Senior Seminar on The Wealth and Well-Being of Nations:

Each year, seniors in the department of economics participate in a semester-long course that is built around the ideas and influence of that year's Upton Scholar. By the time the Upton Scholar arrives in October, students will have read several of his or her books and research by other scholars that has been influenced by these writings. This advanced preparation provides students the rare opportunity to engage with a leading intellectual figure on a substantive and scholarly level.

Endowed Student Internship Awards:

A portion of the Miller Upton Memorial Endowments supports exceptional students pursuing high-impact internship experiences. Students are encouraged to pursue internships with for-profit firms and non-profit research organizations dedicated to advancing the wealth and well-being of nations.

Charles G. Koch Student Research Colloquium and Speaker Series:

With generous support from the Charles G. Koch Charitable Foundation, the department has initiated a research colloquium that gives students the opportunity to read and discuss seminal articles aimed at deepening their understanding of the market process. Students also develop original analysis that applies economic ideas to novel contexts. Colloquium participants receive close mentoring as they craft an article with the eventual goal of publication in a newspaper, magazine, or academic journal. The themes of the research colloquium and annual forum are supported with a speaker series featuring the next generation of scholars working on questions central to our understanding of the nature and causes of wealth and well-being.

Annual Proceedings of The Wealth and Well-Being of Nations:

The keynote address presented by the Upton Scholar is an important contribution to the public discourse on the nature and causes of wealth and well-being. Further, the annual forum includes presentations by noted scholars who expand upon or challenge the work of the Upton Scholar. These presentations are assembled in the *Annual Proceedings of the Wealth and Well-Being of Nations*, which serves as an important intellectual resource for students, alumni, and leaders within higher education.

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Introduction

Joshua C. Hall

As the Elbert H. Neese, Jr. Professor of Economics, it is my privilege to introduce the fifth Annual *Proceedings of the Wealth and Well-Being of Nations*.

Under the banner of the Miller Upton Programs, The Department of Economics at Beloit College has developed an ambitious initiative to advance understanding of the ideas and institutions necessary for widespread prosperity and human development. The centerpiece of these programs is the annual Wealth and Well-Being of Nations: a Forum in Honor of Miller Upton. Every year, the Upton Forum brings to Beloit College a distinguished, internationally recognized scholar who works within the classical liberal tradition. The Upton Scholar engages with students, faculty, alumni, and civic leaders in an informed dialogue around the nature and causes of wealth and well-being.

In addition to the Upton Scholar, we feature leading scholars whose work complements the work of that year's Upton Scholar. We assemble this cadre of scholars to demonstrate that the intellectual enterprise of understanding the nature and causes of wealth and well-being is an ongoing project. The essays collected in this volume capture in written form many of the ideas exchanged, challenges posed, and questions considered during the Upton Forum and over the course of the academic year.

Before introducing the Upton Scholar and the substance of the contributions made within this volume, let me say a few words about the man for whom the forum is named. R. Miller Upton was the sixth President of Beloit College, serving from 1954-1975. A nationally recognized leader in higher education, President Upton had two passions. First, he believed that small residential liberal arts colleges were the ideal places to engage the "great questions" because at places like Beloit College, students are expected to acquire the intellectual habits necessary for critical thinking and civil discourse. Second, he believed in the ideals of a liberal society: political freedom, the rule of law, and peace and prosperity through the voluntary exchange of goods and ideas. For President Upton, the critical and open discourse fostered by liberal education was crucial to building and maintaining liberal democracy.

Consider the following quote from a speech President Upton gave at Culver-Stockton College in Missouri during the run-up to America's Bicentennial:

> Let us not, therefore, content ourselves with a crash celebration of the Bicentennial of the beginning — July 4, 1976.
>
> Such a celebration we should have, but we have more to think about than that. We have the opportunity during the 13-year period 1976-1989 to reawaken the nation to the nature of its origin and the genius of its concept. All segments of our contemporary society should be involved in recovering the mission and pride of our existence — not for the sake of pride alone but to reassure our contribution to the social evolution of man by fidelity to the principle of decentralization of authority.

The Miller Upton Forum reflects and honors the two passions of President Upton that are so apparent in that quote. It does so by bringing to Beloit an internationally recognized scholar whose work falls within the classical liberal tradition. In 2013, that scholar was Professor Timur Kuran.

Explaining the Economic Trajectories of Civilizations

Professor Timur Kuran is the Gorter Family Professor of Islamic Studies at Duke University, where he has appointments in both the economics and political science departments. During his career, Kuran has focused on some of the biggest and most important social science questions, such as the evolution of preferences and institutions. While an economist by training, he has published not only in top economics journals but in sociology and political science journals as well. The boldness and clarity of his research, in addition to his willingness to speak to and learn from other disciplines, has helped scholars better understand social change, revolutions, and the underdevelopment of the Middle East. It is for these reasons we were honored to name Timur Kuran as the fifth Upton Scholar.

It would be extremely difficult, if not impossible, for me to effectively detail in the space available the large number of important arguments advanced by Professor Kuran and how they have contributed to our understanding of the wealth and well-being of nations. As author of three major books and over 60 journal articles, the sheer scope of his scholarship is considerable. Instead I will sketch here, in the briefest of fashions, the arguments presented in Kuran's two most prominent books, before moving on to discussing the new scholarship surrounding his ideas that are contained within these collected proceedings.

In his first book, *Private Truths, Public Lies: The Social Consequences of Preference Falsification*, Kuran (1995) argues that individual's publicly expressed preferences often diverge from their private preferences in the face of repression or social disapprobation. This "preference falsification" often has social consequences because when a person hides their true opinion about an opinion or policy they make it harder for others to publicly express their true preferences. Professor Kuran's work shows, among other things, how preference falsification can distort and corrupt public knowledge by minimizing intellectual debate and consideration of the advantages of institutional change. In addition, his notion of preference falsification is crucial for understanding why revolutions or the fall of communism cannot be predicted with any certainty.

In his most recent book, *The Long Divergence: How Islamic Law Held Back the Middle East*, Kuran (2011) is a careful study of the mechanisms by which Islamic law impeded capital formation and innovation in business organization in the Middle East. The starting point for his analysis is the fact that the economy of the Middle East was roughly comparable with that of Europe in the year 1000. By the nineteenth century, however, the Middle East had fallen considerably behind Europe in terms of economic development. Kuran shows that this long divergence was not due to Islam being inherently conservative or hostile to commerce, as some have argued. Instead, Kuran argues, the institutions that developed during the first two centuries of Islam to facilitate development ultimately blocked the emergence or adoption of innovations crucial to the modern economy, such as the modern corporation, standardized accounting, or written contracting. In helping to explain why the industrial revolution took so long to spread from Europe to the Middle East and why the Middle East still lags behind today, Kuran has contributed greatly to our understanding of the wealth and well-being of nations.

New Questions Pursued in this Volume

In his keynote address offered as the first essay in this volume, Kuran turns his attention away from economic institutions in the Middle East and towards democratization. Like his work in *The Long Divergence*, Kuran shows how Islam *indirectly* influenced institutional change in the Middle East. His careful economic history of the Middle East illustrates how, over the past millennium, Islamic law influenced economic and social institutions in a manner that hindered institutional improvement. For example, the interpretation and implementation of the tax system mandated in the Quran led to arbitrary taxation, which in turn led the wealthy to protect their assets through the Islamic trusts known as waqfs. The waqf, while successfully sheltering assets, weakened civil society since tying up resources in a waqf meant they could not be used politically to achieve institutional change. In addition, Kuran argues that civil society was not robust in the Middle East because Islamic law kept commercial relations at the level of personal exchange. Combined, these historical factors manifest themselves in the current Middle East as low levels of trust, high rates of corruption, and a weak civil society, all of which, Kuran argues, indirectly contribute to the lack of democratization in the region.

The remainder of this proceedings volume features scholars working on themes prominent in Kuran's work. In "Institutional Bottlenecks: What Can Be Done?" **Christopher Coyne** and **Abigail Hall** tackle the thorniest issue raised by Kuran's work. Throughout his work, especially in *The Long Divergence*, Kuran has carefully identified the mechanisms by which the institutions of the Middle East have led to economic stagnation. Since institutions are path-dependent and slow to change, "institutional bottlenecks" are created. Coyne and Hall use the work of Nobel Laureate F.A. Hayek on spontaneity versus constructivism in an attempt to answer the difficult question of what can be done to overcome institutional bottlenecks once they are identified. They conclude that given the limitations on human reasoning, it is best to focus on the meta-rules by which institutional evolution takes place.

In "Preference Falsification, Revolutionary Coordination, and The Tahrir Square Model," **David Patel** employs Kuran's revolutionary threshold model to explain the 2011 protests in Egypt that eventually ended the nearly thirty-year rule of Hosni Mubarak. In Kuran's model, revolutions are unexpected because of the divergence between public and private preferences. In the face of a repressive regime, some individuals may be willing to express their true preference for a new government. Others, however, might want a new government but are unwilling to publicly express this opinion unless enough other people were to do so. Each individual has a different "revolutionary threshold" – the amount of public opposition necessary for them to make private preferences for the opposition public – and thus seeing the true extent of the opposition is necessary for fostering revolutions. Patel builds upon Kuran's work by showing how focal public squares like Cairo's Tahrir Square can foster revolutions by making common knowledge the true size of the opposition to the current regime.

In a provocative essay, **Murat Iyigun** asks tough questions surrounding scholarship in new institutional economics. While new institutionalism has had considerable success in the last thirty years convincing people that "institutions matter," there are some important blind spots in their analysis, argues Iyigun. If institutions are durable and long-lasting, why have many constitutional democracies struggled with eroding institutional quality in recent years? There is ample evidence that economic, legal, and political institutions are open to change, so why the narrow focus on these institutions as the source of economic growth to the exclusion of other institutions such as beliefs, culture, and social norms. Like the drunk looking under the streetlight for his keys because that is where the light is brightest, Iyigun argues that the quest for a clean identification strategy has caused many new institutionalists to ignore these other important causes.

Jared Rubin provides a wonderful overview of Kuran's work on the underdevelopment of the Middle East in "Timur Kuran's Framework and Economic Underdevelopment in the Islamic World." He takes readers on a tour of some of Kuran's seminar papers, showing why Kuran's insights and arguments were so compelling that they quickly overturned previous notions regarding Islamic underdevelopment such as the "fact" that Islam is inherently "conservative." Rubin then goes on to show very clearly how Kuran's research has influenced his own important scholarship on the role of religious legitimacy for political authorities. Differences in both the prevalence of usury laws and restrictions on the printing press, Rubin's work shows, can be explained by the fact that Islamic political authorities relied much more heavily on religious legitimacy than did contemporary Western political authorities.

The final two essays in the proceedings are somewhat exploratory in nature. In "Religion and Entrepreneurial Activity in the US," **Travis Wiseman** and **Andrew Young** examine the role that religion plays in explaining differences in entrepreneurship across US states. In contrast to the "thick" economic history that Kuran does, they employ "thin" regression analysis approach to take a first look at how religion might influence entrepreneurship in the United States. Wiseman and Young have many interesting findings, but what is most valuable about their paper is the questions that their work raises for future research. Similarly, the final essay by **Anna Faria** and **J. Robert Subrick** raises important issues concerning economic underdevelopment in Brazil. According to available estimates, in 1600, Brazil had income levels higher than what is now the United States. Today, Brazil's per-capita GDP is under a quarter of that of the United States. Building off Kuran's approach in *The Long Divergence*, Faria and Subrick discuss different possible arguments for "Brazil's Long Divergence."

With Many Thanks

On behalf of Jeff Adams, the Allen-Bradley Professor of Economics and the other members of the Department of Economics, I want to extend our thanks to everyone who played a part in making the 2012 Upton Forum and associated programs a success, including the many scholars who presented during the forum and over the academic year. Taking over the duties of the Neese Chair from Emily Chamlee-Wright was a daunting task, but having such personable and engaging scholars visiting campus made things considerably easier, as did having such wonderful students in my 2012 Senior Seminar on the Wealth and Well-Being of Nations. Their willingness to dive deeply into the readings and engage with our visitors was integral to the success of the Forum.

Special thanks go to former Neese Chair Emily Chamlee-Wright for creating such a strong foundation for success as Neese Chair. Whenever I had doubts about what was the right way to handle something, I could always follow her detailed directions from previous Upton Forums, secure in the fact that she never did anything without a good reason. The biggest thanks I can give her, however, is for not taking Jennifer Kodl, Program Coordinator of the Upton Programs and Managing Editor of this volume, with her to Washington College. Jennifer's experience, attention to detail, and good spirit were everything this neophyte needed to pull off the dozens of Upton programs and events.

Finally, I would like to thank the many alumni, friends, and charitable foundations who have supported the Miller Upton Programs. When the Upton Forum was launched, the goal was to create a suite of programs that would foster the kind of intense and engaged inquiry that leads to the development of liberally educated men and women. A belief in the emancipating power of critical thinking, an unapologetic passion for ideas, and a deep respect for open inquiry in which the answers are not preordained, have been our guiding principles. If the Economics Department were to honor Miller's legacy, anything less would have been unacceptable. The generosity of our contributors has allowed us to live up to

the promise of those principles and has ensured that the Miller Upton Programs will serve Beloit College students and the broader community of intellectually engaged citizens for many generations to come.

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Religious Obstacles to Democratization in the Middle East: Past and Present*

Timur Kuran†

According to practically all global indices of political performance, the Middle East, which is defined here to include the Arab world plus Iran and Turkey, stands out as a poor performer. Transparency International ratings indicate that corruption is much more prevalent in the Middle East than in the OECD, the club of economically advanced democracies. The Middle East also scores low in the World Bank's rule of law index, and in the civil liberties index of Freedom House (Table 1).

There are variations within the Middle East, which are themselves intriguing. Turkey's ratings stand roughly mid-way between the weighted averages for the OECD, to which it belongs, and the strikingly low rankings of Iran and the Arab League. With respect to the rest of the Middle East, Turkey looks politically advanced; by the OECD gold standard, it looks corrupt, misgoverned, and repressive. Turkey's intermediate status reflects the progress it has made in recent years (Figure 1); until even a decade ago, in terms of political performance it looked more similar to Iran and the Arab League than to the OECD.

This improvement in relative performance provides room for optimism concerning the future political trajectories of Iran and the Arab world. It also provides an analytical reason for lumping Turkey with Iran and the Arab world in

*An abbreviated version of this article appeared in *Philosophy and Social Criticism*, 39 (2013), pp. 395-405, under the title "The Political Consequences of Islam's Economic Legacy."

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studies involving historical political transformations. Notwithstanding Turkey's recent transformation, each member of the trio is a laggard with respect to political development.

Links between Political Performance and Islam

In all members of the Arab League, as in Iran and Turkey, the majority of the population consists of practicing Muslims (Pew Research Center 2012). On that basis, many interpreters both outside and within the region attribute the political deficiencies captured by global political indices to Islam. But numerous others reject this inference. We need not go beyond the statistics in Table 1 to see one reason for doubt. The governance problems observed in the Middle East are replicated in places where Islam is not a major factor. China's political record is just as poor as that of the Middle East.

Table 1

Comparative indicators of political performance, 2011-12

(0 (worst) to 10 (best), standardized and population weighted)

Region, Country, or Country Grouping	Lack of Corruption	Rule of Law	Civil Liberties
Africa (non-Arab)	2.7	2.9	5.8
India	3.1	4.9	7.0
China	3.6	4.2	4.0
Middle East	3.0	3.7	5.3
Arab League	*2.8*	*3.5*	*4.4*
Iran	*2.7*	*2.8*	*4.0*
Turkey	*4.2*	*5.3*	*7.0*
OECD (except Turkey)	6.6	8.0	8.6

Note: The population figures used in the averages are for 2005.

Sources: (1) Transparency International, *Corruption Perceptions Index*, 2012 (http://www.transparency.org), with transformation 1-*x*; (2) World Bank Rule of Law Indicators, 2011 (http://info.worldbank.org/governance), with transformation 2.5*x*-1; (3) Freedom House, *Freedom in the World Report*, 2011 (http://www.freedomhouse.org).

There are also historical reasons to reject the linkage in question. Although there exist Islamic philosophical traditions associated with social or political repression, over the ages these have competed with traditions supportive of political checks and balances, which are central to democracy and individual liberties. In the Middle Ages Islamic philosophy grappled with the challenge of subjecting rulers to the law. On that basis Noah Feldman (2008) holds that rule of law in the Middle East is weak in spite of Islam, not as its consequence.

Additional reasons for skepticism emerge when we compare, in any one component of the region, political performance under regimes committed to Islamization with the records of more or less secular regimes. Iran's theocracy has a dismal political record, but the preceding secular monarchy was also notoriously repressive. In the Arab world, the political records of particular regimes have been no better than those of regimes that derive legitimacy from Islam. Persecuting opponents, they cling to power using vast intelligence and security networks. The three North African dictators toppled in 2011 through popular uprisings had been in power cumulatively for 96 years. Each denied Islamists political freedoms and excluded them from his governing coalition (Diamond 2010). Turkey's recent political history offers further evidence in this vein. Since political power passed in 2002 from secular parties to the AKP (Justice and Development Party), which has Islamist roots and has sought to give Islam a greater public role in governance, basic political indices have improved, not worsened. Figure 1 provides the time paths for two indices that go back at least fifteen years. They both indicate an improvement in Turkey's political performance in both absolute and relative terms during the past decade.

Nevertheless, there are good reasons to explore the alleged links between Islam and the Middle East's political underdevelopment. Eric Chaney (2012a, 2012b) has found that countries whose land mass was conquered by Arab armies before 1100 and which remained under Islamic rule from then until at least the colonial era, are significantly less democratic today than the rest of the world. Chaney's finding obviously raises the question of whether distinctly Islamic institutions contributed to this pattern. Several articles suggest that regions under Islamic rule were held back both economically and politically because of the high degree to which political authorities derived legitimacy and power from religious authorities (Platteau 2008; Coşgel, Miceli, and Ahmed 2009; Rubin 2011). Lisa Blaydes and Chaney himself (2013) observe that after 700 CE, as political stability increased in Europe as measured by the tenure of monarchs, the Middle East remained unstable. They attribute the divergence in question to differences in military recruitment, a factor unrelated to religion per se. Whereas executive constraints emerged under the feudal structures that served as the basis for military recruitment by European monarchs, Muslim armies relied on slaves imported from non-Muslim territories. Dependence n slave armies limited the bargaining strength of local elites vis-à-vis the sultan, hindering the development of political checks and balances.

The focus here is the common economic legacy that the region acquired through specific Islamic laws that were enforced widely until the modern era. I have shown elsewhere that these delayed the Middle East's economic modernization through several mutually reinforcing mechanisms (Kuran 2011). Extending that thesis, I argue that the region's economic trajectory would have influenced its political trajectory as well. Political development would have followed a different path than in Western Europe, which led the transition to the impersonal economy of the modern world.

The rest of the paper identifies the mechanisms through which Islam's traditional economic institutions produced identifiable consequences. A key claim is that the political legacy of the economic system defined by Islamic law constrains all modern regimes of the Middle East, irrespective of their particular agendas. In particular, it limits the political performance of secular Middle Eastern governments as surely as it constrains Islamist governments. It weakens rule of law, fuels corruption, and depresses civil liberties regardless of whether the politicians in power are promoting secular or religious lifestyles.

This is not to say that the religious orientation of the governing coalition is irrelevant to the governed. It determines who enjoys political freedoms and who gets repressed. Under Turkey's secular regimes from the 1920s onward, Islamists were denied political freedoms and subjected to persecution. The tables have now turned, and it is vocal secularists who are being singled out as outlaws. More than a hundred generals have been jailed, all committed secularists; as of early 2012 more than 70 journalists were in prison; almost all belong to the secular end of the Turkish political spectrum (Turam 2012). In Ben Ali's Tunisia, Islamists were excluded from positions of power. The post-revolutionary government has favored Islamists, and secular-minded Tunisians have been purged from government ministries and agencies (Bahloul 2012).

Economic institutions critical to the Islamic political legacy

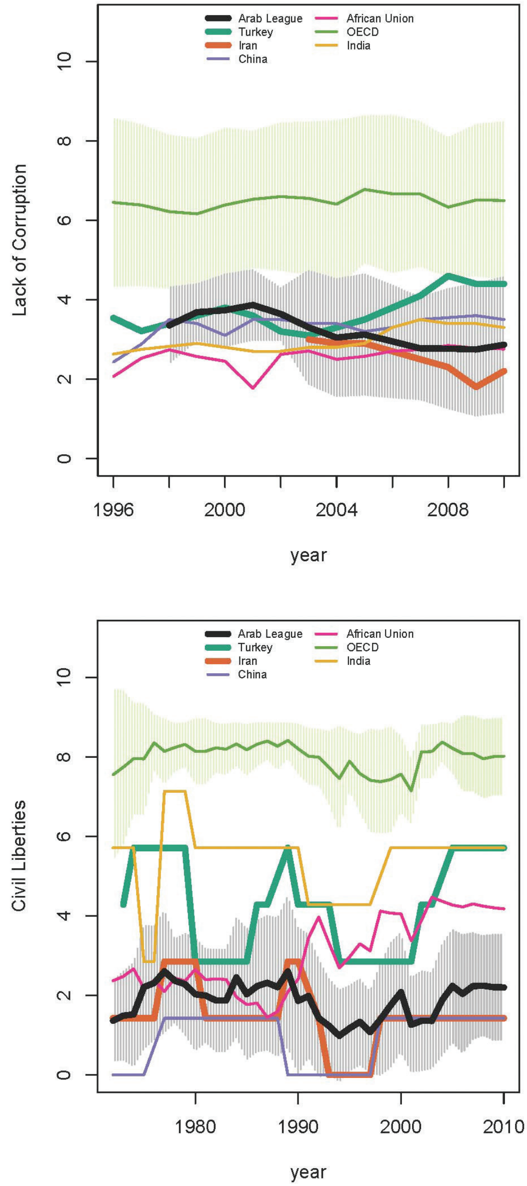

Figure 1. Time paths of the lack of corruption (top) and civil liberties indices. The vertical shadings give the standard deviations for the OECD and Arab League; each vertical bar represents the population-weighted average standard deviation for the year in question. *Sources:* Transparency International, *Corruption Perceptions Index*, 1996-2010; Freedom House, *Civil Liberties Index*, 1972-2010. Note: For each index, data collection procedures as well as definitions have changed over the years. However, in any given year the same procedures and definitions applied to all countries measured.

Until the early twentieth century, in principle and in many respects also in practice, the law of the land was Islamic law, or the sharia, throughout the Middle East. Several elements of Islamic law helped to shape the region's political development. They include the Islamic system of taxation, Islam's distinct form of trust, the Islamic inheritance system, and the Islamic law of contracts. Through several mutually supportive mechanisms, these institutions hindered the development of governmental checks and balances, keeping non-governmental organizations from translating economic resources into political power. They also delayed, if not blocked, the advancement of individual liberties. A quick preview of the argument will be helpful.

At the rise of Islam, in the early-seventh century, an attempt was made to cap taxation and make it both progressive and predictable. Due to exemptions granted to wealthy constituencies, the Quran-based tax system became irrelevant to governance, and it ceased to constrain government takings. Over the next few centuries Islamic tax practices evolved without reference to Islam's initial tax system. Nor were notable efforts made to place alternative fiscal constraints on the state.

