in Sharabi, 41–42; Ann Elizabeth Mayer, *Islam and Human Rights: Tradition and Politics* (Boulder, Colo.: Westview, 1998); Fatima Mernissi, *Beyond the Veil: Male-Female Dynamics in a Modern Muslim Society* (Bloomington: Indiana University Press, 1987); Yesim Arat, "Feminists, Islamists, and Political Change in Turkey," *Political Psychology* 19 (March 1998); *Arab Human Development Report 2002* (New York: United Nations Development Programme, 2002).

[35] Pippa Norris and Ronald Inglehart, "Cultural Barriers to Equal Representation," *Journal of Democracy* 12 (July 2001); Katherine Meyer, Helen Rizzo, and Yousef Ali, "Islam and the Extension of Citizenship Rights to Women in Kuwait," *Journal for the Scientific Study of Religion* 37 (March 1998); Mark Tessler, "Islam and Democracy in the Middle East: The Impact of Religious Orientations on Attitudes toward Democracy in Four Arab Countries," *Comparative Politics* 34 (April 2002).

TABLE 8

DIFFERENCE IN MEAN LITERACY GAP, SEX RATIO, WOMEN IN
GOVERNMENT, AND THE GENDER EMPOWERMENT MEASURE FOR
CATHOLIC AND MUSLIM COUNTRIES[a]

| | Literacy Gap, 1990 (Male Literacy Rate Minus Female Literacy rate) | Sex Ratio, 2000 (Mean Number of Males per 100 Females) | Women in Government, 1998 (Mean Percent of Ministerial and Sub-ministerial Officials) | Gender Em-powerment Measure, 1998 |
|---|---|---|---|---|
| Muslim countries | 18.7 | 102 | 5.2 | .29 |
| Catholic countries | 4.3 | 97 | 12.2 | .50 |
| F | 60.80 | 13.05 | 38.12 | 74.59 |

SOURCES: Data for literacy rates: World Bank, *Genderstats* (genderstats.worldbank.org, accessed March 2002); and *CIA World Factbook 2000* (Washington, D.C.: Brassey's, 2000). For sex ratio: U.S. Census Bureau, International Database Summary Demographic Data (census.gov/ipc/www/idbsum, assessed January 2002). For women in government: United Nations Development Programme, *Human Development Report 2000* (New York: Oxford University Press, 2000). The UNDP measures women in government in terms of "women in government at all levels" (p. 267), which refers to "ministers, secretaries of state and heads of central banks and cabinet agencies," as well as "deputy and vice ministers (or their equivalent); permanent secretaries (or their equivalent); deputy permanent secretaries, directors and advisers (or their equivalent)." For the Gender Empowerment Measure, United Nations Development Programme, *Human Development Report 1998* (New York: Oxford University Press, 1998).

[a]Sample for literacy gap analysis is 89 countries (46 Muslim); sample for sex ratio analysis is 88 countries (45 Muslim); sample for women in government is 90 countries (47 Muslim); sample for Gender Empowerment Measure is 54 countries (20 Muslim).

I use data for literacy rates in 1990. The first (leftmost) column of Table 8 shows the ANOVA test for Catholic and Muslim countries. The difference between the groups is large and statistically significant. Model 1 in Table 9 shows the results of a regression that includes economic development, uses Catholic and Muslim countries as the universe of cases, and treats Catholic countries as the excluded category. The difference between Catholic and Muslim countries retains statistical significance when one controls for income. Model 2 in Table 9 presents the results of the regression that includes all countries for which there are data. The Islam variable is statistically significant and its coefficient is large. The gap in literacy rates between men and women is on average over six percentage points larger in Muslim countries than in non-Muslim countries, controlling for income per capita.

