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Guest Editor: Timur Kuran

CONTENTS

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Explaining the economic trajectories of civilizations: The systemic approach

Timur Kuran*

Department of Economics, Duke University, 213 Social Sciences Building, Box 90097, Durham, NC 27708, USA

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ABSTRACT

A civilization constitutes a durable social system of complementary traits. Some of the complementarities of any given civilization are between elements of "material" life and ones commonly treated as integral to "culture." Identifying the mechanisms responsible for a civilization's observed trajectory involves, therefore, causal relationships that cross the often-postulated "cultural–material" divide. Complementarities make it difficult to transplant institutions across civilizations on a piecemeal basis. They imply that reforms designed to jump-start an economy will fail unless they are comprehensive. Civilizational analysis can benefit, therefore, from attention to institutional complementarities, including ones involving both cultural and material variables.

1. Civilizations and their economic trajectories

At least since Huntington (1993) inflamed political sensitivities through an article titled "The Clash of Civilizations?", the concept of civilization has been associated with permanent conflict and incompatible lifestyles.[1] This negative connotation has made intellectuals reluctant to use the word for fear of being misunderstood. This is unfortunate because whatever its political overtones, the concept of civilization captures a cluster of attributes that its alternatives fail to convey. In any case, numerous terms that conjure up negative images enjoy wide use in intellectual discourses. The concepts of political conflict, economic warfare, and cultural inertia offer examples. In spite of the implied associations, intellectuals refer routinely to politics, economics, and culture.

One analytical advantage of the term civilization is that it conveys commonalities that transcend political boundaries and even geography. Although a civilization usually has a home region, its reach may extend globally. With its huge Pakistani population, the English town of Bradford is part of contemporary Islamic civilization. Likewise, the Chinatowns of American cities are integral to Chinese civilization.

* Tel.: +1 919 660 1872.
E-mail address: t.kuran@duke.edu.

[1] The article's central claim is that alignments defined by ideology and superpower politics are giving way to alignments based on civilization. Huntington (1996) offers a more detailed version of the thesis.

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Civilization captures more than "culture," which comes to mind as a benign alternative. We may speak of the political culture of India, Calcutta's commercial culture, and the musical culture of South Asia. The concept of Indian civilization encompasses all of these, along with the mechanisms that account for their interactions. Serving as a broader unit of analysis, it weaves together social traits and patterns studied by diverse disciplines, including ones that "cultural studies" specialists typically consider outside their intellectual domain.

Finally, civilization connotes a particularly durable set of traits that give a large population a distinct identity. What makes the traits durable is their complementarities. Having co-evolved over a long time period, they are by and large mutually supporting. As such, they make sense as a whole, and appear natural, to people who grow up with them. In an environment involving high honesty and high social trust, people trade readily with strangers. Trust pays off, so expectations of honesty are fulfilled and people continue to trust one another. Thus high social trust and impersonal exchange are mutually supporting traits.

One of the vexing historical puzzles of the social sciences is the rise of western Europe as an economic powerhouse and the concomitant slip in the relative performance of other civilizations, including the Islamic world, India, and China. This article proposes that explaining the divergent economic trajectories of the world's great civilizations requires a systemic approach focused on social mechanisms composed of bidirectional dynamic relationships. The variables that form the mechanisms will include ones associated with material life; these are central to economic discourse. They will also include traits commonly considered irrelevant to economic transformations or viewed as reflections of material trends.

In a systemic approach there is no room, then, for the base-superstructure distinction to which "materialist" scholars of the Marxian tradition adhere explicitly and diverse others implicitly. The systemic approach also stands apart from "culturalist" approaches, which treat economic outcomes as by-products of traits ordinarily excluded from debates on economic development, such as mentalities, ideologies, and religious life. Both materialist and culturalist approaches to long-term economic development commit, I shall argue, what has been dubbed the "fallacy of absolute priority." This fallacy entails the misperception that certain variables act on others without being acted upon in turn (Fischer, 1971, p. 178). Though strictly materialist and strictly culturalist accounts offer valuable insights, they are best treated as components of a fuller analysis that allows circular relationships across the presumed material and cultural domains.

Through the works of diverse social scientists, we have long known that major social outcomes may be among the unintended consequences of behaviors and policies selected for unrelated reasons.[2] Because its analytical building blocks consist of complex rather than unilinear relationships, the systemic approach proposed here accommodates both intended and unintended effects. The distinction between static and dynamic efficiency also fits naturally into the systemic approach. In solving designated problems, an institution may dampen incentives to transform other components of the social system. As we shall see, a plethora of otherwise valuable historical studies overlook unintended consequences, limiting their interpretations to immediate, direct, and easily identified outcomes. In exhibiting this "fallacy of overlooking secondary consequences" (Hazlitt, 1946, pp. 3–4), they limit their ability to explain major shifts in relative economic standings.[3] Transformations such as the economic ascent of Western Europe and slips in the relative performance of other regions require attention to unanticipated interactions among variables.