Instead, the political elites of the early Muslim empires developed an institution to shelter private wealth from taxation. This institution was the waqf, which is a type of trust based on pre-existing Byzantine and Persian models. The waqf served also as a device to provide public goods through resources exempt from taxation and generally immune to confiscation. By design, waqfs were politically powerless. For all the resources placed that they controlled, they thus failed to generate political checks and balances.

Meanwhile, Islam's relatively egalitarian inheritance system fragmented the estates of successful businessmen, and it also discouraged the pooling of capital in large and perpetual business ventures. The private business sector thus consisted of atomistic and ephemeral companies, making it difficult for merchants and financiers to form coalitions capable of bargaining effectively with the state.

The upshot is that the Middle East reached modern times without an effective civil society. Although institutions transplanted to the region since the nineteenth century have given individuals and groups new political capabilities, the past continues to limit the political performance of each country in identifiable ways. The three institutions that played critical roles are described in greater detail in sections ahead, which also lay out the mechanisms whereby they delayed the rise of civil society and the emergence of political checks and balances.

Islam's original tax system and its rapid degeneration

The holy book of Islam, the Quran, emerged in the early-seventh century, through verses that Muhammad articulated in stages. Remarkably, it established a system of predictable taxation to finance public expenses. Called zakat, it grew out of the tithing practices of earlier religions. It stands out, though, in its specificity (Kuran 2002; Zysow 2002). The Quran spells out eight categories of public expenditure to be financed through zakat revenue. Although it leaves open the rates at which people must pay into the system, customary rates emerged quickly for common sources of income in seventh-century Arabia, such as farming, and common forms of wealth, such as precious metals and animal herds.

Except for the poorest, all Muslims were required to contribute to the financing of public expenses under the rubric of zakat. The rates were mildly progressive and low in comparison to the typical rates of antiquity. Most critical for our purposes, they were meant to be fixed. A wealthy Muslim knew what percent of his gold hoard he needed to turn over, annually, to the communal treasure. Likewise, a camel dealer knew how many camels he had to give the state each year.

In fixing the contributions of Muslims to their community's governance, the system also capped their obligations. In effect, it tied the emerging Islamic state's hands with regard to taxation. As such, zakat might have provided the doctrinal foundation of a social contract involving equity in taxation, predictable taxation, and limited government. Instead it lost significance, and the reason has to do with Islam's very quick transformation from an Arabian faith to a world religion.

Islam spread meteorically within Arabia, to what is now the wider Arab land mass, and to areas beyond in Asia, Africa, and Europe. By the early part of the eighth century, places as far as Spain and Uzbekistan were under Islamic rule (Lapidus 1988, chap. 3). Outside of Arabia the economic base differed from that to which the zakat system was geared. To maintain its progressivity as a tax system, the traditional zakat rates would have had to be revised with an eye toward covering sources of income and forms of wealth unknown in Arabia during Islam's initial few decades. However, the coverage of zakat on the collection side did not broaden; if anything it got narrower.

Although the sequence of developments cannot be identified precisely, the surviving recollections of the first century provide a general idea. Initially influential groups in Arabia, and as the conquests unfolded elites in captured territories, demanded exemptions of one kind or another. Rulers met their demands, undoubtedly to build alliances and pacify threatening groups. The tax code associated with zakat began to look like the modern American tax code: riddled with holes and substantially regressive at the upper end of the income scale.

Having curtailed the coverage of zakat taxation, these wealthy and influential groups then began to treat as sacred, and hence unmodifiable, the specifics of the restricted tax code, rather than the principles of taxpayer equity, predictable taxation, and limited government on which the original code rested. In the process, they choked off the capacity to raise revenue through zakat. States ruling in the name of Islam came to depend, for survival, on other taxes (Løkkegaard 1950; Darling 1996). The goal of capping taxation, and making it predictable, gave way, among politically dominant groups, to concerns with advancing the interests of states or, more specifically, those of rulers.

One might expect the beneficiaries of zakat spending to have defended the Quranic fiscal system in the name of religion. This was challenging in practice, because the Quran is subject to multiple interpretations on the relevant matters. Consider its verses that discourage the hoarding of wealth. In isolation, these could be used, and were used frequently, to justify arbitrary taxation. Another problem is that the principles of limited and predictable taxation are not self-evident; they require interpreting verses within the contexts in which they emerged. Passages that appear contradictory when taken at face value often reflect differences in background conditions. Verses that treat zakat as a tax belong to a period when the Muslim community was growing explosively through the conquest of Arabia; there are other verses, from Islam's earliest years when the community probably numbered at most in the hundreds, that treat it as a voluntary payment—as charity provided out of religious devotion, rather than as a state-enforced obligation (Hurgronje 1882/1957, pp. 157-60). Yet one would not know this from reading the Quran from start to finish, because in its canonical form its suras, or chapters, are not laid out in their order of emergence; disregarding chronology, they are laid out in order of length, from longest to shortest.

The upshot is that within mere decades the zakat system ceased to constrain rulers governing under Islamic law on either taxation or the reach of government. Before long Islamic taxation turned out to be whatever the state could get away with. And rulers took to making spending decisions without regard to the eight expenditure categories of the Quran. The earlier-mentioned philosophical discourses focused on binding the state testifies to the failure of first Islamic state to put in place a sustainable fiscal system conducive to strong property rights.

The lack of effective constraints on predation benefited certain rulers, who responded to crises through arbitrary taxation or confiscation. By the same token, it harmed the Middle East's political development. Governments never gained the trust of people to be able to borrow internally at low cost, as European governments eventually did.

This interpretation of why sustainable constraints on government predation did not emerge through Islam in the seventh century does not explain, of course, why they did not emerge later. Other Islamic institutions account for why the victims of predation remained perpetually unorganized, and thus incapable of advancing the rule of law.

Provision of public goods through waqfs

The elites who effectively destroyed the zakat system through loopholes found themselves without protection against arbitrary takings. Like elites in other times and places, they would have looked for a new institution to protect their assets. In fact, a century after the emergence of Islam, Islamic law saw the appearance of a distinctly Islamic form of trust, which responded to the need in question. As with a modern trust, a waqf consists of an endowment established to provide a designated service. In this case the endowment's income is to serve the waqf's chosen function in perpetuity. A madrasa, or Islamic college, was typically founded as a waqf. The madrasa's construction would be financed through part of the established endowment; and the remainder of the endowment would be used, in principle forever, to produce the income needed for its maintenance (Kuran 200, pp. 841-48).

Just as the canonical zakat rates protected property by capping taxation, so the waqf shielded property through the common belief that waqf assets are sacred. This belief made rulers reluctant to confiscate waqf assets, lest they develop a reputation for impiety. How this belief got absorbed into the Muslim cosmology is unknown. A key source of inspiration was probably the Eastern Roman custom of treating as sacred the trusts of churches and monasteries. Whatever the range of influences, by the eighth century Muslims were extending protection to all endowments, including those serving economic and social functions. The assets of a waqf supporting a water fountain would share the sacredness, and thus the protection from confiscation, of the endowment supporting a congregational mosque.

The sacredness of waqf properties served, then, as a vehicle for rulers to make a credible commitment to respect the inviolability of endowed assets. For the political elites of the eighth century the most important forms of property consisted of agricultural land and commercial buildings. It is probably no coincidence, then, that the traditional waqf law required the endowment of a waqf to consist of immovables. The law favored political elites, who acquired vast lands following conquests, over merchants and artisans, whose wealth tended to consist of movable commercial goods and movable stores of value, namely, money and precious metals. Hence, in substituting for zakat as a protector of private assets, waqf law also altered the beneficiaries of the protection. Under the canonical zakat system the owners of large camel herds and hoarders of gold and silver ranked among the favored group; the capping of their obligations gave them material security. By contrast, under waqf law, animals and precious metals were explicitly *denied* protection (Kuran 2001, pp. 844-48; Kuran 2003, pp. 276-80). This shift in the tax burden is consistent with the transfer of the Arab Empire's seat of governance from western Arabia to what would come to be known as the Levant. The Arab-dominated Islamic Empire was ruled by the Umayyad dynasty based in Damascus, Syria from 661 to 750, and then by the Abbasid dynasty based in Baghdad, Iraq from 750 to 1258. These dynasties benefited from the establishment of waqfs whose social services provided employment, supported economic activity, and, probably most important, diminished expectations of state-provided public goods.

It is not self-evident why private wealth holders placed private assets in organizations committed to serving communal needs. Insofar as they sought to shelter private wealth, why would they have relinquished control and usufruct rights voluntarily? The catch is that waqf regulations allowed them to maintain some control over the assets and also to pass those rights onto designated descendants. Although the motives to found a waqf included piety and social status, such pecuniary returns were generally as least as significant. As a caretaker, a waqf founder could receive fees out of the revenue; he could also appoint employees and designate descendants as successors. In sum, some of the income generated by endowed assets accrued to founders, their families, and their descendants.

On account of their wealth-sheltering function, over the millennium preceding the modern era waqfs attracted a huge share of privately held real estate. Since waqfs were established in perpetuity, the share of real estate under waqf control grew over time. By the nineteenth century, depending on the area of the Middle East, 15 to 50 percent of income-producing real estate was included within the corpus of a waqf (Kuran 2001, pp. 849-52).

The waqf's emergence in the Middle East coincides with that of the corporation in Western Europe. In contrast to the waqf, which is required to follow the directives of its founder, as recorded in its deed, the corporation is a self-governing organization. Both the trust and the corporation were present in Justinian's sixth-century codification of Roman law, which was known to both Arab and European policy makers of the seventh and eighth centuries. Europeans transplanted and developed both organizational forms, and most of the largest non-governmental associations were established as a corporation. Thus, the churches, cities, and craft guilds of medieval Europe typically organized themselves within a corporation. Meanwhile, their Middle Eastern counterparts all operated through organizations lacking self-governance. Indeed, mosques and urban services were financed through waqfs. Like European guilds, Middle Eastern guilds were perpetual organizations. But they were controlled, in some measure, by the state. Not until the twentieth century did Middle Eastern states recognize the corporation and develop a legal infrastructure conducive to its widespread use (Berman 1983, chaps. 1-2; Kuran 2005, pp. 789-99).

This difference in institutional choice reflects a critical difference in state capabilities. During the eighth to the tenth centuries, the Middle East had relatively strong states capable of enforcing Islamic law over wide territories. Precisely because of this strength, the Umayyad, Abbasid, and Fatimid dynasties were able to prey on residents over large territories. As noted above, zakat was long eclipsed as a wealth shield. With Middle Eastern elites feeling a need for material protection from their strong states, the waqf supplied the need. Meanwhile, in the West the states formed after the demise of the Western Roman Empire were too weak to secure law and order. Through the corporate form of organization, communities could develop legal systems on a small scale to regulate their internal affairs. The corporation supplied the means of self-governance in an environment lacking an outside party able to secure the peace (Kuran 2011, pp. 102-10).

Given that waqfs came to control vast resources securely, and that they served broad constituencies—the users of fountains, inns, coup kitchens, mosques—they had the potential to become powerful political players. In principle, they could have used their resources partly to resist trends harmful to their constituencies and to constrain the state. The resulting decentralization of power might have placed the Middle East on the road to democratization. In Western Europe, cities, guilds, and universities organized as corporations set in motion just such a political dynamic. In limiting the powers of central governments, they became agents of democratization.

Alas, in spite of their immense wealth, waqfs remained politically powerless. Several factors kept them persistently weak. First of all, they lacked the flexibility to reallocate resources to campaigns aimed at protecting their constituents. The requirement to follow the founder's instructions explicitly limited their responsiveness to political threats. Had they possessed corporate rights, they would have had the necessary flexibility. Second, they lacked legal personhood, implying that they had no standing in court as organizations. Whereas in 1300 the city of Heidelberg could put its corporate weight behind a campaign to protect its water supply, faced with an analogous threat, a Damascus waqf supplying a neighborhood's water could be defended only by its caretaker, who might appeal to a judge as an individual authorized to enforce a deed. The third factor concerns the accountability of officials. The constituents of a corporation could replace a poorly performing leader; for instance, the residents of a city could replace an unsatisfactory mayor. By contrast, the constituents of a waqf had no say over the caretaker, and he was not accountable to them. If he was monitored at all, it was by the state. Finally, and perhaps most critical, by law waqfs were barred from participating in politics. Whereas an incorporated European city was permitted, indeed expected, to use its resources to influence political conflicts, waqfs could not do so legitimately.

The upshot is that in the pre-modern Middle East the suppliers of social services did not constrain rulers as their counterparts in western Europe did. One manifestation of this difference is that, over more than a millennium, waqfs did not foster political movements or ideologies. The contrast with western Europe is particularly salient here. Many European cities, churches, and guilds were politically active and vocal. They played important roles in struggles over the division of powers between central and local governments; in the uprisings that ended, through the Protestant Reformation, the near-monopoly of the Roman Church over interpreting the Bible; and in the development of worker's rights. The civil society that they formed collectively limited the powers of monarchs. In the process they helped to develop ideologies that would justify the curtailment and containment of central rulers' rights and privileges.

Civil society and its persistent weakness

The term civil society is being used here in sense of Alexis de Tocqueville (1835-40/2000), the great French writer who attributed the resilience of nineteenth-century American democracy to the vitality of its intermediate associations—its organizations standing between the state and the individual. These associations served as a barrier to despotism. They ensured that if an American administration trampled on some liberty, opposition would arise from already organized groups beyond the control of the state. Cognizant of the potential for resistance, the administration would avoid going too far in the first place.

The factors that strengthen a country's civil society have long been a subject of scholarly inquiry. Three are especially relevant here. First, there must exist the freedom to found non-governmental organizations of one's choice. This is a freedom that the law of waqfs provided. The owners of private property were free, in principle and often also in practice, to choose the functions of waqfs that they opted to found. They could endow a soup kitchen, or a park, or a school, for example; the beneficiaries would differ, of course, depending on a founder's selection. A founder who made himself his waqf's first caretaker was free also to choose its employees.

The second factor relevant to the strength of civil society is organizational autonomy. Non-governmental organizations must have the capacity to act and react in their own interest. The rules of the waqf tightly restricted this capacity. In principle, and usually in practice as well, the fixing of waqf objectives and procedures through its founding deed tied the hands of successive caretakers. Unlike corporations, waqfs lacked self-governance.

Finally, there is representative administration. The constituents of non-governmental organizations must in some meaningful sense have control over the officials acting on their behalf. Although they could object to a caretaker who disobeyed the letter of the waqf deed, the beneficiaries of a waqf had no say otherwise over how the endowment's revenue was spent. If a waqf-supported school failed to supply a good education, the parents of the students had no grounds for redress, provided the caretaker maintained the school in good repair, kept it staffed, and paid the teachers regularly. They had no legal basis for objecting merely because the curriculum had fallen behind the times or the pedagogical methods were unsatisfactory. This lack of control on the part of end users bred economic inefficiency. Insofar as the users of waqf services refrained from communicating their wants, this lack of control also kept waqfs from becoming a political force for democratization.

The absence of organizational autonomy and representative administration offer key reasons why, as democracy arose in the West, no such tendency emerged in the Middle East. The democratic rights now picked up in global political indices got established in western Europe (and areas settled by west Europeans) through epic struggles driven by groups organized through universities, cities, religious orders, unions, and merchant associations. Such groups demanded rights. They articulated rationales for broadening requests. Stimulating thinking about the distribution of political power, they developed ideas for social reform. Their successes gave rise to rules, regulations, and laws conducive to extending individual rights and strengthening civil society. A virtuous circle thus came into being. As civil society developed, it put in place rules that facilitated the creation and operation of private organizations and gave them more security (Putnam 1993, chap. 5; Fukuyama 2011, chaps. 22-30).

In the Islamic world, no such virtuous circle emerged. By keeping civil society weak, lack of waqf autonomy and unrepresentative administration jointly created a vicious circle that perpetuated autocratic rule. Strong non-governmental organizations could not be founded, making it difficult, if not impossible, to challenge absolutist rulers through collective action. Hence, political checks and balances were relatively unlikely to arise. It merits emphasis that the waqf carried enormous economic significance. Precisely because of its economic weight, its failure to become a self-governing entity played a key role in keeping the political system autocratic. In the absence of the corporation, the Middle East was left without politically influential intermediate social structures.

Nothing here suggests that in the Middle East people were content with their political system. The account implies that subjects could not act on their grievances effectively and that political challengers were unlikely to offer coherent political ideologies. In fact, the pre-modern Middle East was not always politically stable; certain places and periods saw armed rebellions that lasted generations. However, the challengers aimed to establish autocratic regimes that would differ from existing ones only in the ruling dynasty. The new political regimes would not be more democratic in any meaningful sense of the term (Barkey 1994, chap. 5). A basic reason for the observed political stagnation lies in the weakness of civil society.

Waqfs and corruption

The figures on comparative political development in Table 1 pointed to relatively high corruption in the Middle East. This is a longstanding pattern to which Islam's choice of the waqf as an organizational form to supply social services, and its spurning of the corporation, contributed.

We already know that waqfs were meant to be rigid organizations that used their resources according to directives specified in the founder's deed. Changes in relative prices, tastes, lifestyles, incomes, population, and technologies would sooner or later generate needs for reallocating a waqf's resources. If the waqf's caretaker refused to make adaptations on the ground that he was obligated to execute the founder's wishes to the letter, the intended beneficiaries would be served suboptimally. As discussed elsewhere (Kuran, 2001, 2011), the inefficient exploitation of waqf resources was an endemic problem that contributed to holding the Middle East back economically. Wherever economic inefficiencies are present, opportunities exist for social gain. Indeed, the needs of beneficiaries created incentives to circumvent the instructions in the deed; and enterprising caretakers found ways to get around at least some restrictions. Reallocating waqf resources, they kept their organizations functional—or at least made them less dysfunctional than if they adhered strictly to the founder's directives.

In principle, all such adaptations could be blocked by the courts, which were empowered to monitor waqf practices on behalf of the founder and ostensibly in the interest of the Muslim community. They could insist on enforcing the letter of each waqf deed no matter what opportunities got foreclosed. By the same token, the courts could look the other way as adaptations were made, or allow changes openly on the ground of some emergency. Unsurprisingly, judges were quick to grasp that their oversight duties provided opportunities to extract rents. They needed only to make their cooperation contingent on receiving, through a side-payment, a share of the benefits expected to result from the adaptation. In fact, resource reallocations frequently involved bribes. Waqf caretakers paid judges for endorsing convenient interpretations of deed wordings, or simply for staying silent in the face of irregularities. Corruption, which consists of extralegal measures taken to derive a personal advantage, thus became integral to the management of waqfs through time.

Over centuries, the bribes paid to keep waqfs more or less functional contributed to a culture of corruption. Breaking the law became a frequent practice if only because waqfs were growing in number. It also became socially acceptable because it was common knowledge that rigid enforcement of the law would harm practically every sector. To be sure, widely accepted illegality exists in every society. In Scandinavian countries, which top most political indices, the police usually do not penalize motorists who drive slightly above the posted speed limit. But in the pre-modern Middle East, circumvention of the law took place in a far wider range of contexts. The resources involved were also much greater, because waqfs controlled such a massive share of real estate.

Where laws are commonly evaded, it is relatively hard to make people obey new laws. Since everyone breaks the law, the act carries no significant stigma, and enforcement is costly. Consequently, laws enforced at low cost elsewhere don't get enforced. A byproduct of the culture of corruption generated by the waqf system was thus a rise in the cost of making and enforcing laws. Traffic regulations, rules against littering, tax laws, building codes, and environmental restrictions are openly flaunted in large parts of the Middle East even today. A basic reason is that for centuries the circumvention of materially very important laws enjoyed tolerance.

In the historical literature on the waqf system evasions of waqf rules are often treated as a perfect substitutes for formal and legitimate flexibility. In fact, and for reasons just given, the long term effects are different. In eliminating short term handicaps, evasions reduce pressures against law breakers. That makes it difficult to change behaviors through new rules and regulations, which is integral to modernization. If the Middle East scores low in regard to rule of law, a prime reason is that, for many centuries, breaking the law has been very common.

Political legacy of the waqf system

In the mid-nineteenth century, responsibility for providing basic urban services in the Middle East started passing to municipalities formed under new laws. And by the early twentieth century, it became possible to form private corporations supplying services long delivered by waqfs. The charities, professional associations, literary clubs, cultural organizations, and political associations formed during this period of social transformation laid the foundations for the civil societies found in the Middle East today. To one extent or another, the new private organizations were self-governing. None was bound by the preferences of its founders, except perhaps at a high level of generality. Meanwhile, in the course of the twentieth century laws governing waqfs underwent fundamental revisions in many countries. Modern waqfs are charitable corporations. As such, they enjoy flexibilities that their pre-modern namesake lacked.

Yet more than a century after the lifting of legal obstacles to forming self-governing organizations, the countries of the region continue to harbor weak civil societies. A proximate reason is that states have been committed to controlling or undermining private organizations. The region's autocratic regimes have spent decades emasculating the news media, suppressing intellectual inquiry, banning political parties, and co-opting regional, ethnic and religious organizations in order to silence dissenting voices. One of the reasons for their successes is that they have faced weak non-governmental organizations to begin with. Forming politically effective private organizations is an arduous process, and around a century is a short time compared to the millennium and a half that West Europeans have had to found, join, and interact with them.

As already discussed, self-governing organizations can provide the political checks and balances necessary for a self-sustaining democratic system. They also serve educational functions that enhance the effectiveness of individuals as participants in communal collective action. Insofar as they are run democratically, self-governing organizations promote a culture of bargaining and compromise. Through leadership positions over which members compete, they endow citizens with skills to form coalitions and govern. Individuals who lead private organizations acquire skills to synthesize, articulate, and communicate ideas to heterogeneous groups. They learn to turn diverse and diffuse objectives, programs, and grievances into focused social ideologies capable of competing with state-favored ideologies.

If one salient feature of the Arab uprisings that stunned the world in 2011 is that they involved masses of protestors who did not belong to a pre-existing organization, another is that they lacked leaders of stature. Yet another is that they have not generated new ideologies, let alone coherent new ideologies. These patterns are historically rooted symptoms of weak civil societies.

Weak civil societies do not imply strong states. States of the Middle East remain weak themselves in several senses. One manifestation has already been mentioned: limited enforcement of laws. Massive tax evasion offers an important example. Another manifestation is that states are reluctant to take decisions likely to draw opposition from large constituencies. For all the harshness of his regime, Egypt's former dictator Hosni Mubarak felt compelled to maintain heavy consumer and producer subsidies that distorted economic incentives and harmed economic development. Still another source of state weakness lies in the prevalence of nepotism. As in their interactions with private organizations, in those with public agencies citizens tend to rely on personal relationships. In effect, they treat their relationships with government agencies as social interactions with officials (Al-Ramahi 2008; Cunningham and Sarayrah 1993). Corruption is prevalent beyond nepotism; an interaction with a state agency may turn into a personal business deal even in the absence of a pre-existing personal connection simply because all sides consider bribing essential to getting work done. Under the circumstances, states find it difficult to monitor their employees; and monitoring difficulties lower their capacity to implement policies.