Since Islam appears to affect differences in literacy rates, it is worthwhile pushing the analysis to the next logical step, which requires test-

TABLE 9

REGRESSIONS OF LITERACY GAP, SEX RATIO, WOMEN IN GOVERNMENT,
AND THE GENDER EMPOWERMENT MEASURE ON HYPOTHESIZED
DETERMINANTS[a]

| | Dependent Variable: Literacy Gap | | Dependent Variable: Sex Ratio | | Dependent Variable: Women in Government | | Dependent Variable: Gender Empowerment Measure | |
|---|---|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
| Constant | 26.98*** | 42.69*** | 86.56*** | 95.82*** | 15.50*** | 5.07 | 0.12 | −0.05 |
| | (6.01) | (3.90) | (6.87) | (3.11) | (3.68) | (2.75) | (0.09) | (0.07) |
| Economic development | −6.46*** | −10.21*** | 2.99 | 0.53 | −0.95 | 1.83* | 0.10*** | 0.15*** |
| | (1.58) | (1.04) | (1.95) | (0.92) | (0.99) | (0.87) | (0.02) | (0.02) |
| Islamic religious tradition | 11.10*** | 6.65*** | 6.68** | 4.65** | −7.46*** | −5.35*** | −0.15*** | −0.11*** |
| | (2.09) | (1.77) | (2.21) | (1.56) | (1.23) | (0.95) | (0.03) | (0.03) |
| Sample | MC | all | MC | all | MC | all | MC | all |
| Adj. R² | .51 | .47 | .17 | .11 | .29 | .19 | .73 | .64 |
| N | 89 | 153 | 88 | 154 | 90 | 155 | 54 | 92 |

*p<0.05; **p<0.01; ***p<0.001

[a]MC = Muslim and Catholic countries; all = all available countries

ing the effects of the difference in literacy rates on FH scores. The first two models in Table 10 present the results. The first shows a regression of FH scores on log GDP per capita and the Muslim variable for all countries for which data are also available on literacy rates. Both economic development and Islam are highly significant in substantive and statistical terms. The second model adds the differential in literacy rates. The variable is significant in substantive and statistical terms, and its inclusion produces a moderate reduction in the coefficient for the Muslim variable. As model 2 in Table 10 shows, controlling for economic development and Islam, each percentage point in the literacy gap is associated with a change of .04 points in FH score. Thus, the difference between no literacy gap between men and women and a gap of 20 percentage points is associated with a reduction of 0.8, or about one-eighth of the empirical range, in the FH score.

Another measure of the status of women is the population sex ratio, which is the number of males per 100 females. A higher sex ratio often reflects lower status for and poorer treatment of women and girls. As

TABLE 10
REGRESSIONS OF FREEDOM HOUSE SCORES ON
HYPOTHESIZED DETERMINANTS

| Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
|---|---|---|---|---|---|---|---|---|
| Constant | 0.14 | 1.81* | -0.21 | 5.90*** | 0.23 | -0.19 | 0.51 | 0.67 |
| | (0.63) | (0.91) | (0.62) | (1.62) | (0.62) | (0.56) | (0.82) | (0.83) |
| Economic development | 1.39*** | 0.99*** | 1.49*** | 1.52*** | 1.37*** | 1.21*** | 1.36*** | 0.88* |
| | (0.17) | (0.23) | (0.17) | (0.16) | (0.17) | (0.16) | (0.22) | (0.38) |
| Islamic religious tradition | -1.70*** | -1.43*** | -1.55*** | -1.25*** | -1.71*** | -1.27*** | -1.66*** | -1.29*** |
| | (0.27) | (0.27) | (0.27) | (0.26) | (0.26) | (0.25) | (0.37) | (0.36) |
| Literacy gap | | -0.04** | | | | | | |
| | | (0.01) | | | | | | |
| Sex ratio | | | | -0.06*** | | | | |
| | | | | (0.02) | | | | |
| Women in government | | | | | | 0.08*** | | |
| | | | | | | (0.02) | | |
| Gender empowerment measure | | | | | | | | 3.32* |
| | | | | | | | | (1.51) |
| Adj. R² | .50 | .53 | .51 | .54 | .50 | .57 | .55 | .58 |
| N | | 153 | | 154 | | 155 | | 92 |

*p<0.05; **p<0.01; ***p<0.001

the Population Reference Bureau states in a recent report, a deficit of females relative to males often stems from "various forms of lifelong discrimination against girls and women—particularly inferior nutrition and health care early in life and during childbearing years," as well as from "sex-selective abortions or infanticide."[36] The second column of numbers in Table 8 shows that there is a substantial difference between Muslim and Catholic countries in sex ratio. Qatar and the United Arab