As we shall see, reforming a civilization involves targeting a cluster of variables all at once, and the order may matter. The enormity of the task compounds the chances of encountering unanticipated obstacles, producing perverse consequences, even failing to make a dent.[4] In the past quarter-millennium reforms designed to overcome economic underdevelopment have targeted myriads of factors: organizational forms, court procedures, education, governance methods, accounting conventions, mentalities, attitudes toward foreigners, interpersonal relations, and more. One of our challenges is to offer methodological guidance for exploring why reforms in some contexts, countries, and periods have been more successful than in others.

As a prelude to developing the foregoing points, I shall introduce and critique two works that, though impressive in many respects and justifiably influential, suffer from the two fallacies named above. Of these two works, the first exemplifies the strictly materialist approach to the study of civilizational economic performance. The second exemplifies a soft materialist approach: the view that although culture can matter in practice, its economic effects are far more muted than often thought. These brief critiques will be followed by a detailed contrast of culturalist and materialist approaches, with a focus on why an integrative approach that straddles the material and cultural domains has much more explanatory power in relation to civilizational performance. The rest of the article will focus on civilizational analysis, including the identification of mechanisms underlying broad observed trends. Along the way, I shall relate the systemic approach advocated here to methodological works that promote similar, or complementary approaches.

2. Uses and abuses of linear analysis

As an example of a strictly materialist, and therefore blatantly linear, analysis of civilizational performance, we shall consider Maxime Rodinson's *Islam and Capitalism*, which holds that the economic fortunes of the world's Muslims have had

[2] Smith's (1776/1937) observations about the social benefits of personal profit seeking and those of Weber (1904–1905/1958a) on the economic by-products of the Protestant ethic are among the most influential classic contributions. For later applications, see Merton (1936) and Lal (1998). The last source focuses on secondary consequences that contributed to major trends in global history.

[3] Hayek (1973–1979, especially chaps. 3, 9, 11, 18) expounds on the political consequences of this tendency to overlook the secondary effects of policies.

[4] Hirschman (1991) shows that conservatives of various stripes invoke the specter of such possibilities to block social transformations. That a mechanism serves rhetorical functions is consistent, of course, with its existence.

nothing to do with Islam per se. Islam was compatible from the start with free exchange, it reports. More controversially, it claims that Islamic teachings have had scant influence on the evolution of Muslim economic life.

Like all major religions, Islam provided a vast reservoir of principles, commandments, and precedents from which anyone with imagination could pick and choose to support practically any economic agenda or behavior. If the Middle East failed to develop the institutions of modern capitalism from within, Rodinson (1966/1972) infers from the richness and heterogeneity of Islamic traditions, the reason must lie in factors divorced from religion. One must look to factors controlling the distribution of resources and power and to incentives for collective action. Islam, he says, served merely as a veil for political and economic interests. It helped to legitimate privileges and inequalities without contributing to their emergence or preservation. This interpretation is unmistakably materialist. Indeed, Rodinson adheres consciously to the Marxian base-superstructure distinction.

To support his case, Rodinson considers several economic patterns, among them financial practices. In its strict interpretation, he observes, classical Islamic law requires every loan to be free of interest. Although this ban on interest is justified on the basis of the Qur'an, what the Qur'an explicitly prohibits is *ribā*, an ancient Arabian practice whereby the debt of a defaulter was compounded. Commonly resulting in the borrower's enslavement, *ribā* was a potent source of discord (Rahman, 1964; Kuran, 2005, pp. 595–96). Nevertheless, the view that the Qur'an prohibits all interest gained currency.

However, the belief that Islam bans interest has never kept Muslims from borrowing and lending at interest. In the early Islamic centuries, Rodinson documents, interest-based loans were commonly advanced through casuistical methods akin to those used in medieval Europe to evade Christian usury laws.[5] From this finding he infers that Islam was merely a nuisance to financial development. Although its legal stratagems complicated financial practices, he says, none prevented capital owners from earning a return or individuals from borrowing.

Rodinson's work discredits culturalist accounts that equate Islamic financial teachings with Muslim financial practices.[6] It makes a valuable contribution by documenting that even widely accepted religious rules may be circumvented where they interfere with economic goals. But does it really show that the Islamic interest ban was inconsequential for economic evolution? In principle, the ban might have had side effects of far greater importance than its immediate and direct effects.

In regions under Islamic law, and thus subject to a formal ban, financial development differed from paths taken in places with liberalized financial attitudes. By the middle of the second millennium western Europe was well on its way to a consensus on a narrow interpretation of the Biblical prohibition of usury. Among Muslims the dominant view remained that all forms of interest are sinful. If the direct effects of this divergence were negligible, the indirect effects had cascading implications for relative economic performance.