To be sure, various forms of corruption, including nepotism, are universal phenomena; no country receives a perfect score from Transparency International. But there are differences in degree, and those are what we are trying to explain. If corruption is especially common in the Middle East, an important reason is that only in modern times have Middle Eastern legal systems made room for organizations. The transformation came with recognition of the corporate form of organization and, along with it, the concept of a fictitious legal person. For more than a millennium during which European corporations could sue and be sued in their own right, in the Middle East only natural individuals had standing in court. Not even the waqf was considered a person for legal purposes. Under Islamic law, individuals could sue state officials but not the state (see court cases in Kuran 2010). Since the concept of legal personhood entered the legal systems of the Middle East, it has been possible for individuals to sue a foundation, business, municipality, or state ministry. However, it will take time for individuals to get accustomed to interacting with organizations as *organizations*. In the meantime, the ability of states to govern will remain compromised.

Traditional atomism of private sector

A final historical reason why the Middle East remains largely undemocratic involves the commercial sector. Traditionally, profit-making enterprises were tiny and short-lived. In seventeenth-century Istanbul, at the time the commercial center of the eastern Mediterranean, four out of five partnerships had just two members, typically a passive provider of capital and a second person who did the physical work. Less than five percent of all commercial partnerships had five or more members. And even the largest were established for finite periods, usually for less than a year. At this time, in Europe overseas trading companies were being formed as perpetual organizations through capital provided by hundreds of investors. The scales of business continued to diverge until the twentieth century.

Several Islamic institutions accounted for the patterns and their persistence. Any member of an Islamic commercial partnership could pull out at any time, at will. The partnership's premature dissolution by one partner imposed costs on the others. For this reason alone, merchants and investors kept their partnerships small, structurally incomplete, and short-lived. Also consequential was the Islamic inheritance system, which is egalitarian by pre-modern standards. A sudden death forced remaining partners to deal with the decedent's possibly numerous heirs. Middle Easterners kept their commercial partnerships small and short-lived also to minimize the probability of dealing with heirs.

The resulting institutional stagnation of the private commercial sector delayed organizational development in the region. Because small and short-lived enterprises do not face the sorts of coordination and communication problems that fuel institutional creativity, new organizational forms did not emerge indigenously. This stagnation became a huge economic handicap for the Middle East during the Industrial Revolution, when the efficient exploitation of modern technologies required large and perpetual companies. The necessary legal infrastructure was installed through transplants from Europe, which effectively sidelined Islamic law at least on commercial and financial matters (Kuran 2011, chaps. 4-5, 12).

It is the political consequences of the organizational trajectory that matter here. Tiny and ephemeral Middle Eastern businesses could not bargain collectively with the state, as their much larger counterparts in Western Europe did to great effect during the centuries preceding the Industrial Revolution. Their lack of permanence discouraged the formation of business associations, which could have facilitated the bargaining process on behalf of merchants and investors. Along with the atomism of the private commercial sector, rapid turnover of its membership contributed to the persistence of weak property rights. Expropriations of private property, which remained endemic in the eighteenth century, were made possible partly by the weaknesses of private wealth holders as a group.

It is important to realize that organizations formed by private companies belong to civil society. So the atomism of the private commercial sector was among the factors holding civil society back. It thus limited not only the development of rules of special interest to private companies but the strengthening of rule of law generally. The history of human liberties and rights is replete with expansions that stimulated one another. Demonstration effects provide one of the mechanisms at play; immunities gained by one group open the minds of others to new possibilities. A complementary mechanism works through coalition formation; groups help each other gain rights in the interest of self-serving spillover effects.

Islam and the persistence of authoritarian rule

This paper has explored whether Islam accounts for the commonness of authoritarian rule in the Middle East. It has presented an affirmative answer, though in a special sense. The effects have worked through institutions rather than cosmological beliefs or outlooks. The tax system mandated in the Quran, as interpreted and reinterpreted by the first few generations of Muslims, opened the door to arbitrary taxation. The waqf, which is Islam's alternative to the corporation, kept civil society weak due to its rigidity as an organization and its exclusion from politics. And the commercial sector's persistently atomistic structure kept the commercial sector from contributing to the development of civil society, to say nothing of serving as its engine.

This conclusion raises the question of whether modern Islamism represents an attempt to revive institutions responsible for keeping the Middle East politically underdeveloped. Although some Islamists (most explicitly those characterized as Salafis) oppose various social and religious freedoms that in mature democracies people take for granted, very few seriously contemplate going back to a world with only highly rigid non-governmental organizations, expropriations at the will of officials, and only tiny and structurally simple commercial companies expected to dissolve quickly. They are quite comfortable with the institutional fruits of the Western-inspired commercial and financial reforms of the nineteenth and twentieth centuries, even if they treat it as an article of faith that the reforms were harmful. Their own economic successes have benefited from "Islamic" companies organized in modern fashion, including Islamic banks, Islamic mutual funds, and Islamic holding companies, which are corporations, notwithstanding the lip service their promoters pay to medieval contractual forms. Likewise, their political successes have benefited from non-profit organizations that enjoy rights and flexibilities denied to pre-modern waqfs.

Insofar as Islamists are delaying democratization, this is not, then, a result of their economic practices or agenda. It does not follow, of course, that Islamism is irrelevant to democratization. Where they achieve power through the ballot box, as they have in Turkey and, recently, in Tunisia and Egypt, the resulting transfer of power represents democracy in action. If the day comes when popularly elected Islamists leave office peacefully through a defeat at the ballot box, the democratization process will advance further. But it remains questionable whether Islamists will accept a loss of power. Turkish Islamists are known to have characterized democracy as a train that they will ride until they reach their destination, at which point they will hop off.

In any case, Islamists who achieve power do not always respect democratic norms, as these are understood by theorists of democracy. They are not necessarily willing to grant expressive or religious freedoms to their opponents. The rush of the post-revolutionary Arab governments to tighten blasphemy laws signals an attempt to restrict public speech through the threat of heavy penalties, even death, for criticizing Islamist initiatives, or refusing to live what Islamists consider a properly Islamic life, to say nothing of rejecting Islam itself. As Olivier Roy (2012) reminds us, democratic elections can bring to power groups committed to illiberal agendas.

The very process of fair and honest elections can serve to erode illiberal movements. But it may take generations for illiberal streaks to disappear. The institutional legacies identified in this paper cannot be overcome in a few years, even a few decades. It is worth reiterating that they affect all parties in the Middle East, not just the secular dictators now remembered mostly for their brutality and disrespect for political opponents. The effects of the past weigh on the political choices of Islamists too.

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Institutional Bottlenecks: What Can be Done?*

Christopher J. Coyne and Abigail R. Hall†

1. Introduction

How is it that the Middle East, once one of the most economically advanced regions in the world, became relatively underdeveloped within a few centuries? This is the central question which motivates Timur Kuran's (2004a,b 2011a, 2012) research on Islam and the development trajectory of the Middle East. In order to answer this question, Kuran engages in a comparative institutional analysis, both within the Middle East and across regions, to identify the key institutions which facilitated or hampered progress. In doing so he identifies several historical "institutional bottlenecks," path-dependent institutional arrangements, which contribute to economic stagnation. At the time these institutional arrangements were adopted they served to facilitate productive economic activity. These arrangements eventually became bottlenecks, however, as they perpetuated in their original form despite changes to the broader economic environment. The result was economic stagnation due to a gap between path-dependent institutional arrangements based on past economic conditions and the existing economic environment. Even though the bottlenecks themselves

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have since been removed, their legacies have contributed to the regions' ongoing stagnations.

The history of the Middle East contains several clear examples of these bottlenecks, including: (1) Islamic laws regarding inheritance which discouraged capital accumulation, (2) the lack of a notion of "corporation," which resulted in limited organizational forms and a weak civil society, and (3) the waqf, or trust, which resulted in resources being "locked-in" to organizations which proved to be inflexible or inefficient over time. Kuran notes that none of these institutions were inefficient or irrational at the time they were established but, as conditions changed, these arrangements prevented the evolution of economic activity. Due to reforms in the nineteenth and twentieth centuries, none of these historical institutional bottlenecks remain an obstacle to present economic improvements. Nonetheless, the Middle East remains economically underdeveloped. According to Kuran (2011a: 293-298), this is, in part, the result several perverse legacies resulting past bottlenecks. For example, he argues that the Middle East suffers from a lack of key complementary institutions, such as social norms which encourage corruption and low levels of trust, a weak civil society, and inward-looking ideologies which constrain adaptation to changing global conditions.

While Kuran focuses on understanding the economic performance of the Middle East, his research has broader implications for understanding how institutional bottlenecks can lead to economic stagnation in a variety of societal contexts. This leads to a crucial question: what can be done about institutional bottlenecks and the perverse legacies they leave? Our purpose is to use Kuran's analysis as a springboard to explore the answer to this question. If the purpose of economics is to understand the wealth of nations then Kuran's focus on the role of institutional bottlenecks is of central importance to the whole of development economics. Indeed, "the international development community"—consisting of governments, aid agencies, international aid organizations, technocrats and consultants—exists with the specific goal of curing the ills of underdeveloped societies. The very existence of these agencies and organizations seems to imply that the perverse effects of institutional bottlenecks can be effectively dislodged to allow for economic progress. However, the historical record of efforts to "fix" underdeveloped countries has proven disappointing despite the investment of a significant amount of effort and resources (see Easterly 2002, 2006). This implies that developing solutions to remove institutional bottlenecks and the legacies the leave behind may be beyond our grasp. In order to develop an answer to our motivating question we draw on the work of F.A. Hayek and further explore the role of institutions and the limits on human reason on improving the world.

We proceed as follows. The next section provides a discussion of institutional bottlenecks and how they contribute to economic stagnation. Although the form of these bottlenecks varies and is context specific, Kuran's insights regarding their role in economic performance are generally applicable to our understanding of the wealth of nations. Section 3, which consists of two subsections, considers the issues of spontaneity, rational constructivism and the limits of human reason. Section 3.1 discusses what we term "Hayek's dilemma." F.A. Hayek was a staunch critic of "rational constructivism," the belief that man could shape the world according to their wishes and desires through the use of reason. At the same time, however, Hayek made specific recommendations for institutions and rules which he believed would lead to a preferable state of affairs. How can Hayek simultaneously critique the abuse of reason, yet rely on his own to offer specific rules and institutions to improve the human condition? Section 3.2 discusses a resolution to this tension by extending Hayek's emphasis on feedback and competition in markets to the realm of institutions and rules. What matters for rule formation is not whether institutions are spontaneous or constructed, but rather whether feedback mechanisms exist to generate desirable results for those who live under the rules being formed. In light of this resolution, Section 4 returns to our motivating question—what can be done about institutional bottlenecks?—and offers an answer. We argue that focus should be placed on "unblocking reforms," which create general rules by removing barriers to discovery as compared to "end-state reforms," which attempt to predefine and achieve specific outcomes.

2. Institutional Bottlenecks

Institutions can be understood as the formal and informal "rules of the game" (North 1990). These rules create payoffs to various courses of action which, in turn, influence economic outcomes. There is widespread agreement among economists that institutions matter for economic performance. Further, economists know what is required for economic prosperity in general terms, what Dani Rodrik (2007) calls "first-order economic principles"—private property, sound policy, and competitive markets. That said, the specific form of these institutions and policies varies so greatly that economists lack a single, well-defined solution to underdevelopment. This lack of a one-size-fits-all solution is due, at least in part, to the unique historical experiences of different societies. These perspectives serve as constraints on what can be achieved in the present and future (North 1990, 2005). So while we know that private property rights play an important role in all societies, the specific form these rights take, if they exist at all, varies based on unique historical contingencies.

The idea that history matters for institutional trajectories, and hence economic performance, was recognized by Douglass North (1990) who introduced the concept of "institutional path dependence." Institutional path dependency, the locking in of certain institutional arrangements due to increasing returns, has its basis in Brian Arthur's (1988, 1989, 1994) work on path dependence in market settings.[1] At the core of this literature is the recognition that small decisions in the past, which often appear insignificant at the time of the choice, can have significant future implications. A key implication of the path dependency literature is that laissez-faire market activity can result in inefficient allocations—e.g., inferior products or inferior standards of operation—which persist or lock in despite the availability of superior alternatives. These self-enforcing lock-in effects are the result of increasing returns which emerge from three sources: (1) fixed costs which result in lower cost per unit as output increases, (2) learning effects which result in lower costs due to increased know how, and (3) network effects, which refers to the greater benefits of adopting a technology or standard given that others have already chosen to adopt that technology or standard (Arthur 1998: 10, 1994).

Increasing returns, in turn, generate the following outcomes: (1) multiple equilibria where a number of potential outcomes are possible, (2) potential inefficiencies as inferior alternatives "win out" over superior ones, (3) potential lock-in of an equilibrium which, once selected, can persists over time, and (4) potential path dependence whereby small choices and events lead to a particular path which constrains the range of future choices. Arthur's line of reasoning is important because it raises the prospect of market failure whereby inefficient alternatives are not just chosen, but persist over significant periods of time.[2] Further, even if the superiority of alternatives is recognized ex post, it can be difficult to coordinate a wholesale shift to the preferable equilibrium because of increasing returns to maintaining the status quo. The standard solution is for

[1] Also important is Paul David's (1985) work on the economics of QWERTY which raised issues of path dependency in technological standards.

[2] It is important to note that Arthur's analysis and conclusions regarding path dependency and market failure have been challenged (see Liebowitz and Margolis 1990, 1994a,b, 1995, 2000; Kiwit 1997).

some central authority—typically a government—to intervene to correct for the market failure and, in the process, increase overall efficiency.

North (1990: 95-6) extended Arthur's logic of path dependence in markets to institutional arrangements, arguing that increasing returns and positive transaction costs influence institutional paths.[3] The logic of institutional path dependency indicates that two societies may respond to identical conditions in dramatically different ways because of differing historical experiences. It follows that institutional paths serve as constraints on present and future economic opportunities and performance as institutions respond to changes based on past historical experiences.

Kuran's research highlights how institutional paths can create "bottlenecks" in the form of persistent institutional arrangements which hamper economic progress. The logic of institutional bottlenecks helps to explain why some societies remain underdeveloped and why other societies suffer a reversal of fortunes whereby economic prosperity is followed by economic decline and stagnation. Certain institutional arrangements are locked in even as circumstances change. While these institutions may have served a purpose in the past, as conditions change, these arrangements may become suboptimal. Given today's information, agents would be better off if they moved to some other arrangement. However, due to increasing returns existing institutions are self-enforcing and can contribute to economic stagnation if they fail to effectively deal with the ever-evolving economic environment.

To provide one example, consider Kuran's (2004a,b; 2011a) discussion of the waqf system, which refers to an Islamic trust, or pious foundation. These unincorporated trusts were established by a person, under Islamic law, to provide a specified service in perpetuity. The person establishing the trust would establish an endowment to support various social services such as schools, mosques, water infrastructure, etc. The emergence of the waqf was beneficial on several margins. For one, these institutional arrangements allowed for the funding of social services and "public goods" at a time when governments did not fill these roles. According to Kuran (2011a: 110), "In the Middle Ages waqfs financed innumerable services in cities far larger than any western town; and they did so without direct state involvement." Second, in the absence of weak property rights, the waqf was a

[3] Also see Buchanan and Yoon (1994) and Pierson (2000a,b) who discuss institutional path dependence and its connection to economic development. Kiwit (1997) and Leibowitz and Margolis (2000) discuss some issues with extending Arthur's notion of path dependency to institutions.

mechanism for protecting private assets in the face of unpredictable expropriation by those in power. As the trustee of the waqf, the founder could pay themselves a salary and also appoint friends and family to central roles within the waqf. Because waqfs held a sacred status, political elites were less likely to engage in predatory behaviors against them, thus allowing for a more predictable and secure income stream for the waqf's creators and employees.

The emergence of this institutional arrangement was clearly beneficial within existing circumstances as it "represented, in effect, an implicit bargain between rulers and their wealthy subjects. Rulers made a credible commitment to leave certain property effectively in private hands; in return, waqf founders agreed to supply social services, thus unburdening the state of potential responsibilities" (Kuran 2004a: 75). In this regard the institutional arrangements underpinning the waqf system contributed to economic prosperity given the broader context.

Despite the early success of this institutional arrangement, however, over time the waqf system became an institutional bottleneck which hampered economic progress. The inflexibility of the waqf system became evident as necessary goods and services were not being provided. The problem was that the initial constraints established by the waqf system—the dedication of an immoveable endowment to the provision of a specific service in perpetuity—once so beneficial to the development of the Middle East, became a hindrance as needs changed. As Kuran (2004a: 78) notes, "The waqf system lacked the flexibility to reallocate its vast resources quickly to meet the emerging demand for these services." This inflexibility is evident from a consideration of the fundamental differences between waqfs and corporations: (1) the absence of profit-maximizing behavior, (2) non-transferability of individual shares, (3) the lack of separation between the property of the waqf and trustee, and (4) the waqf's lack legal personhood (Kuran 2011a: 128-130). The structure of the waqf system created a disincentive to adapt the goods and services provided, hampering large-scale commercial trade as economic conditions evolved. The inflexibility of the waqf system was even more evident when comparing the public services of the Middle East to those in other western societies in the nineteenth century. Other public services were much more adaptable and, therefore, more conducive to economic progress.

The waqf system is just one example how institutional arrangements, which were once beneficial, can evolve into self-perpetuating institutional bottlenecks (as per the logic of institutional path dependency). Further, even when bottlenecks themselves are removed, they can leave perverse historical legacies which may continue to hamper development. For example, even in the wake of nineteenth and twentieth century reforms which reduced the need for waqfs, past reliance on these institutional arrangements contributed to corruption, ineffective judges, and a weak civil society which contribute to ongoing stagnation (Kuran 2011a: 293-296).

As Kuran's research program demonstrates, the logic of institutional bottlenecks has potent explanatory power for understanding the varying wealth of societies across both time and space. Many development economists and practitioners, however, are not satisfied with stopping at explaining the differences in economic development. Instead, they seek to actively design and implement reforms to remedy the institutional bottlenecks which they believe contribute to underdevelopment. Such exercises in "rational constructivism"—the use of human reason to attempt to design a preferable state of affairs—is grounded in the aforementioned logic of path dependency.

Where institutional bottlenecks exist, many argue that in order to put actors on a new and improved institutional path, some outside entity, such as the international development community, must provide an exogenous shock to break society out of the suboptimal status quo. Thus, many development economists and practitioners concern themselves with finding the "right" institutional mix to promote progress in various countries. Indeed, the entire international aid complex is dedicated to designing solutions intended to fix underdeveloped countries through institutional and policy reforms which aim to achieve superior economic, legal, political and social outcomes.[4]

Recognizing the role of institutional path dependence in economic development, as well as the desire to "do something" to remedy what are perceived as inferior institutional arrangements raises an important question: what can be done about institutional bottlenecks? The answer to this question requires an understanding of the limits on human reason to rationally construct a preferable state of affairs to achieve the end of promoting economic progress.

[4] The prevalence of this type of thinking is evident in Easterly's (2006) critique of "Planners," in contrast to "Searchers," in economic development. A Planner "thinks he already knows the answers" while a Searcher "admits he doesn't know the answers in advance; he believes that poverty is a complicated tangle of political, social, historical, institutional and technological factors" (Easterly 2006: 6). The dominant "Planner" mentality holds that enlightened experts can design institutional reforms to dislodge bottlenecks and achieve economic development.

3. Spontaneity versus Constructivism

3.1 Hayek's dilemma

F.A Hayek (1941) was a strong critic of what he called the "men of science," those who attempted to utilize science to transform and perfect society. Hayek's central critique of constructivism was that there exist hard limits on what human reason is able to comprehend regarding the functioning of society. He argued human civilization was a network of complex institutional arrangements that could not be understood by a single mind or group of minds. This logic applied to economic activity, as evident in Hayek's (1945) famous critique of socialism, as well as to the array of institutions underpinning the "extended order" of society (1960, 1988). For Hayek (1960: 62), social order is largely the result of following informal rules and conventions which were not imposed from above:

> We understand one another and get along with one another, are able to act successfully on our plans, because, most of the time, members of our civilization conform to unconscious patterns of conduct, show a regularity in their actions that is not the result of commands or coercion, often not even of any adherence to known rules, but of firmly established habits and traditions. The general observance of these conventions is a necessary condition of orderliness of the world in which we live, of our being able to find our way in it, though we do not know their significance and may not even be consciously aware of their existence.

According to Hayek, designed orders played a very important role in all societies. These planned orders, however, were embedded within a broader institutional context which was beyond the grasp of human reason. The implication, according to Hayek (1941, 1952), was that the use of science to attempt to rationally improve the world represented an "abuse of reason" which threatened the very foundations of the societies in which planners intervened.

Within this context, a significant part of Hayek's research program focused not just on critiquing the men of science, but also on developing an understanding of the role of complex phenomena in society. Hayek's writings on this topic are wide ranging and deep, and we cannot hope to do justice to them here. That said, Caldwell (2004: 309-10, italics original) provides an excellent summary in the form of eight general propositions which capture Hayek's core insights on the nature of order and complex phenomena:

1. Orders of various sorts exist in nature. An order occurs when the actions of various elements or members of a group are coordinated or brought into mutual adjustment.
2. Sometimes orders occur without anyone consciously designing them. Such spontaneous orders come into being as the result of the individual elements following rules, rules that do not aim at creating the resulting order as a goal.
3. We can say a number of things about the rules that can generate spontaneous orders:
   a. Rules are often simple and often take the form of prohibitions.
   b. Even if individuals are capable of speech, they need not know that they are following rules, and, even if they do know that they are following rules, they need not be able to *articulate* those rules.
   c. Individuals often cannot say *why* they are following the rules that they follow, nor can they see what the actual *results* of following the rules are.
   d. Not all rules lead to order, and, among those that may lead to an order in a given environment, the ability to do so may change as the environment changes.
4. Given what has been said about rules, it should be evident that, typically, they are not consciously selected by individuals aiming at order. Rather, rules persist when the groups in which they are practiced persist.
5. The past history of a group, which includes the environments that the group has faced in the past and the rules that it has followed in the past, determine what rules will be followed in the present and the corresponding nature of the order.
6. Orders vary in complexity. Social orders are among the most complex.
7. When dealing with complex orders, often the best that we can do is to provide an 'explanation of the principle' by which they operate. Precise predictions will not be possible; only 'pattern predictions' about the range of phenomena to expect will be available.
8. As such, the theories that we develop to explain complex orders will forbid fewer events, and, thus, will be less falsifiable, than those that deal with simple phenomena.

As this overview indicates, Hayek had a notion of institutional path dependence (propositions 4 and 5), though it was not necessarily grounded in increasing returns (as are more recent renderings of the concept). In contrast to designed orders, the fundamental foundations of human society are emergent, evolutionary, complex and spontaneous, meaning they are beyond the grasp of human reason. This has important implications for our ability to address institutional bottlenecks and their perverse legacies, as these arrangements are likely part of a complex structure which is fully beyond the grasp of human reason. Further, while the analyst may be able to explain how a complex phenomena emerges *ex post*, the logic of complex phenomena prevents the analyst from making specific point predictions about future outcomes.