[36] Population Reference Bureau, *Women of Our World 2002* (prb.org, accessed June 2002). See also Mini Phillip and Kathakali S. Bagchi, *The Endangered Half* (New Delhi: Vedams, 1995); Barbara D. Miller, "Female-Selective Abortion in Asia: Patterns, Policies, and Debates," *American Anthropologist* 103 (December 2001); Baochang Gu and Krishna Roy, "Sex Ratio at Birth in China, with Reference to Other Areas in East Asia," *Asia-Pacific Population Journal* 10, no. 3 (1995); Ulla Larsen, Woojin Chung, and Monica Das Gupta, "Fertility and Son Preference in Korea," *Population Studies* 52 (November 1998); Jonathan Berkowitz and Jack Snyder, "Racism and Sexism in Medically Assisted Conception," *Bioethics* 12 (January 1998); S. Sudha and S. Irudaya Rajan, "Female Demographic Disadvantage in India, 1981–1991: Sex Selective Abortions and Female Infanticide," *Development and Change* 30 (July 1999).

Emirates are excluded from the analysis, since they are outliers that have very high sex ratios due in part to the large number of (predominantly male) resident workers from abroad. Even without these cases, the difference in sex ratios between Muslim and Catholic countries is large and statistically significant, as is the difference between Muslim and all non-Muslim countries. Models 3 and 4 in Table 9 show this finding. Table 10 shows that in a regression using FH scores as the dependent variable, sex ratio differences are statistically significant even when controlling for Islam and level of development. The difference between a sex ratio of 105/100 and 95/100 is associated with a differential of .6 in the dependent variable. Inclusion of the sex ratio variable also reduces the magnitude of the regression coefficient of the Islam variable.

The fundamental patriarchalism that is evident in literacy rate differentials and sex ratio is also found at high levels of government.[37] The United Nations Development Programme (UNDP) furnishes data on the percentage of high-ranking positions in executive branch agencies occupied by women.[38] The third column in Table 8 shows the disparity between Muslim and Catholic countries. Models 5 and 6 in Table 9 show that the difference between Muslim and Catholic countries, as well as between Muslim and all non-Muslim countries, is large even when one controls for economic development. When FH scores are treated as the dependent variable and the women-in-government variable is included as a predictor in multiple regression, the latter variable is statistically significant and its regression coefficient large. Its inclusion diminishes the regression coefficient of the Muslim variable substantially. The results are reported in models 5 and 6 in Table 10. Each additional 1 percent of officialdom that is occupied by women is associated with an improvement of .08 in the FH score. Thus, the difference between a government that is 5 percent women and one that is 25 percent women is associated with a difference of 1.6 points—nearly one-quarter of the empirical range—in the dependent variable.

Further evidence may be found in analysis of the Gender Empowerment Measure (hereafter GEM) used in UNDP studies. The GEM, an index that extends from 0 (low) to 1 (high), measures women's incomes, status in the workplace, and presence in the legislature. The relevant re-

[37] For a more extensive comparative discussion of women in high government, see Andrew Reynolds, "Women in the Legislatures and Executives of the World: Knocking at the Highest Glass Ceiling," *World Politics* 51 (July 1999).

[38] United Nations Development Programme, *Human Development Report 2000* (New York: Oxford University Press, 2000).

sults, shown in the far-right column of Table 8, in models 7 and 8 in Table 9, and in models 7 and 8 in Table 10, only reinforce the findings presented for the other variables. Women's status is, on the whole, inferior in Muslim societies; and this factor appears to account for part of the link between Islam and authoritarianism.

I am not remotely qualified to comment on whether women "really want" the treatment they and their daughters receive in Muslim societies. This thorny matter is far beyond the scope of the present discussion. There is a vigorous debate among knowledgeable scholars over women's rights, roles, and lives in the Muslim world.[39] Here I have attempted to assess only whether available quantitative data indicate that the status of women and girls accounts for part of the link between Islam and authoritarianism.

The findings support the hypothesis. In the analyses in which FH scores are the dependent variable, the regression coefficient of the Islam variable diminishes in each regression when the measures for female status are included. There is an obvious danger of bias due to endogeneity, particularly in the case of the variables for women in government and the GEM. Treatment and station of women may be conditioned by regime type, with more democratic regimes providing the basis for better treatment of and higher status for women and girls. Exploratory analysis using two-stage least squares (2SLS) regression produced substantively identical results, but good instruments are admittedly difficult to find for this research problem. Despite the hazards of endogeneity, the direction of causation may well run from the treatment of females to regime type. The possible bases for this connection are the subject of the following brief discussion.

## THE LINK BETWEEN THE STATION OF FEMALES AND POLITICAL REGIME: SOME PROVISIONAL THEORY

Precisely how the status and treatment of women and girls affects political regime must be the subject of a great deal more research before firm conclusions may be drawn. Here I can suggest only several tenta-

[39] For example, Mahnaz Afkhami, ed., *Faith and Freedom: Women's Rights in the Muslim World* (Syracuse, N.Y.: Syracuse University Press, 1995); Mahnaz Afkhami and Erika Friedl, eds., *In the Eye of the Storm: Women in Post-Revolutionary Iran* (Syracuse, N.Y.: Syracuse University Press, 1994); Leila Ahmed, *Women and Gender in Islam* (New Haven: Yale University Press, 1993); Alison Baker, *Voices of Resistance: Oral Histories of Moroccan Women* (Albany: State University of New York Press, 1998); Y. Y. Haddad and John L. Esposito, eds., *Islam, Gender, and Social Change* (Oxford: Oxford University Press, 1997); Rosemarie Skaine, *The Women of Afghanistan under the Taliban* (Jefferson, N.C.: McFarland, 2001); Arlene E. MacLeod, *Accommodating Protest: Working Women, the New Veiling, and Change in Cairo* (New York: Columbia University Press, 1990); Ziba Mir-Hosseini, *Islam and Gender* (Princeton: Princeton University Press, 1999).

tive ideas. Sociological, psychological, and demographic explanations offer some promise. Differentials between male and female literacy rates and sex-ratio imbalances reflect social relations in the family and the immediate community, and the character of these relations may reproduce themselves at higher levels. Several leading writers have argued that the repressiveness and unquestioned dominance of the father in the family and of the male in relations between men and women replicate themselves in broader society, creating a culture of domination, intolerance, and dependency in social and political life.[40] The notion of isomorphism between primary social relations and those that obtain in broader society has a long history in social science. One must of course approach the idea with caution; some culturalist theories that assumed congruence between the family and the polity have not fared well in light of evidence. Still, the possibility of a connection should not be ignored. Individuals who are more accustomed to rigidly hierarchical relations in their personal lives may be less prone to resist such patterns of authority in politics. The generalization applies to the wielders of authority as much as to the objects. One of Martin Luther King's favorite sayings was that in order to hold a man down, one needed to stay down there with him. One might reformulate the adage as, in order to hold women down, a man needed to stay down there with them—meaning, of course, that oppression as a habit of life blocks the oppressor's own advancement and freedom.

Furthermore, men behave differently under organizational conditions in which women are present and under those in which they are not. Segregation of the sexes in the school, the workplace, and places of leisure creates a fundamentally different setting for social relations—and for authority relations among males—than does integration. What is more, the social marginalization of women may remove distinctive voices and influences from politics. Some political psychologists have found that women are superior to men in some aspects of building consensus.[41] Other researchers have shown that men hold attitudes that are more conducive to authoritarianism. An important recent study showed that men have a stronger "social dominance" orientation than women; women are generally less comfortable with hierarchy and in-

[40] Sharabi (fn. 34); Abdellah Hammoudi, *The Victim and Its Masks* (Chicago: University of Chicago Press, 1988), 46–47, 150–51; idem, *Master and Disciple: The Cultural Foundations of Moroccan Authoritarianism* (Chicago: University of Chicago Press, 1997); David S. Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (New York: Norton, 1999), 410–15.

[41] Rose McDermott and Jonathan A. Cowden, "The Effects of Uncertainty and Sex in a Crisis Simulation Game," *International Interactions* 27, no. 4 (2001).

equality.[42] Some scholars have found that women tend to be more averse to extremism and violence in politics.[43] If such findings are valid, the relegation of women to the sidelines of public life—which illiteracy has the effect of doing and which the women-in-government variable and the GEM help measure—circumscribes the influence of antiauthoritarian voices. The question is not whether Margaret Thatcher or Indira Gandhi governed with a feminine touch that distinguished her from her male colleagues; it is, instead, whether gaping sex differentials in literacy rates in the general population may shape social life in a manner that influences politics.