Taken together, Hayek's insights regarding the nature of complex phenomena and the limits of human reason have humbling implications for what can be done to address institutional bottlenecks. As Hayek writes, "While the assumption of sufficient knowledge of the concrete facts generally produces a sort of intellectual hubris which deludes itself that reason can judge all values, the insight into the impossibility of such full knowledge induces an attitude of humility and reverence towards the experiences of mankind as a whole that has been precipitated in the values and institutions of existing society" (1967: 39). This seems to imply there is little we can do to improve the complex, deeply imbedded and historically contingent institutional bottlenecks. Analysts and planners can never fully comprehend the complex system which they seek to improve. The outcomes of intended developments, even if motivated by the best of intentions, are unclear and may very well do more harm than good. Even what appear to be relatively simple enhancements often turn out to be nothing of the sort, as society is rarely composed of linear and simple regularities and relationships (Hayek 1967).

This said, one notices a tension across Hayek's writings.[5] While providing strong warning against the abuse of reason, elsewhere Hayek indicates that we can engage in constructivist planning to improve the world. He notes that, "We can 'plan' a system of general rules, equally applicable to all people and intended to be permanent (even if subject to revision with the growth of knowledge), which provides an institutional framework within which the decisions as to what to do and how to earn a living are left to the individuals" (Hayek 1939: 8). Elsewhere, Hayek (1944: 85-86) writes that, "The liberal argument is in favor of making the best possible use of the forces of competition as a means of coordinating human

[5] We are by no means the first to point out this tension in Hayek's writings, see Kukathas (1990), Barry (1994), Vanberg, (1994), Buchanan (1977, 1986), and Sandefur (2009).

efforts, not an argument for leaving things just as they are…It does not deny, but even emphasizes, that, in order that competition should work beneficially, a carefully thought-out legal framework is required, and that neither the existing nor the past legal rules are free from grave defects."

Hayek (1960, 1967, 1973) clearly recognized that the broader social order was the result of both emergent and designed institutions.[6] He also seemed to recognize that the distinction between emergent orders and planned orders is unclear. The system of rules, he wrote, "is the outcome of a process of evolution in the course of which spontaneous growth of customs and deliberate improvements of the particulars of an existing system have constantly interacted" (1973: 100). These quotes, in contrast to those presented earlier, imply an important role for rationally constructed rules in the broader social order. In recognizing the importance of constructed rules, Hayek is never clear on exactly when the rational design of rules has extended beyond the what human reason can grasp. This is problematic. If spontaneous orders are constituted, at least in part, by constructed orders, then Hayek's broader critique of constructivism would be significantly weakened (see Sandefur 2009).

Still elsewhere, Hayek makes specific suggestions for changes to rules and institutions which he believes will improve the world. For example, Hayek made a precise proposal for the denationalization of money (1976) and offered a model constitution meant to create a true separation of powers (1979: 105-127). These proposed changes are rationally constructed and rely on the use of reason. In contrast to Hayek's discussion of complex phenomena, which suggests that we are severely constrained in our ability to improve the world, these quotes imply that we can use human reason to improve upon the status quo. Can we to resolve Hayek's dilemma? The answer to this question has direct relevance for understanding what can be done about institutional bottlenecks.

3.2 Resolving the dilemma

There have been several attempts to reconcile the tension in Hayek's writings. Buchanan (1986) argues that we must be weary not of rational constructivism, but instead of "romantic constructivism," which altogether neglects constraints on human reason. Specifically, he notes that we must, "limit the range of institutional

[6] Hayek (1973: 36-52) differentiates between "spontaneous orders" and "organizations." The former (what the Greeks referred to as "kosmos") are emergent in nature while the latter (what the Greeks referred to as "taxis") are designed or created orders. Hayek notes that emergent orders tend to be complex and guided by abstract rules while organizations are relatively simple and characterized by designed commands and rules.

reform proposals to those which are consistent with man's own behavioural capacities, as these are shaped in part by the culturally evolved rules that he does not understand" (1986: 321).

Vanberg (1994) offers a more comprehensive solution to Hayek's dilemma. He differentiates between "conditional" and "unconditional" evolutionary claims. Conditional evolutionary claims are those that discuss the evolutionary process with an appreciation of specified constraints. By specifying the relevant constraints, we are then able to make general conjectures about what type of evolutionary outcomes will emerge independent from actual observance. Unconditional evolutionary claims, in contrast, are claims about evolution without any reference to specified constraints. While Hayek made conditional claims about market competition—the importance of private property, contracts, etc. as meta-constraints necessary for beneficial market outcomes—he never specified the meta-constraints necessary for the functioning of an evolutionary process of rule formation. Vanberg seeks to remedy this deficiency by extending Hayek's appreciation of conditional claims regarding market competition to rule formation.

In order to understand Hayek's conditional claims regarding markets, it is important to begin with what he saw as the core principle of liberalism, that is, "a policy which deliberately adopts competition, the market, and prices as its ordering principles" (1948: 110). The argument underlying this fundamental principle was Hayek's realization that competition is a process of discovery and that markets allow individuals to act on context-specific, tacit knowledge which cannot be known outside of the market (Hayek 1945). Hayek realized that the desirable properties of market would only be realized under certain meta-conditions, stating, "a functioning market presupposes not only the prevention of violence and fraud but the protection of certain rights, such as property, and the enforcement of contracts" (1948: 110). In specifying these meta-constraints, Hayek was making what Vanberg called "conditional evolutionary" claims about market competition. Provisional on certain institutions being in place, Hayek was able to make the pattern prediction that markets lead to a coordination of plans. Moreover, they generate desirable outcomes from the standpoint of the market participants themselves. Within these meta-constraints, there are, simultaneously, many aspects of the market which are intentionally designed (e.g., research and development, the engineering of goods) and other aspects which are emergent (e.g., the spontaneous emergence of money, norms of trust). The broader point is that within the meta-constraints, within which good outcomes tend to emerge, the emergent-constructivist distinction is irrelevant because both can exist simultaneously and contribute to desirable outcomes.

Vanberg argues we must extend the logic of conditional evolutionary claims to the formation of rules and institutions. Hayek never took this step in his analysis of rules, which is precisely why the dilemma discussed in the previous subsection emerges. What Vanberg concludes is that the focus should not be on the source of rules per se—purely emergent versus purely designed institutions—but rather on the process through which rules emerge and evolve. "What is essential for an evolutionary process," Vanberg notes, "is not that its competing inputs are undesigned, or that its constraining rules are of spontaneous origin. What is essential is that the framing rules are of a kind that allows for, and maintains, a competitive process with desirable characteristics, desirable, that is, for the persons involved" (1994: 192).

This implies that instead of focusing on the issue of spontaneity versus constructivism when considering reforms to institutions, focus should be on whether changes contribute to a framework allowing for discovery by those who must live under the newly reformed institutional arrangements. As Hayek noted in his discussion of rules, reforms will most likely be the result of some mix of spontaneous emergence and purposeful design. What matters is not so much the specific source of reforms, but whether the reforms avoid Hayek's warning against the abuse of reason.

4. What Can Be Done? What Has Been Done?

In closing, we return the question that motivated us—what can be done about institutional bottlenecks and their perverse legacies? If we take seriously Hayek's warnings against constructivism and the abuse of reason, then direct interventions aimed at imposing or achieving specific outcomes are limited in their effectiveness and will generate undesirable consequences. This does not mean we are helpless to improve upon the status quo, however. Based on the preceding discussion, we can make the important distinction between "unblocking reforms" and "end-state reforms."

Unblocking reforms seek to remove barriers to discovery. This involves making changes to the meta-rules which allow individuals to engage in the process of experimentation and learning that Hayek (1945, 1948, 1960, 1974) emphasized throughout this writings. Unblocking reforms do not seek to predetermine certain outcomes of evolutionary processes, but rather aim to create an environment in which individuals can discover outcomes for themselves. In stark contrast, end-state reforms seek to make changes to achieve certain, predefined outcomes. Unblocking reforms appreciate Hayek's critique of rational constructivism while end-state reforms do not. Some specific examples from the Middle East will illustrate this important distinction between the two types of reforms.

As Kuran (2011a: 293-298) notes, none of the institutional bottlenecks that retarded economic change and progress in the past remain an obstacle today. Indeed, a series of reforms were undertaken in the nineteenth and twentieth centuries by governments throughout the Middle East which would, in principle, seem to contribute to the process of modernization and development. For example, the governments of the Ottoman Empire, Egypt, and Iraq all instituted reforms to legal institutions allowing for corporations, contracts, and stock markets. These reforms, which removed past institutional bottlenecks, have been met with widespread acceptance throughout the region (Kuran 2011a, c). In principle, these reforms were of the unblocking variety. They did not seek to select winners or specific end states, but rather sought to create a general environment within which people could engage in experimentation and voluntary economic activity whether it was starting a corporation or participating in the stock market.

Despite these unblocking reforms the Middle East remains relatively underdeveloped (see Kuran 2011: 293). How can this stagnation be explained given the post-reform presence of institutional arrangements conducive to modern economic life? The answer to this question lies in the fact that while the reforms themselves were unblocking in nature, complementary political reforms that limited the grabbing hand of the state were missing. In the absence of these complementary reforms, the unblocking reforms adopted were limited in their ability to generate development. As Kuran (forthcoming) explains in his paper in this volume, in addition to perverse economic consequences, the economic system emerging from these former institutional bottlenecks also had long-lasting political consequences. Specifically, the political legacy of the Middle East is one characterized by a relatively weak rule of law, corruption, and weak protections on civil liberties. For example, consider the case of civil society in the Middle East. Kuran (2011a: 295-296, forthcoming) finds that a weak civil society is a major contributing factor to ongoing economic and political stagnation despite the aforementioned reforms to remove historical bottlenecks. Weak civil society is one perverse legacy of the waqf system which required these organizations to remain apolitical. This prevented the rise of private associations which may have balanced and checked political power. The result is that in the absence of a robust civil society the state, and not private actors or associations, has been the main player in the post-reform period.

More broadly, what the case of the Middle East demonstrates is that, absent complementary reforms to constrain the predatory proclivities of the state, the implementation of unblocking reforms will result in dysfunctional outcomes in practice. Absent constraints, the political elite may abuse the reforms as opportunities to indulge their personal preferences—e.g., personal enrichment, nepotism, cronyism, etc.—as compared to allowing individuals to engage in discovery and experimentation which would contribute to broader development and improved social welfare.

As another illustration of the distinction between unblocking and end-state reforms, consider again civil society in the Middle East. As noted, weak civil society, which is a legacy of past bottlenecks, continues to be a contributing factor to the absence of effective constraints on the behaviors of governments. What can be done about this situation?

One alternative is for outsiders to subsidize certain groups and associations in the name of fostering the development of civil society to achieve certain predefined end states. As a specific example, consider the case of the Arab Spring. Following the uprisings throughout the region, U.S. government officials highlighted the role of external U.S. funding to activist groups as playing an important role in the protests and in the overthrow if illiberal regimes (see Nixon 2011). While this funding may have contributed to the achievement of specific end states—e.g., the fall of illiberal governments—this is fundamentally different from a civil society in the sense of voluntary associations that emerge as private solutions to collective action problems. Tocqueville (1830-40) emphasized that civil society emerged from the actions of private individuals and served as an important middle ground between the atomism of markets and potential coercion of government. Government-funded civil society is, therefore, fundamentally at odds with Tocqueville's vision of civil society association. So while external governments can indeed fund certain groups to achieve predefined end states, this is fundamentally different than creating the conditions necessary for the emergence of a voluntary, civil society.

The distinction between unblocking and end-state reforms is important in the context of civil society. Because end state reforms are not neutral they can have perverse effects on other aspects of civil society. Consider, for instance, the case of Egypt. In the period following the fall of the Mubarak regime, the Supreme Council of the Armed Forces (SCAF), a body of senior officers in the Egyptian military, began a crackdown on a variety of Egyptian NGO's associated with the U.S. and other foreign governments. Whether accurate or not, the SCAF attributed the ongoing unrest in the country to the meddling of foreign governments through NGOs operating in Egypt. More broadly, this example illustrates that in pursuing specific end-state reforms, interveners can generate unintended consequences in the form of backlash against private associations which ultimately prevents the emergence of a civil society based on voluntary actions. By itself, this line of reasoning does not mean that end-state reforms cannot achieve desired goals, but rather, it appreciates that efforts at rational constructivism can generate undesirable costs precisely because of the limits on our reason to anticipate negative unintended consequences.

As these examples, and our broader discussion indicate, limitations on human reason means that end-state reforms are limited in their ability to fix institutional bottlenecks and their perverse legacies. Furthermore, due to the limits of human reason, end-state reforms will often generate unintended and often negative consequences. This logic can be extended well beyond the case of the Middle East. Indeed, the argument that efforts at change should focus on unblocking reforms, as compared to end-state reforms, is at odds with the typical response to perceived bottlenecks by the international development community which involve top-down plans—i.e., externally designed and imposed institutional reforms, well-timed and spent foreign aid, military interventions, etc.—to achieve specific, predefined outcomes which will supposedly remedy the various problems that supposedly plague underdeveloped societies (see Easterly 2001, 2006; Coyne 2013). This type of end-state thinking neglects issues of experimentation, discovery, and adaptability–precisely what Hayek warned against in his critique of constructivism (see Coyne and Mathers 2010).

In contrast to this typical response, our analysis suggests that where opportunities exist, they will be on the margin of unblocking reforms that frame the subsequent process of interaction and evolution.[7] Such reforms appreciate the limits on human reason because reformers are not selecting end states, but instead

[7] One issue of relevance that we do not address in detail is the distinction between "positive" and "normative" political economy. We direct the reader to Buchanan (1959) who discusses this distinction between the two and outlines the process of positive political economy.

are focused on establishing the conditions which facilitate subsequent interactions and learning. Such an approach recognizes that while we cannot know the specific outcomes of evolutionary processes *ex ante*, we can establish constraints to guide it.

Of course, historical experience has repeatedly shown that reforms to a society's meta-institutions are no easy task, but if there is any role for the political economist it is, as Hayek (1974) noted, "to cultivate a growth by providing the appropriate environment, in the manner in which the gardener does this for his plants." More generally, if we are to avoid doing more harm than good, it is crucial to remember that appreciating the limits of human reason are just as important, if not more so, than what can be accomplished within those limits.

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Preference Falsification, Revolutionary Coordination, and The Tahrir Square Model

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1. Introduction

Eighteen days of sustained protests in Cairo's Tahrir Square in early 2011 brought down Hosni Mubarak, ruler of Egypt for over 29 years. The speed with which protests grew during that time surprised many participants and observers. Egyptians had been protesting by the thousands – occasionally, by the tens of thousands – for over a decade. Yet, few analysts thought that public protests could grow to the point where they could bring down the regime. One study documented over two million Egyptian workers participating in 3,239 strikes, gatherings, sit-ins, and demonstrations from 2004-2010 (Beinin 2010, 2011). And those numbers reflect only workplace mobilizations. Political parties, associations (e.g., the Society of Muslim Brothers), youth movements (e.g., Kefaya or the April 6 Youth Movement), and residential-based groups held thousands of similar events over that period. But these groups often were divided among themselves and drew from different social bases. The overthrow of President Ben Ali in Tunisia certainly inspired many Egyptians, but what was sufficiently different in Egypt in January 2011 that these disparate groups could coordinate their efforts and attract the support of large numbers of Egyptians who had never before protested against the regime?

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In this essay, I build upon Timur Kuran's work on unforeseen political revolutions to help make sense of the stability (and fragility) of the status quo that existed in Egypt. By relaxing a few assumptions of Kuran's model, I am able to show that a key innovation in January 2011 was that Egyptians fortuitously stumbled upon a particular way and place to protest that made it easy for them to see how many others had joined the opposition. A series of events on January 25th created incentives for Egyptian opposition groups to focus their subsequent efforts on one place – Tahrir Square. Committed activists seized Tahrir three days later and continuously occupied the space until Mubarak stepped down. Relative moderates joined and reinforced them on days that were named and highly organized. One protester's sign succinctly summarized the strategy, "Mubarak, you go away. I go home. The end."

This modality of protest, which I call "The Tahrir Square Model," was particularly powerful in growing the size of the opposition because it helped Egyptians determine how many other Egyptians had joined the opposition to Mubarak's regime. It generated common knowledge about the size of the opposition and helped induce what Kuran calls a revolutionary bandwagon. Until the opposition stumbled into Tahrir, Egyptians had been unable to collectively estimate the size of the opposition, a critical parameter in his framework. After opposition groups coordinated their efforts in that one well-known space, Egyptians could monitor the size of the crowds over time by watching al-Jazeera and by visiting Tahrir or hearing reports from friends and family who had visited.

After Mubarak was forced from office, activists in other Arab countries mimicked the "Tahrir Square Model" as best they could. In my research, I find that protests spread and grew only in countries that had an analogous central focal square. The transnational diffusion of this specific innovation facilitated collective mobilization in some countries (those with a specific feature in the urban built environment) but hindered it in others. It shaped how and where the so-called "Arab Spring" spread.

This paper proceeds as follows. Section 2 briefly introduces Kuran's dual preference model before relaxing a few key assumptions about what people know. Section 3 examines the Tahrir Square model and uses details of the Egyptian uprising to illustrate the usefulness of the deductive approach. Section 4 discusses the spread of that model beyond Egypt. Section 5 concludes.

2. *Preference Falsification and political revolution*

One of Timur Kuran's research programs focuses on the repercussions of hidden preferences. His dual preference model distinguishes between an individual's private preference and her public preference. The former is what she would express in the absence of social pressures or anticipated punishment; the latter is what she chooses to convey. Kuran defines "preference falsification" as choosing a public preference different from one's private preference, and he then uses the concept to explore the unintended consequences of such behavior in a wide variety of strategic settings.

Most influentially, Kuran applied this deductive perspective to the study of political revolutions and, in particular, explaining why such events often surprise both observers and participants (Kuran 1991; 1995, p. 247-260). Imagine a society where some public opposition to the ruling regime exists. Activists are willing to challenge the regime, despite considerable personal risk and little hope of success, but they are too few in number to overthrow it and need others to join them. Now imagine that some remainder of the rest of society would join this opposition if enough others also did. These individuals vary in their motivations and the conditions under which they would join the opposition; they have different private preferences. Some would join the opposition if only a few others did as well; perhaps they need 20% of society to be in public opposition for them to join. Others would only join if large portions of society, maybe 50%, had already "defected" to the opposition. A presumably small portion of society would never defect from the regime; Donald Rumsfeld famously blamed insurgent attacks in Iraq on "pockets of dead-enders." Each individual has a "revolutionary threshold" – the critical value of public opposition at which an individual will abandon the government and join that opposition – and these unobservable thresholds vary throughout society.

People do not know the distribution of these revolutionary thresholds within their society. The distribution might be one in which a small change in the number of people in opposition would lead to a series of self-augmenting defections whereby each move to the opposition triggers more defections. Such a society is on the pinnacle of revolution without anyone fully realizing it because a change in the private preference of a small number of people would trigger a revolutionary bandwagon. Kuran would say that such a status quo owes its stability to preference falsification. Or, the distribution of thresholds could be such that even a large number of people joining the opposition at once would be insufficient to reach the revolutionary threshold needed to trigger yet more defections.

Changes in an individual's private preferences can change their revolutionary threshold. Kuran give an example of someone who has an unpleasant encounter at a government ministry, and this new (and exogenous) alienation from the regime deepens (i.e., changes her private preference in a way that reduces her revolutionary threshold) to the point where she tosses an egg at the country's leader during an official rally (i.e., she changes her behavior to bring her public preference in line with her new private preference – she is now in opposition) (Kuran 1995, p. 250). He then analyses how the impact of this defection varies according to different distributions of thresholds in society.

Kuran's basic model, however, does not consider how people know how many other people oppose the regime. The size of the opposition in a society at any moment is assumed to be common knowledge, that is, everyone knows it, everyone knows that everyone knows it, and everyone knows that everyone knows that everyone knows it, etc. (Chwe 2001). In the example given, a few citizens might witness the egg-tossing and tell others about it. But, first, how do people who hear about it secondhand know that the rumor is true and not misinformation or an exaggeration by those already in opposition? Kuran mentions that revolutionary leaders have incentives to publicize hidden discontent but they also have incentives to exaggerate the breadth and depth of that discontent, and others in society know this. Second, how do people know that the egg-tosser is a new defector and not someone who had long been in opposition? How do people know that the number in opposition has increased? More fundamentally, how do people know how many other people already oppose the regime? Regimes, particularly authoritarian ones, have incentives and capabilities to prevent people from accurately learning the size of actual opposition. I argue that the way Egyptians came to protest in Tahrir Square solved these informational challenges.

2. *The Tahrir Square model*

3.1 A divided opposition

Protests had become common in Egypt in the 2000s; it was sometimes rare to go a week without seeing or hearing about a demonstration, perhaps by journalists or a group of neighbors. Joel Beinin (2010, p. 14) described the worker protest wave since 2004 as "the largest social movement Egypt has witnessed in more than half a century," and a state-owned newspaper, Ruz al-Yusuf, declared 2007 "The Year of the Sit-in" (El-Ghobashy 2011b, p. 40). Labor demonstrations were only one form of protest occurring in Egypt. Mona El-Ghobashy (2011a,

p. 3-4; 2011b) categorizes protests in Egypt in three distinct currents: 1) labor – workplace protests by industrial laborers, civil servants, and trade practitioners; 2) popular – protests by neighborhood or town residents, including those by Copts, Sinai Bedouins, and farmers; and 3) professional or associational – protests by professional associations, social movements, and political parties. The latter category includes grassroots movements, such as the Egyptian Movement for Change (also known as Kifaya, or Enough), The Society of Muslim Brothers, and, since 2008, the April 6 Youth Movement and online organizers of networks of tech-savvy youth. "For at least a decade before Mubarak's ouster," El-Ghobashy writes (2011b, p. 39.), "Egyptians were doing their politics outdoors."

These groups had diverse agendas and interests. They drew from distinct social bases and tended to mobilize in different places and in different ways. Coordination among them was often difficult. The Egyptian revolution of 2011 built upon more than 10 years of mobilization by these groups, but Egyptians on January 25th did not know three things: 1) how many other Egyptians already opposed the regime, 2) how many Egyptians other Egyptians thought already opposed the regime, and 3) the circumstances under which many others would join the opposition. The fortuitous coordination of protests on Tahrir Square on January 25th-28th solved these informational problems.

3.2 Tahrir Square and coordination

The history of Egypt's most recent revolution is still being written, but, based on available evidence and participants' accounts, it appears that the strategy of continuously occupying Tahrir Square was not deliberate or planned. Prior to and on January 25th, small to medium-sized protests occurred throughout Cairo. Although Tahrir Square had been the site of previous protests on occasion, such as the 1977 bread riots and demonstrations in March 2003 against the U.S. bombing of Baghdad, it was not a preeminent site of protest. Other sites were more prominent protest venues, and Tahrir had never lived up to its billing as "Liberation" Square.[1]

More commonly, protesters moved around, hoping to link up with other groups or attract additional participants. Different groups – trade unions, fan clubs of soccer teams, Kifaya, the Wafd and Ghad parties, neighbors – organized

[1] Tahrir Square is approximately 140 years old and sits on the site of a former British military barracks. Initially named Ismailia Square, it was officially renamed Tahrir Square in 1955 to commemorate the 1952 revolution.

these protests. There are conflicting accounts of who organized what on the "Day of Anger" on January 25th, but accounts agree that organizers changed the start time and locations of planned protests to mislead security forces. Protesters started off in small groups from different locations inside neighborhoods or outside mosques and converged at key intersections to move together to various locations. Multiple accounts relate that sometime in the afternoon a small group of protesters in Tahrir Square clashed with riot police and, hearing of this, numerous protesters flocked there in support.