Patriarchy's purely demographic manifestations may also affect politics. Sex ratios, analyzed above, have not heretofore attracted much attention in political science, but they may prove crucial for understanding politics in coming decades. Of the thirty-two countries with sex ratios that exceed 102/100, twenty-two are predominantly Muslim. In a few oil-rich countries of the Persian Gulf, imbalances may be attributed to large numbers of (mostly male) guest workers. Most of the foreign workers are themselves from other Muslim countries, however, and their absence from home lowers the sex ratio for their home countries. It is not clear precisely to what extent labor migrations affect overall sex ratios. In any case, in most countries with high sex ratios labor migrations do not affect the numbers. In Afghanistan, Bangladesh, Iran, and Pakistan, for example, all of which have sex ratios over 104/100, the imbalance cannot be explained without reference to neglect of girls' health care and nutrition and sex-selective abortion. Extremely high sex ratios themselves make for a social time bomb and may dim the prospects for popular rule. They may create conditions under which young men are more likely to join militant groups and engage in threatening, anomic behavior that provokes official repression. Late marriages for males, who in some Muslim countries must by custom be economically capable of supporting wives who do not work, may contribute to male aggression and frustration, but sheer numbers exacerbate the problem. Countries with sex ratios that

[42] Felicia Pratto, L. M. Stallworth, and Jim Sidanius, "The Gender Gap: Differences in Political Attitudes and Social Dominance Orientation," *British Journal of Social Psychology* 36 (March 1997).

[43] Pamela Johnston Conover and Virginia Sapiro, "Gender, Feminist Consciousness and War," *American Journal of Political Science* 37 (November 1993); Carol Gilligan, "In a Different Voice: Women's Conceptions of Self and Morality," in Diana Tietjens Meyers, *Feminist Social Thought* (New York: Routledge, 1997); Janet Flammang, *Women's Political Voice* (Philadelphia: Temple University Press, 1997); Barbara Crossette, "Living in a World without Women," *New York Times*, November 4, 2001.

exceed 103/100—which include Afghanistan, Iran, Jordan, Kuwait, Libya, Pakistan, Saudi Arabia, Somalia, Sudan, and Syria—are not bereft of mass social stress and movements of militant religious brotherhoods.

Just as understanding the causal mechanism linking female subordination and authoritarianism requires a great deal more study, so too is further investigation necessary to grasp fully the link between Islam and authoritarianism more generally. Even as the above analysis provides evidence that the station of women helps explain the relationship between Islam and regime type, it by no means furnishes a complete picture. Indeed, the regressions presented in Table 10 suggest that the station of women *is not* the only factor contributing to the effect of Islam on regime type. The coefficient of the Islam variable declines in magnitude when the variables measuring the status of women are included, but the former does not diminish by more than one-third in any of the equations. The treatment of women and girls may be an important part of the story, but it is very likely only one of several factors. Natural resource endowment may explain some of the problem as well, as the analysis showed above. Some candidate factors that are often adduced to explain political regime type, such as a British colonial past and sociocultural diversity, were shown to have little explanatory power. Others, however, are much harder to test statistically and were not included in the analysis. The structure of social networks is one such factor. Some writers have noted what appears to be the unusual tenacity of clan and tribal relations in Muslim societies and have argued that such ties are inimical to democracy.[44] Other scholars have shown that Soviet-type regimes decimated familialism in non-Muslim areas but could not do so in predominantly Muslim parts of the communist world.[45] One social scientist has recently investigated how specific facets of kin-based political power affect the position of women. In a rigorous qualitative comparison of three North African countries, she has illuminated how variation in state-formation, state-building, and nation-building experiences may affect kin-based political power and help account for cross-national differences in women's status.[46]

[44] Saad Eddin Ibrahim, cited in Iliya Harik, "Democratic Thought in the Arab World," in Butterworth and Zartman (fn. 31), 143–44.

[45] Pauline Jones Luong, *Institutional Change and Political Continuity in Post-Soviet Central Asia* (Cambridge: Cambridge University Press, 2002); Muriel Atkin, "Thwarted Democratization in Tajikistan," in Karen Dawisha and Bruce Parrot, eds., *Conflict, Cleavage, and Change in Central Asia and the Caucasus* (Cambridge: Cambridge University Press, 1997); Kathleen Collins, *Clans, Pacts, and Politics: Understanding Regime Change in Central Asia* (Ph.D. diss., Stanford University, 1999).

[46] Mounira M. Charrad, *States and Women's Rights: The Making of Postcolonial Tunisia, Algeria, and Morocco* (Berkeley: University of California Press, 2001).

The resilience and durability of primordial ties may help explain the resistance of Muslim countries to democratization. But some specialists have argued, by contrast, that clan cleavages and networks may furnish social bases for the growth of civic associations and the extension of citizenship rights and may, under some circumstances, promote democratization.[47] Advancement of understanding will undoubtedly require a great deal more research, including both cross-national analysis and single-country and small-N studies. There is still a lot to explain.

## IMPLICATIONS FOR DEMOCRACY

The findings may hold implications for democracy's prospects, both within and outside the Muslim world. First, they point to the need to study variation in the extent of sex disparities across Muslim countries. Some countries have sex ratios of 104/100 or higher, gaps between male and female literacy rates of 20 or more percentage points, and rates of women's participation in high office that do not exceed the mean for all Muslim countries. They include Afghanistan, Bangladesh, Côte d'Ivoire, Libya, Oman, Pakistan, Saudi Arabia, Somalia, and Syria. In some other polities conditions are less starkly unfavorable but on balance still inauspicious. Algeria, Egypt, Iraq, Nigeria, Sudan, Tunisia, Turkey, and Yemen each have sex ratios in the 102–3/100 range and large literacy gaps, and only in Turkey is women's participation in government well above the Muslim mean. Morocco does not have an unbalanced sex ratio, but the literacy gap is wide and women's participation in government is not substantially above the Muslim average. In Iran and Jordan the literacy gap is not as severe as in many other Muslim countries, but women are virtually absent from high politics and the sex ratio is dramatically unbalanced. Several of these countries—most notably, Bangladesh, Pakistan, Nigeria, and Turkey—have some traditions and institutions of open government and are often seen as the Islamic world's leading candidates for thoroughgoing, lasting democratization. The present analysis provides grounds for skepticism regarding the chances for robust democracy in any of these polities.

Democracy's prospects may be more favorable elsewhere. Despite the prominence of Megawati Sukarnoputri, whose inherited personal

[47] Eva Bellin, "Civil Society: Effective Tool for the Analysis of Middle East Politics?" *PS: Political Science and Politics* 27 (September 1994); Sheila Carapico, *Civil Society in Yemen* (Cambridge: Cambridge University Press, 1998); Dennis Galvan, "Political Turnover and Social Change in Senegal," *Journal of Democracy* 12 (July 2001); Linda L. Layne, "Tribesmen as Citizens," in Layne, ed., *Elections in the Middle East* (Boulder, Colo.: Westview, 1987); Timothy J. Piro, "Liberal Professionals in the Arab World," in Butterworth and Zartman (fn. 31).

authority carried her to the pinnacle of state, women are not well represented in high government in Indonesia. But other conditions are more auspicious: the sex ratio is not unbalanced and the literacy gap is smaller than the Muslim average. The picture is mixed in other countries as well. Malaysia's sex ratio is only mildly unbalanced, the literacy gap is moderate, and women are relatively well represented in government. In the small, wealthy states of the Persian Gulf, sex ratios are extremely lopsided and women are absent or virtually absent from high politics. But in these countries the literacy gap is moderate or even nonexistent—a condition that might provide a substantial advantage for possible future democratization. Burkina Faso, Gambia, and Mali have no sex ratio problem and, by Muslim standards, only moderate literacy gaps. They also have high rates of female political participation in government. These countries, or some portion of them, may help soften the link between Islam and authoritarianism—in part because they do not bear the full complement of stark sexual inequalities common in many other Muslim countries. Other factors, including levels of economic development and dependence on oil exports, will of course affect democracy's prospects as well.

In addition to directing attention to potentially important variation within the Muslim world, the present article raises questions regarding democracy's future in some non-Muslim countries. Large literacy gaps, lopsided, male-dominant sex ratios, and scarcity of women in high politics are especially acute in Muslim countries, but these conditions are by no means distinctively Muslim. The world's two largest polities, neither of them predominantly Muslim, suffer from all three conditions. In India the literacy gap in 1990 was 26 percentage points; in China, 19. Women's participation in government in both countries is meager. In India the proportion of women in high officialdom is the same as the mean for Muslim countries; in China it is even lower. The sex ratio in each country exceeds 106/100. In India infanticide and neglect of girls' health is rampant, and child mortality for girls greatly exceeds that for boys. There is controversy over the rate of infanticide in present-day China, but little question that neglect of girls' health care remains dire. What is more, sex-selective abortion has risen steeply since the widespread introduction of ultrasound and amniocentesis in the 1980s. The at-birth sex ratio in China now stands at an astoundingly disproportionate 117/100. In neither India nor China are rates of infanticide, neglect of girls' health care and education, or prenatal sex selection markedly lower among the majority Hindus and Han Chinese than among the Muslim minorities. In neither country is imbal-