Participants' accounts reflect the contingent nature of the decision to occupy Tahrir Square. Ashraf Khalil (2012, p. 148-49) describes, "Just before 4:00 P.M. just as the police were potentially starting to turn the tide [in Tahrir Square], a thousand-strong march rushed in from the direction of Abdin with a huge roar, adding fresh numbers and momentum to the protesters." He continues, quoting a participant who is also a blogger, "As evening approached, "The discussion became, 'Do we stay or not?' People were saying, 'If we leave, we'll never take the square again.' Then people started getting blankets and food," said Mohamed El Dahshan. Fresh bodies began flocking to the square, having heard the news of its occupation by protesters." Police violently removed protesters from Tahrir Square that night, but something had changed.

The occupation of Tahrir Square solved a tacit coordination problem for Egyptian opposition groups of where and how to demonstrate for change. Opposition groups, who were deeply divided by agendas and interests, realized on January 26th that the previous day's clashes and failed attempt to hold Tahrir Square had given the space a focal quality. They knew that Egyptians would now expect other Egyptians wanting to protest to go there. Because no group or political current could credibly claim to have organized the initial occupation of Tahrir, no group "owned" the space. In contrast, opposition groups knew that if they wanted to be part of what was occurring, Tahrir is where they had to try to be. Several called – some independently, some in a coordinated manner – for massive "Friday of Anger" protests on the following Friday, January 28th, to converge and retake Tahrir Square.

The remaining timeline of events is well-documented. The regime also knew that Tahrir had acquired a focal quality and tried to prevent the anticipated popular takeover of the square. On January 26th, downtown businesses were instructed to close before 1 pm, Metro lines did not stop at Tahrir Square's Sadat Station, nearby Metro stations were partially blocked, and thousands of police and Interior

Ministry forces were deployed at numerous checkpoints in the area (El-Ghobashy 2011, p. 9). On the night of January 27th, Egypt's Internet and cellular phone services went dead; roads into Cairo were closed and the city was locked down; and major roads leading into Tahrir Square were blocked. Yet, on January 28th, protesters, now joined by opposition groups that had not participated as organizations on January 25th – such as the Tagammu leftists, Nasserists, and the Muslim Brothers – forced their way across the Qasr al-Nil bridge and down other arteries into Tahrir Square. Protesters occupied Tahrir continuously until Mubarak was forced to relinquish power two weeks later.

3.2 Seeing public opposition

Why was the occupation of Tahrir Square so effective at overcoming constraints on collective action and growing the size of the opposition? The continuous occupation of Tahrir Square made it easier for Egyptians to see (and know that others saw) how many other Egyptians had defected from the regime; it made this information common knowledge (Chwe 2001). Media outlets and bloggers reported directly from Tahrir, and several Arab satellite stations aired almost constant feeds. Al-Jazeera, in particular, covered the occupation of the square with enthusiasm and a framing that, in the eyes of many, made the station an actor in the event.

Cairenes knew Tahrir Square's size and location, which helped them to estimate the relative size of crowds there. They could tell if the number of protesters was increasing, and they knew that others could as well. It made the size and nature of the opposition visible; it also made it more difficult for revolutionary entrepreneurs to exaggerate or the regime to minimize the size of the opposition. Once public opposition became visible, citizens found it easier to decide if they wanted to join (i.e., if their revolutionary threshold had been met). The layout and accessibility of Tahrir Square also made it easy for Egyptians to visit and report back to friends and family members with pictures taken with camera phones and accounts of who was there and what was being said. Two metro lines meet at Sadat station, and 23 streets lead to different parts of Tahrir Square (which is not really a square, but a vaguely-defined space that encompasses about 5-6 adjoining open areas). It is a difficult space for security forces to encircle or isolate. Finally, the atmosphere in Tahrir Square, at least on some days, was festive and exciting. The constant presence of the media, particularly al-Jazeera, in the square provided a sense of protection. As time went on, people could go and see for themselves what was occurring without fully committing to becoming part of the opposition.

The continuous aspect of the protest/occupation made it easy for those not previously part of an opposition group to see how many others were now opposed to the regime. This facilitated the revolutionary bandwagon that occurred over the subsequent two weeks. Many participants claim it was their first time participating in a demonstration. A 68-year old Egyptian describes his attitude at the time, "When the demonstrations started [in January], I thought it was just one more demonstration that would be dispersed by the police as usual. But as time went on, there was a persistence that we had not seen before. I started believing it may go all the way" (Rusdhy 2011, p. 181). A 45-year old businessman recalled, "When the recent demonstrations started, I figured these were a bunch of kids with some signs and banners, dreaming of democracy, so I didn't pay much attention. … And I knew from previous demonstrations how the scenario would unfold: the youth would go out to demonstrate, they might get violent; then one shot would be fired, one youngster would die, and the whole thing would be over. But that did not happen this time! This time was the exact opposite of what usually happens. … When the demonstrations continued, I asked myself if I supported them. I have the same frustrations as the kids on the street. I know people might think I have an easy life, but they don't realize how hard people like me have to work to live the way we do, and the pressures we face" (Rushdy, p. 192-193). Youth groups and social movements were among the committed activists in Tahrir Square from the beginning. After two weeks, on February 9th and 10th, blue-collar workers and civil servants joined the protesters in large numbers (El-Ghobashy 2011b, p. 42). Mubarak was removed from power the following day.

4. *Transnational diffusion*

Although the Arab Uprisings began in Tunisia, it was the Egyptian occupation of Tahrir Square that made it a clear case of a cross-national wave of popular mobilization to authoritarian regimes (Patel, Bunce, and Wolchick forthcoming). The toppling of Mubarak demonstrated to others that the precedent could travel and succeed in a country that was larger, more similar to others in the region, and closely allied with the U.S. (Patel and Bunce 2012). My current research examines variation in the subsequent transnational diffusion: why did the Egyptian example of how to sustain and grow protest spread to some Arab countries but not others in the weeks following Mubarak's departure from office? Leaders in Libya and Yemen were also soon forced from power after ruling for 42 and 33 years, respectively. Revolutionary bandwagons began in Bahrain and Syria. But, in Jordan, Oman, Algeria, Iraq, and elsewhere, protests either never got off the ground or failed to grow. Should we – and, more importantly, citizens in those countries – infer that they have a distribution of revolutionary thresholds insufficient for a bandwagon process? My revision of Kuran's framework, which focuses on the challenges of identifying the size of the extant public opposition, suggests that the Arab Uprisings are not necessarily finished. The transnational spread of the Tahrir Square Model facilitated similar mobilizations in some countries but hindered it in others. I find that the urban built environment of capital cities is the key determinant of where the Egyptian precedent took root.

Inspired by events in Tunisia, protests of some sort occurred or were planned in almost all Arab countries. But, after the fall of Mubarak in Egypt, protesters elsewhere had a specific protest model to mimic – the Tahrir Square Model. I hypothesize that in countries where the capital city has a single square or public space that the public would collectively imagine as a domestic parallel to Tahrir Square, the Egyptian example should have bit more deeply because citizens would know where and how other citizens would apply that example (Patel 2012). Protests should have been more likely to occur and expand in these countries as revolutionary entrepreneurs seized their focal squares or remained collectively mobilized after being forced out of them by the regime. In countries where the capital city lacks such a focal space, however, citizens would not know where and how other citizens would apply the Egyptian model. In these cases, I expect protests to either not get off the ground or to remain sporadic in both time and space as uncoordinated opposition groups try to apply the model in various ways and places. I identified the countries in which latent focal squares existed and found that countries with them had a higher propensity for mobilization than those that did not. Sustained mobilization occurred and grew in four of the six countries that possess such a square; no bandwagon mobilizations occurred in any of the ten polities that lack a latent focal square. These findings offer an alternative and original explanation for why Arab republics have been more susceptible to protests or "contagion" than the region's monarchies during this wave of popular protest. Republics and monarchies have different spatial layouts. Republics that were once monarchies often have large public squares that were built to commemorate the overthrow of the monarchical regime. Those spaces became focal protest squares during the Arab Uprisings. My theory can also account for variation among republics and among monarchies in their susceptibility to protest in the months immediately after Mubarak left office.

5. *Conclusion*

Until the Arab Uprisings began in late 2010 and early 2011, the authoritarian regimes of the Arab Middle East had been remarkable stable since the early 1970s. Most of the region's rulers came to power decades ago or are a relative or appointed successor of their predecessor. They survived wild fluctuations in the oil market and the end of the Cold War, and a brief period of relative "liberalization" in the early 1990s. Explaining the robustness of both authoritarians and authoritarianism has been the central preoccupation of many scholars of the region over the past fifteen years, and scholars have debated the explanatory power of factors such as culture, the region's vast oil and gas rents, and international support for ruling regimes (Bellin 2004). Since the beginning of the Arab Spring, however, regional scholars have rediscovered the work of Timur Kuran, and many of us are building upon his framework to examine the micro-foundations of participation and non-participation in popular uprisings. The Arab Uprisings have changed the Middle East. Publics are mobilized and openly challenge regimes' coercive apparatuses. Kuran's work is already providing a deductive foundation to understand the consequences of these changes and the nature and causes of wealth and well-being in the least democratic region of the world.

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Are We There Yet? Time for Checks and Balances on New Institutionalism*

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In academic circles, the last decade has witnessed the widespread acceptance of institutions as the primal cause of sustained economic development. Douglass North's (1990) seminal ideas came home to roost empirical validation and triumphant fruition two decades years later through the findings of Acemoglu, Johnson and Robinson (2001), Rodrik, Subramanian and Trebbi (2004) and, to a lesser extent, others.[1]

The core of North's ideas revolves around formal institutions and the political as well as economic "rules of the game". But his functionalist take on what constitutes institutions that potentially impinge upon sustained economic growth and development is much broader. It not only acknowledges that social norms, beliefs and informal organizations matter for economic development, but also that formal political institutions could be malleable, with the softer and harder to measure institutional determinants coming to bear on the formal rules of the game.

For the empirical literature that came to dominate the institutionalist debate in the last decade, however, the path to identification and empirical credibility lay in narrowing the definition of institutions such that the latter could be observable and quantifiable. This is, in essence, why institutions in the development eco-

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[1] An incomplete list of complementary empirical papers includes Hall and Jones (1999), Easterly and Levine (2003), and admittedly my own in Iyigun and Rodrik (2005).

nomics context have come to be synonymous with formal political and economic rules of the game.

These qualifications aside, it seemed that the $64,000 question was finally laid to rest. With the Herculean task of identification ingeniously—albeit somewhat questionably[2]—tackled, reversals of fortune were now explained; the causal effects of geography, culture, trade, colonialism, imperialism, and slavery were ruled out; the Western-centric prescriptive foundations of policy guidance to the Third World were set.[3]

Accordingly, the narrative went, Latin American, Middle Eastern, African and Iron-curtain countries were poor because their economic and political elites sustained extractive institutions to bolster and maintain their status. By contrast, the United States, United Kingdom and continental European countries were prosperous because, due to historical serendipities, technological advances or threats of social unrest, the elites eventually came to relinquish their political powers by adopting inclusive institutions.

Institutions ruled big time although there was China, whose path of sustained economic growth since the early-1980s could not, in any shape or form, be attributed to its political institutions. But one observation did not a rebuttal make, and institutionalists were consistent in their dismissal of China in the long run, due to its extractive and elite-friendly institutions.

To top things off, the United States and United Kingdom required no caveats until about five years ago, although the Thatcherite and Reaganite movements left nothing to the imagination since the early-1980s in their successful attempts at redesigning U. S. and U. K. institutions to the benefit of the economic and political elites. To the institutionalists, either all of this was a sideshow having little if anything to bear on stellar and exemplary political institutions that had their checks and balances. Or they were the blueprint of efficient and best-practice institutional evolution in response to rapid globalization, technological change and financial integration.

Nevertheless, the 2008 financial meltdown laid bare the extent to which American, British and to a lesser extent continental European economic, political and legal institutions have evolved in the last three decades to serve the interests of a narrow but powerful elite. The sociopolitical ramifications of this are all too

[2] Albouy (2012).

[3] Acemoglu, Johnson and Robinson (2002).

well known, with a libertarian-driven, anti-government Tea Party crusade picking up steam on the one hand, and the prominence of income inequality in recent political discourse thanks to the 99-percent movement, on the other. But the role of Western political institutions in generating the 2008 financial crisis and their meager performance in its aftermath have also served to expose the soft underbelly of new institutionalism. More to the point, it exposed the weaknesses of the particular strand within the institutionalist school that has now come to dominate the academic narrative, with its narrower focus on formal, political and economic, extractive versus inclusive institutions.

For one, consider how, in stark contrast to the pre-crisis era, institutionalism proponents now treat the U. S. political landscape with not only alarm, but also cautious optimism. Accordingly, there is cause for concern because the financial meltdown and its aftermath have amply illustrated the tight grip of the financial oligarchs and the wealthy elite on U. S. political and legal institutions.[4] But the 2008 crisis revealed absolutely nothing new in terms of the evolution of U. S. institutions, which had begun their transformation in the 1980s and kept evolving in the 1990s and 2000s in ways that became increasingly exclusive (in income and wealth and by the standards of the 1960s and 1970s). Yet, prior to 2008, the institutionalists weren't much concerned about the health of U. S. institutions. If anything, and as already mentioned, the U. S. constitutional system and its checks and balances were unabashedly touted as a blueprint for growth-enhancing but dynamic institutions. This is revisionist history put to selective use.

As the next line of defense, institutionalists are now more eager to point out that the United States has been there and done that at least once before, when the restrictive and economically-constraining political system, which produced the Gilded Age of the robber barons, was transformed into a political system with more inclusive and transparent institutions. Thus, the argument goes, U.S. institutions have enough flexibility that their checks and balances could yield self-corrections in the future. Never mind the fact that U. S. political and legal institutions were anything but inclusive until the civil rights movement of the 1960s. Institutionalism proponents ought to be highly mindful of the fact that an excessive reliance on this argument at best weakens and at worst reverses the chain of causation from institutions to economic development. After all, U. S.

[4] Johnson (2010).

industrialization was well underway, if not close to complete, at the turn of the 20th century when the aforementioned institutional revival began to take hold.

The second half of the first decade of the 21st century also began to witness, in Fareed Zakaria's own terms, the rise of the rest.[5] As we approach the middle of the second decade of this century, BRICs, Turkey, Vietnam are only a subsample of emerging-market economies that have sustained rapid rates of economic growth for longer than a decade. Nonetheless, by the metrics of this school of thought, half of the BRICs are in the institutional doghouse, while Brazil has nothing to write home about. Add to this Turkey, whose institutional merits—or lack thereof—about which some prominent institutionalists ought to know a thing or two, we now have more than a handful of countries that are on a path of rapid economic prosperity, in spite of their rather extractive institutions.

At some level, one could write off these new comers and late bloomers for not having proved their mettle in the long run. One could also find it acceptable to refer to the historical evolution of the U. S. institutions as an illustration of the resilience of effective institutions and the push back inherent in them thanks to a system of checks and balances.[6] In doing so, however, one ought to be careful to define and categorize institutions *based on function rather than form*. On that basis, one should then illustrate that the evolution of institutions concurrent with and in the aftermath of economic takeoff might affect forms but not functions. The institutionalists are on relatively firm ground with respect to the first (i.e. *inclusive* or *extractive* institutions). But they are on much shakier ground regarding the second: American political institutions were anything but inclusive well into the 20th century. Suffrage did not fully become effective until the 19th amendment was passed in 1920, and the Civil Rights Act was signed in 1964.

Moreover, for at least two important reasons, the institutionalist school will continue to have to contend with the post-1980s American political experience and institutional evolution in the foreseeable future.

First, the U. S. political experience in the last three decades and the evolution of its formal institutions, in particular, have validated Mancur Olson's view that constitutional democracies could very well witness systemic economic declines on

[5] Zakaria (2008).

[6] That noted, there is absolutely no shortage of sources to consult on whether or not there has been institutional entropy in the United States starting in the 1980s, but for a more recent and unabashed treatment, see Ferguson (2012).

the back of institutional changes that are adopted to serve special interest groups inimical to sustained growth.

Olson's key argument in *The Rise and Decline of Nations* (1982) is that institutional entropy and decay is part and parcel of the natural political order. As Rosser (2007) elaborates, according to Olson, "...stable democracies tend to accumulate more and more distributional coalitions whose political power will accumulate, thus gradually impeding the economic growth of the society." Focusing, in particular, "on the post-World War II performance of Germany and Japan as compared with the United Kingdom, [Olson argued] that the defeat of Germany and Japan in the war had led to the overthrow of the power of narrow special interest groups that impeded growth whereas in the [United Kingdom] such groups reached a peak of power that was responsible for the relatively weak performance of the British economy."

After riding high in the stagnant 1970s and 1980s, Olson's views had fallen out of favor in the aftermath of the fall of the Berlin wall and the decade and a half that followed. The latter, of course, being an unprecedented era of robust growth in the Western hemisphere which, based on 20/20 hindsight, was sustained, to some significant extent, first by the dot-com speculations, and then the U. S. real estate bubble. While recent developments in the United States are, at least to some extent, a culmination of the sociopolitical changes that took place in the last three decades, they are by no means proof that constitutional democracies will inevitably fall into disrepair because prosperity produces institutional decay. But they do illustrate that even best-practice constitutional democracies with their systems of checks and balances and inclusive institutions are not immune from regressions in institutional quality. Coupled with the undeniable fact that institutions are endogenous, this fragility raises the specter of Olsonian reverse causality.

Alternatively, the deep-rooted fundamentals of sustained growth could be lying elsewhere, making it all the more conspicuous that the formal political institutionalists typically give short shrift to cultural factors as well as informal and social institutions as alternative drivers of economic development. This is not to deny that the efficacy of political and economic institutions came to bear positively on economic development historically.[7] Legal institutions govern contractual relations and the private use of force, political institutions guide the political decision-making process, and economic institutions govern interactions among

[7] North (1990), North and Weingast (1989), North, Wallis and Weingast (2009).

economic agents. Economic and political developments thus require formal institutions that support impersonal exchange and align the incentives of political decision-makers and the public.

Nevertheless, and as I have already made clear, institutions relevant for economic development are much broader than those that the formal political institutionalists would have us believe. Indeed, the Northian institutionalist school encompasses a very important strand on the roles of beliefs, social norms and informal organizations in development.[8] But, the narrow-minded focus on and the obsession with empirical identification have, to some extent, swept this literature by the wayside. Beyond that, however, there is significant evidence that leadership skills and personalities matter for how property rights and the rules of the game evolve even in strong and well-defined institutional settings.[9]

Social institutions, too, affect the welfare of the individual members of a society. They govern human capital formation, access to productive assets and the provision of social safety nets. Social institutions are crucial because they determine social order. Those who have nothing to live by have nothing to lose by reverting to extralegal means and disrupting the social order. Nevertheless, the role of social institutions in sustained economic growth has largely been unnoticed in the literature, although it is part and parcel of classic institutionalism.

In two papers, Greif, Iyigun and Sasson (2011, 2012), we refine the argument that institutional development is a precursor of sustained economic growth and development in three dimensions.[10] First, we focus on the importance of social institutions in the rise of the modern economy. Specifically, we consider risk-sharing institutions that influence development by raising the returns to entrepreneurial risk-taking through two channels, one of which entails the entrepreneurs' own economic wellbeing in case of failure and the other which involves maintaining the social peace during times of rapid economic and social change. The importance of social institutions is evident in the transition to the modern economy. On that basis, we argue that the distinct social institutions in China

[8] Some of the key contributions in this strand include, but are not confined to, Greif (1993, 1994, 1998, 2006), Mokyr (2010), Kuran (1983, 1987, 1989, 2004), Alston and Ferrie (1999) and Alston and Mueller (2012).

[9] For example, see Toobin (2008) and Jones and Olken (2005).

[10] This line of research borrows its fundamentals from earlier work by Greif (1993, 1994, 2006) in that informal, social institutions with deep-rooted cultural elements are at the heart of contractual relationships (or lack there of).

and England were important in rendering England, rather than China, the first modern economy.

In Greif and Iyigun (2012, 2013) we empirically document the historical regularities that associate social systems of poor relief with social unrest, entrepreneurial risk-taking and discoveries: First, based on a panel covering 13 countries and the years between 950 through 1900 CE, we show that acts of social unrest and violence adversely affected discoveries internationally. Second, we document that the Old Poor Law, which was enacted in England in 1601, was particularly good at subduing social disorder, thereby encouraging risk-taking and stimulating entrepreneurial discoveries in England. In particular, based on a UK county-level panel on poor relief and social unrest from 1650 to 1830 CE, we find that variations in the amount of poor relief came to bear negatively and statistically significantly on the propensity of social unrest and disorder in England in the runup to and during the Industrial Revolution.

More relevant, however, is our argument that social and cultural factors historically impacted the design of institutions with which they subsequently co-evolved. Social institutions were often chosen by the elite to avoid social upheavals. Their forms and functions, however, were influenced by pre-existing cultural and social factors.

In sum, while recent political and financial developments in the Western hemisphere have put some heat on macroeconomists and financial economists alike for their well-documented failures, institutional economists have, for the most part, remained above the fray. But the evolution of U. S. political, legal and economic institutions in the last three decades as well as the more recent economic performance of a variety of middle-income countries whose institutional qualities are at best dubious have seriously begun to challenge some of the key premises and predictions of new institutionalism which focuses on formal political institutions.

Practitioners of new institutionalism—among the ranks of whom I include myself—would be straining credibility if they say they saw the writing on the wall long ago. In fact, even as late as the summer of 2008, an overwhelming majority would have held the United States up as a model of institutional effectiveness, and prosperity with institutional root causes. If the decay and entropy in U. S. institutions were a recent phenomenon, one could discount all this as an outlier, the likes of which are hard to predict. But, as I have explained above, they weren't. Not by a long shot.

So what next, then? Let me conclude by making three observations on how the new institutionalist discourse needs to evolve in the coming years for it to maintain relevance and credibility.

First, institutionalists of all stripes need to concede that the prospect of Olsonian decay is all too real even in a most institutionally advanced economy. On that basis, they then need to more seriously entertain non-monotonicities between the levels of income and institutional quality and reverse causality running from the levels of income to institutional evolution. History is replete with civilizations that came and fell because their territorial conquests, economic growth or both eventually could not afford the social, economic and political rent seeking involved domestically.

In fact, coupled with the fact that we now have more than just China to discount as a counterexample of a rapidly-advancing economy whose institutions are sorely lacking, the prospect of a more agnostic link between formal institutions and economic development cannot be readily rejected. On that basis, those who champion formal "rules of the game" as a precursor of sustained economic growth need to come around to the view that political, legal and economic institutions are highly malleable even in advanced economies, while sustained economic growth is deep rooted in *individual beliefs*, *social norms* and *informal cultural organizations*.[11]

If this sounds like too radical a departure from the conventional consensus on the primacy of Northian views, then, at a minimum, those institutionalists who all along advocated the relevance of the importance of social norms, individual beliefs and informal networks need to regain their voice and reclaim their territory.