ance in the sex ratio a new phenomenon. Further, in both the problem is growing more acute rather than abating, as urbanization and other aspects of modernization have not done anything to mitigate the problem.[48]

India's open politics would seem to challenge the arguments advanced in this article. Indeed, the Indian experience shows that the problems of patriarchy analyzed here do not necessarily spell doom for open government. India has a well-established reputation for violating social-scientific generalizations; perhaps it is unsurprising that it is also exceptional in terms of the link between societal patriarchy and political regime. Nonetheless, the findings of this article furnish grounds for skepticism regarding the viability of democracy in India. Ethnic divisions and poverty are usually seen as the most formidable challenges to Indian democracy. The findings reported here suggest the merits of adding sex ratio and the sex gap in literacy rates to the list of challenges. Sex ratio has become the focus of intense discussion in India. Many Indian scholars, journalists, and government officials consider the problem, which is growing more acute by the year with the spread of inexpensive ultrasound machines, a social catastrophe in the making. They are working to force the issue to the top of the public agenda.[49] If conditions in India may darken the prospects for the endurance of democracy, those in China may undermine possibilities for its emergence. Sex ratio in some regions of China now exceeds 140/100 and the sex disparity nationally is widening rapidly. "Bachelor villages," inhabited predominantly by men, already cover parts of the Chinese countryside in several regions. Police officials report a steep rise in crime in these

[48] Fred Arnold, Minja Kim Choe, and T. K. Roy, "Son Preference, the Family-Building Process and Child Mortality in India," *Population Studies* 52 (November 1998); Sabu M. George and Ranbir S. Dahiya, "Female Foeticide in Rural Haryana," *Economic and Political Weekly* 33, 32 (August 14, 1998), 2191–98; Monica Das Gupta and P. N. Mari Bhat, "Fertility Decline and Increased Manifestation of Sex Bias in India," *Population Studies* 51 (November 1997); Gita Aravamudan, "Chilling Deaths," *Week* (India), January 24, 1999 (the-week.com, accessed December 2001); Gilbert Rozman, *Population and Marketing Settlements in Ch'ing China* (New York: Cambridge University Press, 1982); Yi Zeng et al., "Causes and Implications of the Recent Increase in the Reported Sex-Ratio at Birth in China," *Population and Development Review* 19 (June 1993); Sten Johansson and Ola Nygren, "The Missing Girls of China," *Population and Development Review* 17 (March 1991); Erik Eckholm, "Desire for Sons Drives Use of Prenatal Scans in China," *New York Times*, June 22, 2002; J. H. Chu, "Prenatal Sex Determination and Sex-Selective Abortion in Rural Central China," *Population and Development Review* 27 (June 2001).

[49] Malini Karkal, "Invisibility of the Girl Child in India," *Indian Journal of Social Work* 52 (January 1991); "Female Infanticide Continues Unchecked, Unheard," *Times of India*, November 6, 2000; Sudha Ramachandran, "New Technologies, Old Prejudices Blamed for India's Vanishing Girls," *Panos* (London), September 2001 (panos.org.uk, accessed March 2002); Sampath Kumar, "Changing Views on Female Infanticide," *BBC News*, December 11, 2001 (news.bbc.co.uk, accessed April 2002); R. P. Ravindra, "The Campaign against Sex Determination Tests," in Chhaya Datar, ed., *The Struggle against Violence* (Calcutta: Shree, 1993).

areas, as well as an explosion of trade in kidnapped women and trafficking in women from Vietnam and North Korea. While Chinese leaders are perhaps less concerned than some of their Indian counterparts about the implications for democracy, they are indeed alarmed by threats to social order.[50]