Second, and as an extension of the discussion immediately above, the new institutionalists of the "formality and political institutions rule" mold need to concede that reality runs ahead of identification when it comes to the interplay between economic development and formal political institutions. Yes, development economics has been positively transformed in the last decade thanks to a single-minded focus on credible identification. But that has come at the cost of considerably narrowing the research questions involved and focusing primarily on behavioral microeconomic issues. The classic institutionalist ideas are, by defini-

[11] There are some recent and important contributions in the empirical macro development literature that take these primal causal factors more seriously. See, for instance, Fernandez (2008, 2011), Nunn (2008), Nunn and Wantchekon (2011) and Nunn and Puga (2012).

tion, big-picture arguments part of which entails emphasis on difficult to quantify and measure determinants, such as beliefs, norms and culture. Narrowing institutionalist arguments down to formal political institutions may be good identification strategy.[12] However, it not only does significant disservice to the literature in general, but also is bound to crumble under the weight of accumulating empirical evidence in the mold of Olson and the rise of the rest.

Finally, and in light of all this, institutionalists need to refrain themselves from active policy advice. Economists don't pay enough homage to the fact that context and history matter.[13] There is still a lot we do not know about when it comes to why countries eventually set on a path of sustained economic growth and progress. Trumpeting western, Anglo-Saxon centric formal political institutions as the only recipe for economic prosperity might find sympathetic ears and eager media markets in the Western hemisphere, but it runs in the face of historical facts and accumulating contemporary evidence.

[12] Then, again, maybe not. This literature has long been susceptible to the criticism that it had never properly identified any aspects of the *formal* institutional environment as the key to long-term development. Glaeser et al. (2006) make this point forcefully, arguing that Acemoglu et al. (2001, 2002) never properly identified the actual formal elements of political institutions. They, then demonstrate that *de jure institutions* do not have any strong predictable effects on growth.

[13] Dani Rodrik and some coauthors are among the very few in our profession who have emphasized this for over a decade now. See, for example, Hausmann and Rodrik (2003) and Hausmann, Rodrik, Velasco (2008).

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Timur Kuran's Framework and Economic Underdevelopment in the Islamic World

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Introduction

This essay focuses on what I believe to be some of the most important insights of Timur Kuran's corpus of writings on the economics of Islam. In Kuran's first seminal piece on this topic, "Islam and Underdevelopment: An Old Puzzle Revisited" (1997), he lays out the question which has consumed much of his academic life since: "Why has the Islamic world been economically underdeveloped for the past few centuries relative to the West *despite* being ahead for so long following the spread of Islam?" Kuran has answered this important question in numerous articles and a groundbreaking book (Kuran 2011) by focusing on the pathways through which economic stagnation occurred in the Middle East and North Africa. All of these answers have one common theme, which I believe is the most important insight that Kuran provides: all of the legal, political, and institutional phenomena which have been at the core of underdevelopment in the Islamic world *were at one point in history optimal solutions to some economic exigency*. Kuran's work therefore confronts two questions: i) what were the circumstances under which the proposed solution was optimal?, and ii) why did this solution persist despite changing economic circumstances?

Before addressing Kuran's answer, it is necessary to note that the questions themselves are the right ones to ask. Although these are important questions for so

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many reasons, they are ones that have largely evaded scholars until recently. Many scholars, from Max Weber to Bernard Lewis, have suggested that there is "something about Islam" – its "conservative" or "mystical" nature – which discouraged curiosity and prevented risk-taking, innovation, and mechanization.[1] Such explanations are highly Eurocentric, claiming that there is "something" about Western culture that predisposed the West to succeed economically. These explanations miss such an important part of the relative histories of the Middle East and Europe that they cannot be telling the whole story. This is, namely, that *the Middle East was more advanced economically, scientifically, and technologically for centuries following the spread of Islam*. If it is something about Middle Eastern culture or the nature of Islam that is behind the economic divergence of the past half-millennium, how can we account for the earlier lead that the Middle East held? This is why Kuran asks the correct question – a satisfying answer must account not only for the causes of long-run underdevelopment, but also account for earlier success.

Timur's Approach

Kuran's answers begin by seeking the reasons why economically inhibitive Islamic laws or institutions arose in the first place. In every case, he finds that they arose to address a certain problem occurring in a certain economic or political context. For instance, Kuran (2005) asks the question, "Why did the corporate form never arise in Islamic law"? A simplistic answer could assert that economic and legal conservatism discouraged merchants and those with commercial interests from forming new and larger types of partnerships. But such an explanation would confuse cause with effect. Conservatism is something to be explained; it is not a cause itself. Kuran's explanation for the persistent simplicity of Islamic partnerships is two-fold; he first explains the aspects of Islamic law that discouraged the formation of more complex partnerships and then proceeds to explain why they persisted over time. He points to two aspects of Islamic law to shed light on why Muslims had little incentive to form large partnerships: the relatively egalitarian Islamic inheritance system and the lack of a concept of legal personhood for anything but individuals in Islamic law. Because the inheritance system gave numerous heirs shares of a partnership upon the death of a partner, and any of these heirs could choose to dissolve the partnership at any time, incentives to cre-

[1] See, in particular, Weber (1978), Lewis (1982, 2002), Cromer (1908), and von Grunebaum (1966).

ate large partnerships were severely dampened. On top of this, one of the primary benefits of the modern corporate form – corporate legal personhood – would have been unthinkable in Islamic law, which did not recognize personhood for anything but individual persons.

The genius of Kuran's argument is that these two aspects of Islamic law were optimal responses to the economic circumstances under which Islam was founded. For instance, one of the reasons that Islam was so successful and spread so rapidly is that it brought legal and social cohesion to a region that was dominated by warring tribes. It addressed one of the biggest problems of the day, blood feuds between tribes, by only recognizing the rights of individuals and the Islamic community as a whole. It purposefully did not recognize the rights of smaller groups (such as corporations), because these were precisely the types groups that were the source of trouble in that period. Of course, there is no way that the original Islamic thinkers ever could have envisioned the corporate form or its possible economic benefits; it did not come into widespread use in Europe until the early modern period (although it was known in the medieval period and was employed by the Church and towns). By the time the corporate form spread in Europe, the series of marginal improvements made in Europe which allowed partnerships to flourish were absent in the Islamic world. This is the second aspect of Kuran's satisfying answer; it provides insight into why such laws *persisted* over centuries. Kuran notes that in Europe, due to primogeniture (which did not break up inheritance amongst many heirs) and the concept of legal personhood dating back to Roman law, individuals were *incentivized* to respond to new exigencies in different ways than their Middle Eastern counterparts. For example, one problem faced by larger-sized partnerships is complicated bookkeeping. In response, double-entry bookkeeping was invented in Italy in the late medieval period – after partnerships had grown in size to the point where such a remedy was demanded. A similar invention never arose in the Middle East for the simple reason that merchants were never faced with a situation that would require complicated accounting. Merchants were *incentivized* to keep their partnerships small and based on personal relations, and they rarely demanded new laws or financial instruments that would facilitate the growth of big business. This helps explain why the Middle East never truly adopted the corporate form until well after European colonization. The emergence of the corporate form in Europe was contingent on a series of path-dependent factors (such as the invention of double-entry bookkeeping) that eventually formed what Kuran calls the "institutional complex". It was the entire system of factors that allowed the European corporate form to work the way that it did; Middle Eastern business interests could not merely adopt this institutional form in the absence of an appropriate legal and institutional structure.

This argument is typical of Kuran, and it is very appealing. Intellectually, it is much more satisfying to believe that there is nothing inherently different about Europeans and Middle Easterners, and instead believe that long-run economic differences arose due to differing institutional structures and the incentives that they imposed. Moreover, even if one wants to argue that there is "something better" about European culture (which may seem biased, but no cause should be ruled out ex ante), and this is the reason why Europe and its offshoots economically dominated the world over the last few centuries, such an argument is inconsistent with history as recently as a millennium ago. Indeed, Kuran (2011) begins his book *The Long Divergence* by noting that an alien visiting the world in the year 1000 would have never guessed that it would be Europe that would eventually dominate the world economically and technologically.

What is so satisfying about Kuran's explanation is that it can account for early Middle Eastern success and ultimate stagnation by relying on one of the oldest economic dictums: *people respond to incentives*. Kuran takes this a step further by implicitly arguing that institutions respond to incentives as well. Early Islamic institutions arose in response to the relative instability of the pre-Islamic Arabian Peninsula. These institutions incentivized economic growth to a much greater extent than contemporary European institutions. For instance, the Islamic inheritance system – which would become a great source of stagnation over time – was much more egalitarian than anything known in Europe at the time. Yet, whether institutions change or remain stagnant over time is both a function of exogenous factors (e.g., climate, world economic conditions, or military invasions) as well as pushes for change from within. Kuran convincingly argues that numerous aspect of Islamic law discouraged such pushes for change from within despite changing economic conditions. An institutional "lock-in" emerged whereby all of the relevant parties had no incentive to seek change; although there may have been benefits from change, the costs were simply too high. This was unlike the situation in Europe, where the benefits from institutional change were similar to the potential benefits in the Middle East, but the costs were much lower due to the pre-existing institutional structure.

In other words, conservatism is not a cause of economic stagnation but a result of certain types of institutional structures. Where Weber and Lewis saw conservatism in Islamic economic history and ascribed something unique to the nature of Islam, they were confusing cause with effect. If we simply define conservatism as "lack of change over time", there are two possible reasons why conservatism arises. One, favored by the Weberian school, is cultural – there is something inherent about a culture or religion which predisposes people to dislike change. For reasons noted above, it is difficult to swallow this as the cause of the "long divergence" between the Middle East and Western Europe, as it is inconsistent with the fact that the Islamic world was so far ahead of Europe for centuries. The second reason why conservatism emerges is the one favored by Kuran and myself. The argument is simple: change does not occur where people are not incentivized to seek change. That is, a lack of change over time is a result of the incentive structure (generally arising from the institutional complex), not some inherent cultural difference. Of course, one has to argue why an institutional complex which discourages change arises in the first place, and this is precisely what Kuran's works do.

Timur's Influence on My Work

In my own work, I have applied this framework that Kuran proposes to also address the sources of long-run economic differences between Europe and the Middle East. For example, in Rubin (2011), I attempt to map out the consequences of two different institutional arrangements which arose in the two regions in response to different stimuli. This is, namely, that Islamic political authorities have always depended on religious legitimacy to a much greater extent than European political authorities. These aspects of the institutional complexes arose as optimal responses to the conditions under which the religions were born. Christianity was born as a minority religion in the Roman Empire, and it was both unnecessary and infeasible for early Christians to create a legal system based on religious principles. Hence, early Church leaders advocated a separation between political and religious institutions (i.e., Jesus' famous dictum "Render unto Caesar the things which are Caesar's, and unto God the things that are God's"). On the other hand, Islam was formed at a time of weak centralized power and tribal feuding in the Middle East. One reason that Islam was able to spread as quickly as it did was that it brought legal and political cohesion to the region. Because of this, the earliest Muslim caliphs were able to propagate their rule by either claiming a blood-line to Muhammad or by obeying Islamic dictates. Hence, early Muslim history led to Islamic ideals becoming those of the state, and there has never been a clear demarcation in the Islamic world between religious and legal authority like there was for much of Christian history. These differences in institutional structures are akin to the ones that Kuran points out in his works, as they were responses to economic and social conditions in a specific historical epoch.

These institutional differences were the result of the situations under which the religions were born which themselves were clearly exogenous to economic outcomes that arose centuries later. Yet, I argue that these differences can help explain aspects of the long run economic divergence between Western Europe and the Middle East. The basic argument is a game theoretic one which considers how political authorities, religious authorities, and commercial interests interact with each other under the two legitimizing regimes. It suggests that when religious legitimacy is important (as in the Islamic world), political authorities find it costly to enact policies which harm the religious authority (i.e., those that threaten its power or those that are contradictory to religious teachings). This is turn means that even if economic conditions dictate that commercial interests stand to make significant wealth by transgressing some type of religious dictum, they may not do so due to a "double cost" of transgression – those imposed by both the political and religious authorities. This is not the case when the legitimizing relationship is weak, as it was in Western Europe (relative to the Middle East). In this case, political authorities are more likely to permit commercial actions which are not approved by the religious authorities, since the benefits to doing so (a greater tax base) exceed the costs (a weakened religious regime). The ultimate upshot is that religious laws which inhibit economic activities are likely to be undermined over time when religious legitimacy is weak but are likely to remain intact as an equilibrium outcome when religious legitimacy is powerful.

I apply this insight to two cases which are both paradigmatic of the larger divergence in the economies of the Middle East and Western Europe. In Rubin (2011), I show how the theoretical insights outlined above shed light on the histories of restrictions on taking interest on loans in the two regions. Usury laws were eventually undermined in Europe as the power of commercial interests grew and the ability of the Church to legitimize secular authority weakened, whereas restrictions on taking interest were never fully alleviated in Islam. Instead, an equilibrium emerged in the Islamic world where some evasions of the interest ban were permitted as long as a ruse (which incurred a transaction cost) was undertaken. In Coşgel, Miceli, and Rubin (2012), we apply similar insights to shed light on why the printing press was heavily restricted in the Ottoman Empire despite spreading rapidly in Europe. The press threatened the religious establishment, who held an intellectual monopoly and garnered significant power from their hold on the oral transmission of the Qur'an. Since this was an important legitimizing source for the Ottoman sultanate, the costs of permitting the press (and undermining the religious establishment) outweighed the potential economic benefits. In Europe, the ability of religious authorities to legitimize political rule had been waning for centuries by the time that the moveable-type press was invented in 1450, so the Church could not have blocked the press had it wanted to.

Both of these examples, restrictions on interest and printing, are emblematic of Kuran's framework. Both restrictions arose in a setting where their long run economic effects could not have been foreseen. Early bans on taking interest on loans were economically efficient in a period when most loans were taken by poor individuals for consumption purposes. It was only after investment lending became viable on a large scale that these restrictions became inhibitive. Likewise, restrictions on the replication of words and images were hardly economically inhibitive in a pre-printing press world. Thus, like the examples that Kuran cites, interest and printing restrictions emerged in a certain context to suit certain needs. They persisted in the Islamic world due to the incentives imposed by the institutional structures (in this case, the manner in which religious authorities derived legitimacy), not due to an inherent conservativeness or anti-economic attitudes.

I further this framework in a book manuscript that I am currently preparing for Timur Kuran's (and Peter Boettke's) Cambridge Studies in Economics, Cognition, and Society series at Cambridge University Press. By themselves, restrictions on interest and printing were not close to enough to put the economies of Western Europe and the Middle East on divergent paths. Yet, I argue in this book that the reasons that differing views on interest and printing emerged in the two regions is the result of a larger institutional divergence that is one of the primary causes of the economic divergence. This institutional difference is, namely, that European rulers relied less and less over time on religious authorities to propagate their rule and instead turned to commercial interests (in Parliaments) to uphold their rule and provide tax revenue. This divergence happened over a very long time and was the result of path dependent processes stemming from very small initial differences (incidentally, the printing press does play a big and unforeseen role in this divergence through its facilitation of the Protestant Reformation, which provided the death knell to religious legitimacy in parts of Europe). Using a framework similar to Kuran's, I show how the differences that emerged at the birth of Islam and Christianity had long-reaching unintended consequences. Most importantly, it is clear that the identity of the person(s) legitimizing political rule can really matter. In the 16th and 17th centuries, numerous European rulers completely ceased using religious authorities to legitimize to legitimize their rule (as a result of the Reformation). In England, for example, the Tudor monarchs (especially Henry VIII and Elizabeth I) turned to Parliament to legitimize their rule and provide tax revenue. This was an important transformation, because the elite in Parliament primarily had goals that were consistent with broader economic success (e.g., secure property rights, poor relief, and naval protection from invasion and for merchants). This was not the case in the contemporary Ottoman Empire, where religious legitimacy continued to play an important role in propagating the sultanate. Because of these differences, the types of policies emanating from the two regions were very different; those in England favored commercial expansion and protection, while those in the Ottoman Empire did so to a much lesser extent. This is not to say that religious legitimacy is inherently a bad thing or that religious authorities are always against policies which favor economic growth. Indeed, the provision of poor relief by both medieval Christian and Islamic religious authorities almost certainly had a stimulating effect on the economy by providing a social safety net that would not have existed otherwise. The point is that any type of legitimizing agent that does not have economic interests driving their decisions may inhibit economic activity. This is as true of religious authorities as it is the military or a bureaucracy.

Conclusion

In sum, the framework that Timur Kuran has created over the past two decades is both powerful and intellectually satisfying. He asks the right questions, which is perhaps the most important thing of all. He answers these questions in a way that goes to the root of why people make the decisions that they make. This methodology can be used to explain fundamental features of long-run economic development without falling back on ad hoc explanations that are specific to any one region or time period. Of course, Kuran is far from the first scholar to hypothesize why certain rules or actions which seem economic inhibitive emerged historically. Nor is he the first scholar to shed light on why inefficient outcomes can persist over time. Yet, in combining these two strands of thought and applying them to one of the most important and misunderstood epochs in world economic history, he has forcefully argued that this manner of thinking about economic history and development can provide real insight into why some countries are rich and others are poor.

Another implication of Kuran's insights is that what works in some regions does not work in others. Kuran is quick to point out that there is not one path to economic development, nor is there one path to stagnation. Instead, what worked in Europe worked due to a long series of path-dependent events, all of which were molded by and in turn molded the relevant institutional complexes. The same is true of the Middle East. The constraints imposed by Islamic law may have been a barrier to European-style economic success, and Middle Eastern economic and religious institutions may have calcified for centuries. Yet, economic development is still quite possible in this region (with or without oil). One of Kuran's key insights, which stems from the types of questions he asks and the manner in which he answers them, is that the things that worked in Europe will not necessarily work in the same way in the Middle East. The institutions are too different, meaning that the incentives faced by the relevant interests (rulers, religious authorities, and commercial interests) are different, and that merely transplanting "Western-style" economic and political forms to the Middle East may not work. This is far from saying that all is lost; but it is to say that context is important, and we should not be discouraged if the path to long-run economic success is a long and unique one, as it was in Europe.

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Religion and Entrepreneurial Activity in the U.S.[*]

Travis Wiseman and Andrew Young[†]

1. Introduction

What relationships exist between the institutions of a religion and the entrepreneurial activity of that religion's adherents? Numerous studies have documented positive links between entrepreneurship and economic growth and development.[1] However, other studies that report a positive relationship between religion and growth fail to explicitly consider an entrepreneurship channel.[2] In fact, there are few studies that empirically establish relationships between religious institutions and levels of entrepreneurial activity.[3]

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[1] E.g., Zacharakis et al (2000), Baumol (2002), Buamol et al. (2007), Ovaska and Sobel (2005), Audretsch et al., (2006), Berkowitz and DeJong (2005), Wong et al. (2005), and Valliere and Peterson (2009).

[2] E.g., Barro and McCleary (2003), McCleary and Barro (2006), Guisa et al. (2006) and Kuran (2003 & 2011)

[3] Exceptions include Audretsch et al. (2007), Luca and Lorenzo (2011), and Papageorgiou (2012). These will be discussed in more detail below. To our knowledge, our own research (Wiseman and Young (2012)) is the first example of a study linking religion to both productive *and unproductive* (rent seeking) entrepreneurial activity.

This lacuna in the literature is an important one to fill, perhaps especially so in regards to the U.S. economy. According to the Pew Forum's *U.S. Religious Landscape Survey*, more than a majority of Americans claim that religion is very important in their lives, that they attend religious services at least monthly, and that they pray at least daily. The percent of Americans claiming that religion is very important in their lives is more than twice that of Britain (17 percent), France (13 percent) or Germany (21 percent).[4]

The religious marketplace in the U.S. is also exceptionally dynamic. About 28 percent of adults do not claim the religious affiliation that they were born into. (This percentage is nearly twice as large if changes from one Protestant denomination to another are included). Tucked away in Book V of his *Wealth of Nations*, Adam Smith (1776, p. 643), comments on the virtues of such dynamism:

> [Clergy] may either depend altogether for their subsistence upon the voluntary contributions of their hearers; or they may derive it from some other fund, to which the law of their country may entitle them; such as a landed estate, a tythe or land tax, an established salary or stipend. Their exertion, their zeal and industry, are likely to be much greater in the former situation than in the latter.

With a Constitutional separation of church and state and a competitive religious marketplace, it is likely that religious entrepreneurship in the US is vibrant. (The eclectic assortment of TV evangelists is *prima facie* evidence of this.) However, whether or not religious entrepreneurship specifically yields institutions conducive to entrepreneurship generally is a different matter.

Panel (A) of figure 1 plots the percent of individuals for whom religion is very important against a productive entrepreneurship score for each of the 48 contiguous U.S. states. The productive entrepreneurship score is based on per capita venture capital investments, patents per capita, the self-proprietorship (self-employment) growth rate, establishment birth rates, and large (500 employees or more) establishment birth rates.[5] The relationship between the two variables is negative, steep, and highly significant. Given the relative importance of religion in the U.S., this relationship is intriguing and, perhaps, even troubling.

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[4] http://www.pewglobal.org/2011/11/17/the-american-western-european-values-gap/

[5] Entrepreneurship scores are based on Sobel's (2008) methodology and are based on data from 2002 through 2008. We use the Pew Forum's 2007 *US Religious Landscape Survey*. Importance of religion is expressed as percent of state population who say religion is very important in their lives

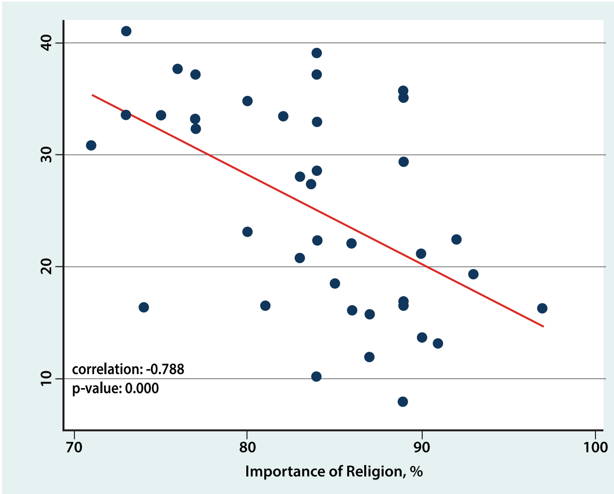

Figure 1.

Entrepreneurial skill can be applied towards the expropriation of wealth as well as its creation (Baumol, 1990). Aside from outright theft or fraud, entrepreneurs can engage in political rent seeking. When we examine unproductive entrepreneurship scores for the 48 contiguous states we find that they are positively related to individuals claiming that religion is very important (figure 1; panel (B)). These unproductive entrepreneurship scores are based on the number of political and lobbying establishments in a state's capital and an (inverse) index of legal system quality. The scores are increasing in the level of political rent seeking activity and the incidence of legal fraud and abuse. While the correlation between the two variables is not statistically significant, it suggests no offsetting benefits to temper the costs of religion in terms of lower productive entrepreneurship.