Finally, the findings presented in this article highlight a fundamental difference between two types of societies: on the one hand, those that have a reputation for male dominance and emphasis on clan and family honor but that nevertheless do not exhibit large sex disparities in basic indicators, and, on the other hand, those that do exhibit such disparities. Southern Europe and countries with Iberian colonial heritage are often regarded as highly patriarchal. But in few places in these areas does one find gaping differentials in the basic indicators used here. Levels of economic development as well as *overall* illiteracy rates are broadly similar in Turkey, Mexico, and Brazil. Yet the literacy gap in these countries is 22, 5, and 2 percent, respectively; the sex ratio is 102/100 in Turkey and 97/100 in both Mexico and Brazil. Levels of economic development and overall literacy rates are higher in Jordan and Iran than they are in Honduras and Nicaragua. Yet the literacy gap is 18 percent in both Jordan and Iran, while there is virtually no literacy gap in Honduras or Nicaragua. Sex ratio is 105/100 in both Jordan and Iran; it is 100/100 in Honduras and 97/100 in Nicaragua. Women make up about 1 percent of high officialdom in the former countries and over 10 percent in the latter. Syria and the Philippines have nearly identical national incomes per capita. In Syria the sex ratio is 104/100, the literacy gap is 35 percentage points, and women fill one in thirty high-ranking posts in government. In the Philippines the sex ratio is 99/100, the literacy gap is 1 percent, and women occupy one in six top government jobs. These examples are in no way exceptional; they are representative and broadly illustrative. In short, patriarchy varies. A culture may in some senses be male dominated but still eschew prenatal sex selection and value the health and basic education of girls as much or nearly as much as the health and basic education of boys. Alternatively, a culture may assign disparate weights to the value of male and female life. The difference may have implications for political regime.

[50] Xingwang Zhou, "Artificial Sex Selection Can Create Disorder in Society: There Is a Natural Ratio of Males to Females," *Worker's Daily [Gongren Ribao]*, August 9, 1999 (usembassy-china.org.cn, accessed March 2002); State Family Planning Commission of China, "Further Efforts to Seek Solutions for Problems in the Population Structure" (2001) (sfpc.gov.cn, accessed March 2002); John Pomfret, "In China's Countryside, 'It's a Boy!' Too Often," *Washington Post*, May 29, 2001; Maureen J. Graham, Ulla Larsen, and Xiping Xu, "Son Preference in Anhui Province, China," *International Family Planning Perspectives* 24 (June 1998).

## THE IRONY OF FEMALE SUBORDINATION

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. Societies usually are "stuck" with their religious traditions and the social and psychological orientations they encode and reproduce.

Yet religious practices and the salience of particular beliefs can change. Even if Muslim countries are more male dominated in some respects than non-Muslim countries, there is no logical reason why such a state of affairs must be immutable. Rigid segregation according to sex and male domination does not have a firm scriptural basis.[51] The Koran provides no justification whatsoever for practices such as female genital mutilation and it condemns all infanticide as a heinous sin, even if it is motivated by a fear of want (17:31; 81:1–14). Much of the Koran's instruction on marriage, divorce, and other aspects of relations between the sexes (for example, 2:222–41; 4:3; 4:128; 33:1–5; 58:1–4) is more liberal than the *sharia* (religious law) as practiced in some modern-day Muslim societies. It is therefore as dubious to try to locate the sources of social practice and order in scripture in Islamic settings as it is to try to locate them there in Christian and Jewish settings, because as with all holy injunction based on sacred text, interpretive traditions are powerful and ultimately determine practice. The status of women in Muslim societies is thus both paradoxical and mutable.

At the present time, however, the evidence shows that Muslim countries are markedly more authoritarian than non-Muslim societies, even when one controls for other potentially influential factors; and the station of women, more than other factors that predominate in Western thinking about religious systems and politics, links Islam and the democratic deficit.

[51] See Fazlur Rahman, *Islam*, 2d ed. (Chicago: Chicago University Press, 1979), 38–40, 231–32; idem, *Islam and Modernity: Transformation of an Intellectual Tradition* (Chicago: University of Chicago Press, 1984), 13–20; Fatima Mernissi, *The Veil and the Male Elite* (Cambridge, Mass.: Perseus, 1992); Farid Esack, *Qur'an Liberation and Pluralism* (Oxford: Oneworld, 1997); Amina Wadud, *Qur'an and Woman* (Oxford: Oxford University Press, 1999).