Our recent research (Wiseman & Young, 2013) demonstrates that the correlations reported in figure 1 are essentially unchanged when controlling for various socioeconomic controls and the quality of secular economic institutions. What do these correlations tell us about the role of religion in determining levels of entrepreneurial activity in the U.S., both productive and unproductive? They actually tell us little unless we can take religion and "unbundle the broad cluster of institutions" that it constitutes (Acemoglu & Johnson, 2005, p. 950). Having done so, the subsequent task is to identify which of these institutions represent channels affecting entrepreneurial activity.

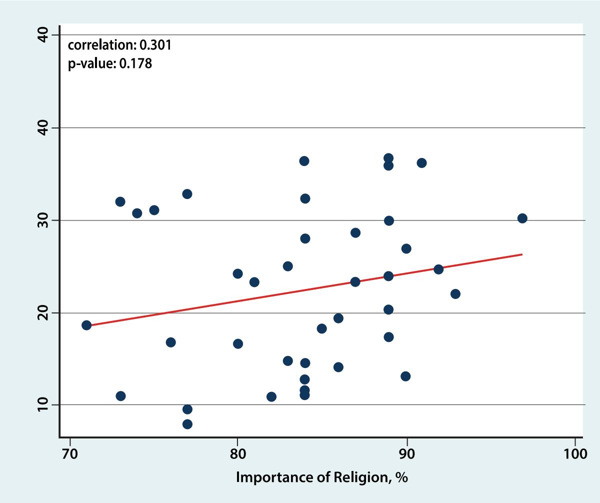

Figure 2.

Timur Kuran's (2003, 2004a&b, 2005, 2011) work on the Islamic Middle East's economic stagnation relative to the West from the tenth century onward is an exercise in the above *par excellence*. Kuran argues that the legal pluralism and egalitarian inheritance system associated with Islamic Law created resistance to modern corporate structures. These institutions created resistance to firms that could outlive their founders and could be characterized by legal personhood and limited liability; in particular, the shielding of the business entity from claims on its individual owners. These institutions also encouraged the sheltering of wealth in *waqfs*, endowments with relatively rigid constraints on its management. Kuran is careful to note that these institutions were not always barriers to progress nor helplessly inflexible; rather the "feasibility of any given innovation depends on the broader institutional matrix" (Kuran, 2011, Loc. 2140-2151). As the West was evolving and adopting the business corporation, the Middle East lacked important complementary institutions:

> Europe was able to adopt the business corporation when the need arose because its institutional preconditions had fallen into place through centuries of incremental and interlinked organizational improvements. For the Middle East to develop a private corporate sector [...] it also would have had to develop standardized bookkeeping and markets for trading shares. In other words, the path that the West traversed through myriads of organizational micro-

innovations spread across many centuries would have had to be leapfrogged through a macro-innovation encompassing an entire institutional complex.

Islamic Law was not simply incompatible with the modern business corporation. More importantly, it was resistant to numerous (individually less important) innovations, the absence of which hindered the corporation's adoption in the seventeenth century and beyond. These arguments are summarized in Kuran's book *The Long Divergence: How Islamic Law Held Back the Middle East*.

Our work examining U.S. states makes only tentative and initial steps towards motivating the sort of analysis that runs through Timur Kuran's work. However, economic history must be explored in considerable detail and, therefore, it is very time consuming. The type of correlations that we report can suggest to the economic historian which institutions are worthy candidates for detailed study. For example: is the historical divergence of the US South in terms of (lower) incomes based on differential rates of entrepreneurial activity rooted in religious institutions? Our analysis cannot answer that question, but our results can suggest whether or not in-depth pursuit of that question is likely to be fruitful.

We begin in section 2 below by outlining the role of the entrepreneur in the economy and the potential importance of religious institutions in determining levels of entrepreneurial activity. The results of Wiseman and Young (2013) are overviewed in section 3. Our concluding section 4 then discusses how these results may point towards fruitful avenues for unbundling U.S. religious institutions in this context.

2. Entrepreneurs and Religious Institutions

Entrepreneurs have long been portrayed as the human dynamos of economic growth. While investments and innovations are the proximate sources of rising incomes, it is an economy's entrepreneurs who act to undertake those investments and innovations. The precise nature of the entrepreneur's role has been debated. However, whether we emphasize the entrepreneur's willingness to bear risk (Knight, 1921), exceptional creativity (Schumpeter, 1934), or alertness to potential markets and untapped profit opportunities (Kirzner, 1973) their importance in a market economy has been widely recognized.

Despite the positive light in which entrepreneurs have been cast, it is not only growth-enhancing activities that involve risk-bearing, creativity, and alertness. Entrepreneurial skill can be a means towards the expropriation of wealth as well as its creation. This fact motivates William Baumol's (1990) distinction between productive versus unproductive entrepreneurship. Amongst an economy's entrepreneurs we are likely to find some bold in business, others creative in cat-burglary, and others yet who gain through their perceptiveness of political processes. Production, rent-seeking, or outright theft – which path to profit will an entrepreneur choose? That, according to Baumol, has everything to do with the institutions within which an entrepreneur acts.

Institutions are "the humanly devised constraints that shape human interaction" (North, 1990, p. 3). They include formal constructs (such as legal codes) as well as informal conventions that also define the relative costs and benefits of different actions. An example of the latter is the convention of holding a door for someone entering behind you. This is not written down anywhere and there are no formal penalties for failing to hold a door. However, to the extent that failure constitutes being perceived as rude (which is generally undesirable in repeated interpersonal interactions) this informal institution does have some "teeth". It is one element of the "rules of the game in [our] society" (North, 1990, p. 3).

Because institutions are "humanly-devised" they are not only constraints on human action but also *the result of* human action. They collectively constitute "a system of socially produced regularities, and in turn are shaped by individual behaviors" (Kuran, 2011, loc. 233). On the one hand, this means that institutions are dynamic and endogenous to the actions of individuals who operate within them. On the other hand, as effective "rules of the game" they are also persistent, often lasting long beyond the time when (if ever) they could have been described as optimal in a static sense. Yet their durability is what often makes institutions dynamically beneficial.

> The rules may have come to exist merely because, in a certain type of situation, friction is likely arise among individuals about what each is entitled to do, which can be prevented only if there is a rule to tell each clearly what his rights are. Here it is necessary merely that some known rule cover the type of situation, and it may not matter greatly what its contents are (Hayek, 1960, p. 158).

The rules of the game may be applied consistently across time and individuals or may vary capriciously. When the former is true, there is *rule of law*; individuals can plan effectively for the future and avoid the costs of uncertainty and surprise.

Any religion is a bundle of various institutions. Each part of that bundle may be well or poorly "designed" and may constrain the religion's adherents consistently or capriciously. As such, any religion in some way shapes the costs and benefits associated with entrepreneurial activity. The most famous thesis concerning religious institutions and economic activity is almost certainly that put forward in 1905 by Max Weber, the German sociologist and economist, in *The Protestant Ethic and the Spirit of Capitalism*. He argued that Protestantism and, in particular, Calvinism promoted a worldview where the elect, predestined for heaven, were evidenced by their material wealth. To the extent that entrepreneurial activity is associated with wealth and the "self-made man" (or "woman") one might, according to Weber's thesis, expect Protestantism to be positively linked to entrepreneurial activity.

Unfortunately, Weber's thesis has fared better in popular than in scholarly circles as a fundamental explanation of Western industrialization and the development of a capitalist economic structures (e.g., Tawney (1926) & Samuelsson (1993)).[6] However, at least one recent study finds that it may apply to modern growth experiences in former European colonies (Grier, 1997). Also, there are numerous alternative theses that are potentially relevant for the present day U.S. Using cross-country data, Barro and McCleary (2003) find that a belief in the existence of heaven and hell is associated with higher per capita income growth. Belief in otherworldly rewards or punishments that are contingent on worldly actions is a plausible determinant of individuals' entrepreneurial activities. If complementary institutions (religious or secular) place creativity or willingness to bear risk in a positive light, for example, then such a belief may be associated with greater productive entrepreneurship.

Barro and McCleary (2003) also find that greater attendance of religious services is negatively correlated with growth. In other words, they find that different effects are associated with "the extent of believing relative to belonging" (p. 760). In the case of belonging (i.e., in this case, attendance) one explanation for the negative effect on growth could be a straightforward opportunity cost. Time spent at church is, by definition, time not spent producing goods and services; likewise, it is time not spent being an entrepreneur.

At this point we are not prepared to put forth any specific theses to explain

[6] Timur Kuran is also critical of Weber's thesis that the lack of a concept of corporation doomed the Middle East to underdevelopment from the start of Islam. Kuran (2011, loc. 791-781) notes that, "In the sixteenth century the public services available to residents in Istanbul and Cairo were not noticeably inferior to those available to Parisians." According to Kuran, Weber fails to realize the *effectiveness* of many traditional Islamic institutions during the time in which they originally evolved.

the U.S. state-level correlations illustrated in figure 1. Rather, we will elaborate on correlations between various other religious variables – some relevant to the *belief-versus-belonging* distinction – and entrepreneurship scores; based on these correlations we will suggest directions that they point to for identifying specific institutional channels for the determination of entrepreneurship.

3. Religious Variables and U.S. State Entrepreneurship Scores

For religious variables we reply on three sources: (1) the Pew Forum's 2007 *U.S. Religious Landscape Survey*[7]; (2) the Gallup Poll's 2004 and 2008 *State of the States* surveys[8]; and (3) the U.S. Census Bureau's 2000 and 2010 *U.S. Religion Census: Religious Congregations & Membership Study*.[9] The Pew ¬belief measures capture the importance of religion, frequency of prayer, and belief in God. Data on the percent of a state's population that attend religious services weekly are also available from the Pew Forum. Gallup affiliation data include the percent of states' populations that are Protestant, Catholic, or Atheist/Agnostic. The U.S. Census Bureau reports a measure of each state's Christian adherents as a percent of the total state population.

We construct entrepreneurship scores for each of the 48 contiguous U.S. states based on Sobel's (2008) methodology.[10] Sobel uses data from 1995 to 2002 and we update his scores using data from 2002 to 2008. The scores are then based on averages of data that are generally centered on the year 2000. They represent average levels of entrepreneurial activity in a state over a fourteen year period.

Productive entrepreneurship scores are based on per capita venture capital investments, patents per capita, the self-proprietorship (self-employment) growth rate, establishment birth rates, and large (500 employees or more) establishment birth rates. Unproductive entrepreneurship scores incorporate three measures of per capita political and lobbying establishments in a state's capital (Sobel & Gar-

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[7] http://www.pewforum.org/Datasets: Importance of religion is expressed as percent of state population who say religion is very important in their lives; frequency of prayer is expressed as percent of state population who say they pray at least once a week; belief in god is expressed as percent of state population who say they believe in God with absolute certainty; worship service attendance is expressed as percent of state population who say they attend religious service at least once a week.

[8] http://www.gallup.com/poll/12091/tracking-religious-affiliation-state-state.aspx#2

[9] http://www.census.gov/compendia/statab/cats/population.html

[10] For details see Sobel (2008, pp. 646-647; Appendix A).

ret, 2002). The unproductive entrepreneurship scores are also based on (100 minus) an index of liability system quality. The latter is the Harris Poll, an index of judicial quality on a 100 point scale. (Hence we take 100 minus this value.) States that have relatively low Harris Poll scores tend to have high rates of legal fraud and abuse in the areas of, e.g., workers compensation, class-action, and medical malpractice. All of these measures attempt to gauge the level of resources in a state that are being expended in legal and political processes rather than in productive market activities. In the case of either productive or unproductive entrepreneurship the state-level variables are ranked from 1 through 48 from smallest to largest. A state's score is then the average of rankings across the constituent variables. This normalizes all equally weights all of the constituent variables. (For more details on productive and unproductive scores see Wiseman & Young (2013) and Sobel (2008).)

We include various other controls in our regressions. A state's average (2000 to 2005) Economic Freedom of North America (EFNA) score (Karabegović et al., 2006) is included to control for secular institutional quality (Bjørnskov and Foss, 2008). We also control for a state's average (log) GDP per capita. This is a proxy for a state's relative level of economic development. As suggested by McCleary and Barro (2006), the level of economic development may be an important determinant of religiosity; omitting it from entrepreneurship regressions could to biased estimates. Additionally, we include a state's population density and median citizen's age; also the percent of its population with a bachelor's degree or higher, and the percent of its population that is male. (These data are from the U.S. Census Bureau.)

Tables 1 & 2 report results based on productive entrepreneurship scores as the dependent variable. Tables 3 & 4 do the same for unproductive entrepreneurship as the dependent variable. Religious variables are organized into categories of religiosity (the percent of a state's population who have regular *attendance* of services; who have a certain *belief in god*; who partake in *prayer* at least once a week; who claim that the *importance* of religion in their lives is "very") and simple affiliation (*total* Christian *adherents* as a percent of a state's population; the percent of a state's population who are *protestant*, the percent who are *catholic*, and the percent who claim to be *atheist/agnostic*). Note that the *atheist/agnostic* variable controls for individuals who, presumably, do not pray or deem religion to be of any importance in their lives; they rank low in terms of both belonging and belief. Tables

1 & 3 report regression results that include religiosity variables.[11] Tables 2 & 4 report regressions that include affiliation variables.

In the productive entrepreneurship regressions, *attendance*, *prayer*, *importance*, and *total adherence* are all negative and significant. Belief and belonging

Table 1

Regressions of US state productive entrepreneurship scores on religiosity variables

	Specifications			
Independent variable	1	2	3	4
Attendance, %	-0.437**	-	-	-
	(2.30)			
Belief in God, %	-	-0.233	-	-
		(0.94)		
Prayer, %	-	-	-0.940**	-
			(2.03)	
Importance, %	-	-	-	-0.639**
				(2.36)
Controls				
Log GDP Per Capita	-11.331	-7.957	-3.515	-10.921
	(0.82)	(0.51)	(0.25)	(2.36)
EFNA	5.760*	5.196	4.158	6.355**
	(1.86)	(1.44)	(1.52)	(1.96)
Pop. Density	0.013**	0.013**	0.013*	0.013**
	(2.67)	(2.21)	(1.94)	(2.58)
Median Age	-2.187**	-1.409*	-0.315	-1.725**
	(2.63)	(1.94)	(0.50)	(2.43)
Bachelor's +, %	0.544*	0.642*	1.041***	0.442
	(1.75)	(1.80)	(2.73)	(1.31)
Male Pop., %	1.229	2.926	5.313***	0.590
	(0.56)	(1.16)	(3.46)	(0.24)
R^2	0.707	0.666	0.694	0.705
Observations	39	39	39	39

Notes: Absolute values of t-statistics are in parentheses. *, **, and *** denotes significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Constant included, but not reported.

[11] The number of observations for religiosity variables is 39 rather than 48. The Pew study combines, in several cases, two contiguous states to provide a single score for both.

Table 2

Regressions of US state productive entrepreneurship scores on affiliation variables

	Specifications			
Independent variable	1	2	3	4
Total Adherents, %	-0.467***	-	-	-
	(6.46)			
Protestant, %	-	-0.127	-	-
		(1.46)		
Catholic, %	-	-	-0.150	-
			(1.59)	
Atheist/Agnostic, %	-	-	-	1.213***
				(5.0.)
Controls				
Log GDP Per Capita	-7.480	-12.541	-9.461	-9.692
	(0.88)	(1.16)	(0.79)	(1.06)
EFNA	4.946**	7.337**	6.486**	6.190**
	(2.35)	(2.51)	(2.11)	(2.48)
Pop. Density	0.016***	0.010*	0.017***	0.013***
	(3.88)	(1.94)	(2.86)	(3.25)
Median Age	-2.807***	-1.025*	-1.002*	-1.872***
	(5.53)	(1.78)	(1.76)	(3.54)
Bachelor's +, %	0.714***	0.785***	1.012***	0.615***
	(3.60)	(2.99)	(4.09)	(2.92)
Male Pop., %	0.543	-1.494	3.130	-0.583
	(0.40)	(0.72)	(1.47)	(0.31)
R^2	0.784	0.627	0.624	0.727
Observations	48	48	48	48

Notes: Absolute values of t-statistics are in parentheses. *, **, and *** denotes significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Constant included, but not reported.

Table 3

Regressions of US state unproductive entrepreneurship scores on religiosity variables

	Specifications			
Independent variable	1	2	3	4
Attendance, %	0.023	-	-	-
	(0.09)			
Belief in God, %	-	0.343	-	-
		(0.87)		
Prayer, %	-	-	0.254	-
			(0.32)	
Importance, %	-	-	-	-0.047
				(0.11)
Controls				
Log GDP Per Capita	-33.091	-43.942*	-32.947*	-34.368*
	(1.62)	(1.86)	(1.87)	(1.68)
EFNA	0.565	3.065	0.523	0.884
	(0.12)	(0.53)	(0.13)	(0.17)
Pop. Density	-0.001	-0.001	0.001	0.001
	(0.07)	(0.05)	(0.11)	(0.05)
Median Age	-0.756	-1.422	-1.003	-0.871
	(0.76)	(1.38)	(1.11)	(1.01)
Bachelor's +, %	0.434	0.264	0.333	0.391
	(0.71)	(0.45)	(0.53)	(0.64)
Male Pop., %	0.133	-2.936	-0.175	-0.373
	(0.04)	(0.62)	(0.06)	(0.09)
R^2	0.282	0.299	0.285	0.282
Observations	39	39	39	39

Notes: Absolute values of t-statistics are in parentheses. *, **, and *** denotes significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Constant included, but not reported.

Table 4

Regressions of US state unproductive entrepreneurship scores on affiliation variables

	Specifications			
Independent variable	1	2	3	4
Total Adherents, %	0.381***	-	-	-
	(2.80)			
Protestant, %	-	-0.031	-	-
		(0.24)		
Catholic, %	-	-	0.200	-
			(1.14)	
Atheist/Agnostic, %	-	-	-	-0.552
				(1.20)
Controls				
Log GDP Per Capita	-27.822*	-24.058	-27.624*	-25.110*
	(1.92)	(1.53)	(1.73)	(1.68)
EFNA	-2.071	-3.535	-3.126	-3.335
	(0.60)	(0.87)	(0.79)	(0.93)
Pop. Density	0.007	0.008	0.005	0.009
	(0.70)	(0.71)	(0.48)	(0.81)
Median Age	1.034	-0.225	-0.548	0.031
	(1.24)	(0.29)	(0.68)	(0.04)
Bachelor's +, %	0.443	0.234	0.154	0.410
	(1.15)	(0.50)	(0.35)	(0.99)
Male Pop., %	5.493*	3.418	3.167	5.216
	(1.93)	(0.96)	(0.98)	(1.51)
R^2	0.335	0.222	0.244	0.244
Observations	48	48	48	48

Notes: Absolute values of t-statistics are in parentheses. *, **, and *** denotes significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Constant included, but not reported.

both seem to correlate in a quantitatively meaningful way with productive entrepreneurial activity. However, the largest effect is associated with the simple *total adherents* measure: a sample standard deviation increase in this variable (about 10 percentage points) is associated with an almost a 5 point decrease in a state's productive entrepreneurship score. (Recall that the scores are a ranking; they range from 1 to 48 where the latter represents the most productive entrepreneurial U.S. state.) Alternatively, the estimated effect of *atheist/agnostic* variable is positive and significant. If this variable increases by a standard deviation (about 6 percentage points) a state's productive entrepreneurship score increases by 4 points.

Measures of both belief and belonging appear to be associated with decreases in productive entrepreneurship. This could be because religiosity imposes opportunity costs on time and other resources; however, it could also be because of increases in the perceived relative benefits to rent-seeking versus productive activities. In our data, the evidence for the latter story is somewhat mixed. In the unproductive entrepreneurship regressions most of the religion variables do not enter significantly. However, the *total adherents* variable is positive and highly significant; a standard deviation increase is associated with about a 4 point increase in a state's unproductive entrepreneurship score.

In either the case of productive or unproductive entrepreneurship, the simple *total adherents* variable packs a good deal of explanatory power. This is confirmed in table 5 where we report productive and unproductive entrepreneurship regressions including, together, all of the religion variables that were significant in either tables 1 through 4. Of the religion variables, only *total adherents* enters significantly in either case. Once again, the estimated effect is negative in the case of productive entrepreneurship; positive in the case of unproductive entrepreneurship.

4. Discussion

The results presented above are, on the one hand, fairly straightforward and compelling: U.S. states with greater numbers of individuals claiming to be adherents of Christianity score higher in terms of productive entrepreneurship; lower in terms of unproductive entrepreneurship. On the other hand, they are also puzzling a represent a challenge to social scientists.

Table 5

Regressions of US state unproductive entrepreneurship scores on all previously significant religion variables

	Specifications	
Independent variable	Productive Entrepreneurship	Unproductive Entrepreneurship
Religiosity		
Attendance, %	-0.147	-0.165
	(0.64)	(0.46)
Prayer, %	-0.265	-0.651
	(0.54)	(0.69)
Importance, %	-0.209	0.100
	(0.56)	(0.16)
Affiliation		
Total Adherents, %	-0.345**	
	(2.05)	0.514*
		(1.78)
Atheist/Agnostic, %	0.005	0.570
	(0.01)	(0.76)
Controls		
Log GDP Per Capita	-12.275	-34.662
	(0.97)	(1.55)
EFNA	5.505**	2.181
	(2.05)	(0.35)
Pop. Density	0.015**	-0.002
	(2.63)	(0.36)
Median Age	-2.743**	0.874
	(2.64)	(0.64)
Bachelor's +, %	0.710*	0.423
	(1.95)	(0.64)
Male Pop., %	-0.704	1.810
	(0.28)	(0.42)
R^2	0.786	0.370
Observations	39	39

Notes: Absolute values of t-statistics are in parentheses. *, **, and *** denotes significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Constant included, but not reported.

More "belief"-based measures (e.g., frequency of prayer; certainty of belief in God) are not robustly correlated with entrepreneurship. This might at first suggest that a basic opportunity cost story is operative: time spent in religious activities is not available for entrepreneurship. However, this would not by itself account for the *positive* effect on unproductive entrepreneurship. Furthermore, frequency of religious service attendance is trumped by the simple number of adherents in our regressions. Among the religion variables, *total adherents* and *attendance* have the highest pairwise correlation (0.61) suggesting that collinearity may have a role to play. Still, based on a basic opportunity cost story one would expect that the independent variation in *attendance* is more likely to be associated with a detectable effect.

It is also worth noting that the distinction between protestant and catholic adherents appears to be unimportant in our data. The only group besides total Christian adherents that matters is individuals claiming to be atheists or agnostics, having a positive and significant correlation with productive entrepreneurship. However, even that correlation becomes insignificant when the total number of Christian adherents is controlled for.

Where does this point us? One possibility is to consider formal Christian religious organizations as special interests. In other words, if churches in the U.S. (and their associations) seek benefits through political processes for their adherents, then this could be associated with increased rent seeking and shift of entrepreneurial activities away from wealth-generating endeavors. A well-known example is the Christian Coalition of America. We do not wish to claim that this special interest group is especially prone to rent-seeking. However, to the extent that such a group functions as a special interest it works through political processes to capture rents for its members. The time and resources used in these religious activities are not available for wealth-generating ones, leading to substitution away from productive entrepreneurial activities.

The above is merely conjecture but, again, it is one direction in which our results may point researchers. Given the competitiveness of the religious marketplace in the U.S., it would be interesting a very important to know if that competition is, to a significant degree, along the margin of rents that religious associations can offer their adherents. To seriously explore this possibility will involve detailed documentation and analysis of formal religious organizations in the U.S. Such organization will presumably include not only nation-wide institutions such as the Christian Coalition, but also more local organizations that may be adept at navigating local political processes.

More generally, correlations like those reported in this paper can point researchers towards areas where the sort of "thick" economic history pursued by Timur Kuran is likely to be fruitful. To use an example introduced above, consider the economic divergence of the US South. Various sources for this divergence have been proposed and explored, including the isolation of labor markets (Wright, 1986), the Northern expropriation associated with Reconstruction (DiLorenzo, 2002), and the incompatibility of the culture with the formal institutions introduced postbellum (Carden, 2009). It is worth noting that the US South has the highest percentage of Christians (83 percent) and by far the largest number of evangelical Protestants (24 percent of all Christians) (Pew, 2008). Since the rise of evangelicalism is rooted in the nineteenth century (Mathews, 1977) our results raise the possibility of a persistent and institutionally based shortfall of productive entrepreneurship in the South. That possibility being raised, our cross-sectional evidence can do little more; we leave the relevant "thick" economic history for another time and/or other researchers.

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Brazil's Long Divergence

Anna B. Faria and J. Robert Subrick†

Introduction

Timur Kuran has offered a novel explanation for the great divergence. Institutions in the Middle East emerged a millennium ago that initially encouraged wealth-creation. They provided the foundations for economic growth. But as time passed, the same institutions became dysfunctional and hindered economic growth. They attained such security that when shocks arrived to change the status quo and potentially increase economic growth, they persisted. Middle Eastern institutions became robust institutions. As the centuries past, previously 'good' institutions evolved into impediments for long-run development. They did not allow for the modern institutions associated with economic development to emerge. The Middle East fell behind Western Europe and has yet to catch up.

West European countries and the United States adopted and developed organizational forms that encouraged invention and innovation. They created institutions that allowed various members of society to pool their resources to make investments over increasing periods of time. Kuran (2011: 5) stressed the

> laws, regulations, and organizational forms that enabled economic activities now taken for granted in all but the most impoverished parts of the globe: the mobilization of productive resources on a huge scale within long-lasting private enterprises and the provision of social services through durable entities capable of transformation.

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Long-Run Growth Required

> …[the] institutions essential to the mass mobilization of savings, the lengthening of individual planning horizons, and the exploitation of new technologies through structurally complex organizations.

Providing the incentives for individuals to adopt new technologies that yielded benefits into an uncertain future was key for understanding why some countries are rich and others are not.

Kuran's framework provides a unique approach to understand the economic history of Brazil. Half a millennia ago, GDP per capita in Brazil was approximately equal to that in the U.S. Since about 1600, Brazil's income per capita has declined substantially relative to the U.S.. We argue that Brazil adopted institutions that promoted growth after the arrival of the Portuguese in 1500 but evolved into dysfunctional institutions. Given the tropical environment and the small size of the indigenous population, a plantation economy emerged that was initially efficient and economic growth followed (Engerman and Sokoloff 2012). Sugar plantations became very important to the economy. Over time, the owners of the large farms became the political elite. They adopted and sustained policies that institutionalized their political power. Reforms, such as the abolition of slavery or land reforms to recognize the rights of squatters, did not happen until the late nineteenth century if they happened at all. As a result, Brazil failed to develop the commercial institutions associated with economic development. These include financial markets and limited liability corporations, two institutions emphasized by Kuran.

The United States offers a natural point of comparison. Both Brazil and the U.S. were New World Colonies. Both have long coastlines on the Atlantic Ocean that provided access to the markets of Western Europe. Both are over 3,000,000 square miles. Both relied on natural resources for economic growth. Malaria hindered economic growth in portions of both countries although to a lesser extent in the U.S. Both have large river networks. Although Brazil has a large tropical land area that U.S. does not, it does not imply hindered development. Other tropical regions, such as Malaysia and Singapore, have succeeded (Tullock 1997).

Yet, Brazilian income has diverged greatly from that of the United States. Figure 1 illustrates Brazil's long divergence. According to Maddison (2003), GDP per capita in both Brazil and the United States was $400 in 1500. One hundred years later, Brazilian income per capita exceeded American income by approximately 7 percent. However, Brazilian income did not fare well during the next 270 years. By 1870, income per capita in Brazil was less than one-third of the income of the average American. By the beginning of the First World War, it was less than one-fifth. By the end of the Second World War, the ratio reached its lowest point, 11 percent. More recent data puts the ratio at approximately

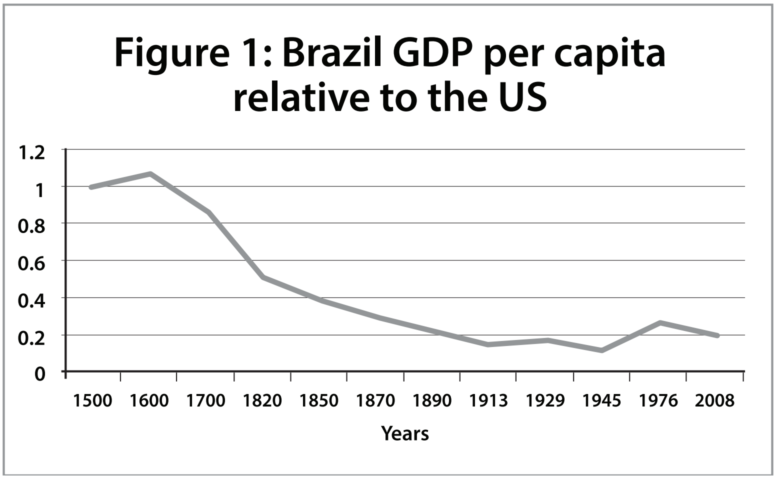

Figure 1.

20 percent. What explains Brazil's long divergence? We begin by looking at the initial conditions and subsequent institutional development.

Sugar Plantations and Efficient Institutions

Economic cycles based on sugar, gold, and coffee characterized the evolution of the Brazilian economy (Normano 1935). Natural resource booms in various parts of the country led to the adoption of institutions that promoted short-run growth but often led to long-run stagnation. We will focus on the sugar boom in the Northeast region from Rio Grande do Norte to Bahia that lasted from the early sixteenth century until 1760 because it illustrates the basic reasons for Brazil's long divergence (see Figure 2).

The sugar economy had three characteristics: "plantations, monoculture, and slave labor" (Naritomi, Soares, and Assunção 2012). Two fundamental reasons explain the predominance of African slave labor in the Brazilian sugar cane planta-

Figure 2: The Location of the Sugar Plantations
Source: Naritomi, Soares, and Assunção (2012)

tions starting in the late sixteenth century. First, voluntary European immigration proved near impossible. Many Europeans did not want to move to Brazil. Second, the indigenous peoples did not survive enslavement for long periods of time or produce enough to justify their continued use. Enslaving the indigenous peoples was too costly. The alternative, imported African slaves, proved cheap and practical for the Portuguese settlers when no other suitable substitutes existed.

The Dutch and French navies separately fought against the Portuguese for the better part of the sixteenth century for parts of Brazilian territory claimed by Portugal in the Treaty of Tordesillas in 1494. The Dutch sought land in the Northeast portion of modern Brazil. The French fought to take over the area in present day Rio de Janeiro and other southern territories. The Portuguese kingdom initially did not secure settlements in Brazil, opting instead to extract Brazilwood from the new colonial territory by bartering with the indigenous peoples. However, once the pressure from the Dutch and the French grew, Portugal claimed the vast territories by granting land to Portuguese gentlemen who would to cultivate it and pay dues to the Crown.

Before introducing sugar cane to Brazil, the Portuguese had already experimented with sugar growing farms in their Atlantic colonies. Furtado (2007: 32) argued this pre-acquired knowledge of sugar planting and milling techniques contributed to the success and expansion of the Brazilian sugar industry early on. The climate and topography allowed for the large plantations. Sugar cane thrived in the hot and humid environment of the Northeast.

The Brazilian Northeast did not provide the Portuguese Crown with the gold and silver wealth the Spanish found in their colonies. As a substitute, the nutrient-rich soil, *terra roxa*, and the tropical climate of the northeastern coast provided ideal conditions for the development of large-scale agricultural production. Sugar cane thrived in *terra roxa*, which gave the Portuguese colony a major advantage in world markets. High demand in Europe and its lack of substitutes increased the profitability of cane sugar. Sugar soon became the colony's leading export and the basis for Brazil's entire economy for over two centuries.

Larger plots of land yielded higher profitability to landowners due to economies of scale. Since the Portuguese Crown had the monopoly on land grants, noblemen interested in growing sugar had to negotiate with the monarch the right to settle. Larger production and profitability for the landowner meant higher tax collection for the Crown. A land distribution system arose, in which few plantations secured high revenues for the monarchy. Once in place, large plantations were easier to defend and manage remotely than smaller land plots with multiple landlords.

In Brazil expenses related to territory defense, cultivation, transportation and shipping justified the rise of large-scale production (Simonsen 1977: 98). Portugal had the land and technical knowledge to produce large amounts of sugar and dominate the world market. But labor was scarce. Upon the Portuguese arrival, approximately 5 million people inhabited Brazil, mostly near the coastline (Gomes 2000).[1] European immigrants did not satisfy labor demand in the colony. Few Europeans would willingly leave their temperate home continent to venture into unexplored tropical territories (Simonsen 1977: 126). The Portuguese could not profitably enslave or contract with native groups. Most indigenous peoples led a nomadic lifestyle and adopted hunting and gathering as their main sources of nourishment. Agriculture existed, but it was largely underdeveloped compared to Europe, and based on slash-and-burn methods that rendered the land infertile within a few cultivation cycles. Virtually no concept of private property rights existed and very little trade took place within or between local groups. Native

[1] This, of course, should be taken with a grain of salt. Estimates range from approximately one million to eight million.

enslavement offered a narrow prospect for productive labor at the plantations.

The alternative to European and native labor came from Africa. In 1511, the Spanish brought the first fifty African slaves to the Antilles. By 1549, the Portuguese Crown had authorized the use of African slave labor in the Brazilian plantations, although there are reports of slaves in the southern colony of São Vicente (currently in São Paulo state) as early as 1535. In Brazil, African slaves sold for considerably more than indigenous peoples suggesting African slaves had higher rates of productivity than the alternatives (ibid. 132).

One factor of the colonization process made Portugal better situated to exploit the trans-Atlantic slave trade: The Treaty of Tordesillas. It allocated to Portugal the territories in Africa where slave supply was most abundant (ibid. 129-30). Plantation owners benefited from access to cheap labor, and the slave traders made a profit off of the trans-Atlantic trade. Simonsen (1977) estimates that between the seventeenth and nineteenth centuries, a total of 1.35 million African slaves came to Brazil to work on the sugar cane plantations alone. Klein (1999) estimates the number of slaves to be 1.569 million between 1551-1760.

The owners of large plantations yielded considerable political power. They controlled the colony's primary economic product. As a result, they manipulated the political and legal systems to their advantage. The Portuguese Crown did not seek to interfere with its main source of revenue. In particular, the political elite created a system of property law that protected their interests and discouraged productive investment. They discouraged innovation in cultivation methods, and limited the extent of public services available to the population in the Northeast. The region still underperforms in measures of institutional development and public goods provision to this day.[2]

Sugar Plantations and Dysfunctional Institutions

The Portuguese government sought to generate revenue from sugar. They granted large parcels of land (*sesmarias*) that generally varied between 16 and 50 square miles (Dean 1971). The *sesmarias* often lacked clearly defined boundaries but this did not prevent investments from taking place. The landowners fulfilled their obligation to produce sugar and provided revenue and sugar to the Portuguese Crown. In return, they received support in the form of scarce credit and slaves, which offset the limited availability of labor both free and forced. By the

[2] The Firjan IFDM 2010 index of public goods provision has six Northeastern states in the bottom ten performing states, and none in the top five states.

mid-eighteenth century, the more innovative Dutch sugar producers of the Antilles had taken over the world market. The Northeastern sugar economy collapsed soon thereafter.

At its independence in 1822, Brazil's property laws reflected the demands of the Portuguese government and the Brazilian economic elite. But the laws clearly had become dysfunctional. The Industrial Revolution had begun in Britain and Brazil had fallen behind the United States and portions of Western Europe. The Portuguese colonizers allocated land to the politically connected with little concern for economic efficiency. Friends and allies of the Crown had the legal rights to vast tracts of land. Often they had little interest in improving the land beyond the areas near the Atlantic Ocean where sugar grew efficiently. But the large tracts encouraged the establishment of informal property rights. Few landowners monitored their land and squatters took advantage of it. They claimed large tracts of land and, by independence in 1822, the demand for land reforms had become a political issue.

The vastness of Brazil and the difficulty of enforcing land grants made squatting profitable. Anyone willing to move inland and defend their claims from indigenous peoples and the environment could. The formal legal system did little to stop squatting. The claims of squatters came into conflict with expanding plantations, who sought to satisfy demand in international markets for Brazilian resources.

Reform focused on two issues. First, the new government had to address the question of recognizing the rights of squatters. Second, the post-colonial government faced the looming problem of labor supply in a world where slavery did not exist. But addressing these issues required adjusting to the evolving political equilibrium that shifted economic power from the northeast to the south where coffee planters had begun to exert influence on national policy.

Table 1

Exports as a Percentage of Total Exports

Years	Sugar	Coffee	Cotton	Mining
1650	95.0	--	--	5.0
1750	47.0	--	--	53.0
1800	31.0	--	6.0	63.0
1841-1850	26.7	41.4	7.5	25.4
1891-1900	6.0	64.5	2.7	26.8

Source: Skidmore (1999), p. 50

Table 1 illustrates the changing economic significance of the sugar planters. In 1650, sugar dominated the economy accounting for ninety-five percent of the exports. Sugar was king. A century later, sugar remained a little less than fifty percent of exports but gold had become the largest component of exports. Fifty years later, the relative decline of sugar continued as gold production remained the most important economic activity. By 1850, coffee had become the dominant export product that would last throughout the century. Sugar declined to less than ten percent of exports.

Following the collapse of the sugar economy, coffee took over as the main source of income for the colony. Quick to adjust to its new revenue source, the Portuguese Crown shifted the colony's capital from São Salvador, in Bahia, to Rio de Janeiro. By moving the capital to the main port city in the Southeast, the government's ability to collect taxes improved. Coffee planters had ready access to the political agents that could shape policy to their likings. Many became politicians themselves, and with that, by the early nineteenth century Brazilian politics had taken a turn to the south.

The expansion to the coffee growing regions in São Paulo took place in the late eighteenth century, when squatters and slave raiders crossed the coastal mountains of Serra do Mar. Once established, the coffee planters sought more land. When the squatters refused to yield, the planters used their political power to force them out. The Southeastern politicians began pushing for land reform.

The growing importance of coffee led to the property reform in 1850. The land law of 1850 changed the rules for land allocation. Rather than simply grant land to the politically connected or claim land by squatting, would be owners had to purchase the land from the government. This would provide incentives for those who valued the land to obtain it. It also served as a way to generate funds for the government to overcome its labor supply problem. Revenue from land sales could be used to subsidize immigration.

Great Britain abolished the slave trade in 1834. A treaty with Great Britain in 1826 which became effective in 1830 declared slavery illegal. The Aberdeen Act of 1845 made it legal for British ships to seize ships carrying slaves headed to Brazil. Finally the Free Womb Law in 1871 paved the way for the end of slavery. It stated any child of a slave born after 1871 would be granted freedom upon their 21st birthday (Schulz 2008). In 1888, slavery was abolished. But the transition illustrated the persistence of the political power of the sugar plantation owners in the Northeast.

The Brazilian government outlawed the trans-Atlantic slave trade in 1850, the same year the British began enforcing the Aberdeen Act of 1845. Brazil could no longer import slaves. However, slavery persisted due to the regional differences between the sugar dominated northeast and the coffee economy of the south. The sugar plantation owners remained politically powerful even though their relative economic importance had declined (see Table 1). Slaves represented a valuable asset even as the value of sugar declined. This provided the incentives for the persistence of dysfunctional institutions as they sought to remain politically powerful.

The coffee plantation owners needed cheap labor to satisfy growing demand for Brazilian coffee. The impending demise of slavery signaled by the passage of Lei Eusébio de Queirós led them to search out alternative methods to obtain workers. They could buy existing slaves from the declining sugar plantations. Marginal farmers in the Northeast did sell their slaves. But this undermined the overall political influence of the sugar elite. In 1853, they introduced an intrastate tax on slaves so as to discourage their sale to southern farmers.

Europe offered an attractive alternative. With the U.S. offering opportunities for many Europeans and the British subsidizing immigration, the coffee planters and the Brazilian government devised a plan to attract workers to the coffee region, especially São Paulo. Competition from Argentina, with its European-like climate, for immigrants also required a plan of action to satisfy the demand for labor by the coffee barons. Subsidies for immigrants and a promise of landownership became a proposed policy to address the issue.

The debates over the revision of the land law through the 1840s and leading to its reform in 1850 stressed two major questions. First, the rights of the squatters had to be addressed. Large numbers of people had access to land but did not have legal title. Formalizing ownership offered an opportunity to provide an incentive structure for wealth-creating invention and innovation. It would also provide collateral necessary to expand the extent of credit markets. Second, it provided an opportunity to raise revenues to subsidize the importation of European labor (Dean 1971). With the impending demise of slavery as signaled by the treaties with Britain, coffee barons searched for a viable source of cheap labor.

As the various politicians debated the land reform laws, it became increasingly clear that the status quo would prevail. Proposed changes to recognize the rights of squatters met opposition (Da Costa 2000). Although the reformed law granted more rights to squatters, it limited the ability to make legal claims to land.

Few had the resources to pay for official surveys demarcating land. Furthermore, in the event of a legal conflict, the squatters rarely won. For example, the de jure landowner often took advantage of "lost" ledgers documenting the squatter's legal claims. The second provision to provide funding for European labor did attain some measure of success. European immigration increased from approximately 500 per year before the 1850 law to nearly 20,000 by 1860 (Dean 1971: 623). The government did secure their property rights and the number of small landholdings grew.

Even though an important economic shock loomed in the future with the impending ending of slavery, the political elite did little to change institutions. Instead, the political balance of power remained in the landed interests although the coffee barons gained relative political power. But without vibrant, domestic credit markets, their ability to expand in order to meet increasing demand faced severe constraints. For example, heavy reliance on British credit meant that financial crises in London limited Brazilian coffee plantation owners' options.

Why No Financial Market Development?

The legal system impeded the emergence of one of the vital institutions for economic development: the credit market. As late as 1888, only 26 banks existed in Brazil and only 7 out of 20 states had a bank. Haber (1997) reports that half of all deposits were placed in banks located in Rio de Janeiro. Although a stock exchange existed in Rio since 1820, it remained relatively small. Furthermore, it offered little funding for private enterprise. Credit markets barely existed.

The lack of legal status of squatters limited their access to credit markets. They could not use land as collateral to secure a loan. As a result, the number of people in the credit markets remained small and only the wealthy and politically connected had access to credit. This empowered the landed elite. They had access to credit necessary for economic growth.

The imperial government sought to limit banking competition. The 1860 incorporation law limited joint-stock companies to those who received permission from the government. Most importantly, it did not provide limited liability. The law allowed for a Brazilian investor to be legally liable for a firm's debt for five years after selling the asset (Haber 1991). This policy greatly limited financial market development. It discouraged investors who could potentially have to pay for actions that took place after the investment occurred.

The lack of financial market development mirrored the political-economic equilibrium. The government's policies reflected the interests of the wealthy landowners. They supported the internal slave trade because it provided revenue and they preferred small credit markets since they had the assets necessary to obtain credit when needed. Collateral existed for the rich. More broadly, they sought monetary stability in order to protect the value of their assets. To do so, they effectively limited the ability of any bank to issue currency in large quantities. As a consequence, they prevented the emergence of a countrywide banking system. The persistence of slavery exacerbated the problem.

Slavery reduced the price of labor. It also altered the relative price of labor and capital. With a relative abundance of slaves (compared to physical capital), only weak incentives existed to create financial markets. If they did emerge, they could threaten the political-economic status of the landowners. Credit represented a means for more and more people to make investments in either human or physical capital. If profitable, entrepreneurs would move resources to these ventures and out of the traditional but declining sectors. In the end, the sustained economic growth experienced by Western Europe and the United States did not take place and Brazil's long divergence continued.

Geographic Destiny?

We have stressed the institutional sources for Brazil's great divergence. But what about geographic explanations for economic development? A long tradition in economics dating at least back to David Hume and Adam Smith has identified the role of geographic factors in affecting the evolution of economies. More recently, Diamond (1997), Kamarck (1976), and Sachs (2001) attribute relative economic backwardness to a country's geographic endowments. They argue geography directly affects long-run growth through several mechanisms. The prevalence of malaria affects worker productivity. In some cases malaria kills and in others it limits a worker's time on the job. Tropical environments with a lack of frost allow disease-carrying insects to infect people with productivity reducing maladies. Dense tropical forests raise the costs of engaging in trade and limits specialization.

Brazil has significant geographic constraints. Over 90% of the country is classified as tropical and the Amazon region accounts for over 40% of the land area. Malaria has and remains a public health concern, especially in the Amazon region (Oliveira-Ferreira 2010). Geography appears to be a viable explanation for Brazil's long divergence. A comparison with the U.S. reveals a 'reversal of fortune' that undermines the geography hypothesis.

From 1500 until the seventeenth century, Brazil's economy expanded primarily due to the sugar plantations. Income per capita was greater in Brazil than the U.S. But the U.S. outperformed Brazil during the subsequent centuries. The geographic endowments of the countries remained the same. However, institutional developments differed greatly.

In the U.S., institutions developed that secured property rights and increasing included large portions of the population in political decision-making (Engerman and Sokoloff 2012). The rule of law and democracy emerged. Education and literacy spread throughout the population. An Industrial Revolution occurred. The U.S. economy modernized and became the largest in the world. As we have argued, dysfunctional institutions emerged and persisted in Brazil. And that made all the difference.

Conclusions

The abolition of slavery occurred in 1888. The imperial government came to an end and a republican form of government emerged the following year. Financial market reforms occurred shortly thereafter. The newly empowered coffee barons sought and gained access to credit. Bank deregulation occurred. Shareholder liability was limited to 12 months. New laws increased transparency. By 1891, 68 banks operated in Brazil.

However, the potential to end the long divergence disappeared quickly. The rapid expansion of credit led to the *Encilhamento*, a speculative bubble. It burst in 1892. In response, the government constrained financial market development after 1896. Only one bank had the right to issue currency and by 1906, only 10 banks operated (Triner 2000).

The long divergence continued. Quickly after a period of liberal reforms that undermined the sugar interest, the coffee barons successfully captured the government and instituted reforms that stifled Brazil's economic growth. They pursued policies that hindered financial market development. They did not embrace reforms that would encourage the formation of limited liability corporations. They prevented the reforms that would have led to the emergence of the institutions that Kuran identified as crucial for economic growth. As a result, Brazil remained relatively poor.

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