Consider accounting practices. In the mercantile states of Italy, and then elsewhere in Europe, the freedom to deal in interest contributed to making financial transactions transparent; and, in turn, that transparency stimulated the development of increasingly sophisticated accounting methods. Thus, it is in the West that double-entry bookkeeping spread.[7] By facilitating communication and coordination among investors, managers, and financiers, a new collective practice paved the way for the modern firm. Meanwhile, in the Middle East, the deliberate opaqueness of financial transactions discouraged written contracts, limiting the need for developing advanced accounting conventions. The persistence of a largely oral contracting culture and the concomitant lack of standardization in accounting contributed to keeping economic enterprises small and ephemeral.

By no means were restrictive attitudes toward interest the sole cause of the lag in organizational modernization.,[8] Nevertheless, the Middle East's failure to narrow the scope of the Islamic "interest ban" had organizational consequences that became critical to relative economic performance when technological advances made it advantageous to pool large amounts of capital within huge organizations. If the Middle East's first banks were founded by westerners operating under foreign laws, a basic reason lies in the region's failure to make financial transactions transparent within Islamic law, its indigenous legal system. Hence, religion was a factor in the region's economic trajectory. Although economic incentives led generations of Muslims to circumvent Islamic financial restrictions, those very acts of evasion distorted financial development.

Like any account that splits social variables into two hierarchical categories, an autonomous base and a subservient superstructure, Rodinson's work suffers from the misperception that every causal series must have a first term that is strictly material. This misperception is, of course, the fallacy of absolute priority. In focusing on how economic incentives trump religion and mold the practice of religious law, *Islam and Capitalism* disregards effects in the opposite direction, from religion and religious law to economic incentives.

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[5] For example, the borrower would simultaneously purchase from the lender a good at a price inflated by a "service charge"; by mutual agreement, payment for the good was deferred. Empirical studies of more recent periods show, in the same vein, that financial contracts involving thinly veiled interest payments were routinely registered in Islamic courts and enforced by state-appointed judicial functionaries. The following court cases offer examples: Istanbul court register no. 9, case 197b/3 (1662); Istanbul court register no. 22, cases 94b/1, 109b/2 (1695); and Galata court register no. 145, case 116b/1 (1690). For further evidence on the evasion of the interest ban, see Khan (1929) and Kuran (2005).

[6] Since the publication of *Islam and Capitalism* this conflation has been particularly salient in Islamist discourses. Siddiqi (1973), who presumes that early Muslims generally avoided interest, offers an example. Although non-Islamist scholars generally distinguish between doctrine and practice, the impression that Rodinson discredited lives on in popular discourses. Reputable journalists with superficial knowledge about Islam are shocked to hear that throughout Islamic history most Muslims have dealt in interest as a matter of course.

[7] Although double-entry bookkeeping is known to have emerged in other places, too, it is in fifteenth-century Italy that the method first found fertile ground.

[8] See Kuran (2001, 2003) for complementary mechanisms.

The limitations of *Islam and Capitalism* are rooted also in its focus on primary and intended consequences. Rodinson goes no further than whether the Islamic interest ban achieved its intended purpose. Finding that the ban was commonly circumvented, he infers that it could not have affected economic development. In neglecting to inquire into the dynamic paths blocked through the use of legal stratagems, he thus commits also the fallacy of overlooking secondary consequences.

In sum, Rodinson's strictly materialist interpretation of institutional economic history fails to capture the institutional dynamics that led to economic underdevelopment because it overlooks both side effects and the constraints rooted in culture. In spite of these shortcomings, it is a useful work. For one thing, in demonstrating the interest ban's ineffectiveness, it rules out one of the mechanisms by which Islam might have caused economic backwardness.[9] Such a negative result should spur researchers to look elsewhere for causes of the Middle East's economic retardation. For another, in documenting the methods that pre-modern Muslims used to circumvent the ban on interest, it provides clues regarding the social mechanisms responsible for making the Middle East an economic laggard.

3. Seeds of trouble in records of success

The fallacies in question also afflict scholarship aimed merely at exploring the workings of the Middle Eastern economy without focusing on religion. In highlighting documented successes, various studies disregard the evolutionary paths that those very successes precluded. Inadvertently, therefore, their interpretations sow confusion about broader historical matters by hindering understanding of subsequent developments.

The point may be illustrated through a well-researched, and in many ways admirably instructive, biography of Ismail Abu Taqiyya, an Egyptian merchant who was active between 1580 and 1625. At the time, the use of coffee as a beverage was spreading in the region and demand for refined sugar was growing rapidly. Displaying remarkable entrepreneurial skills, Abu Taqiyya became a major supplier of coffee to Egypt and sugar to much of the eastern Mediterranean. Hanna (1998, p. 59) writes about how the Islamic legal system allowed Abu Taqiyya to exploit commercial opportunities. Describing his shining career, she claims that the prevailing legal system did not keep him from carrying out business. What she actually documents is that over his career Abu Taqiyya formed thousands of partnerships under Islamic law. She thus establishes that in the early seventeenth century a Middle Eastern entrepreneur could prosper without relying on foreign institutions simply by exploiting his own society's institutions.

It is the inferences drawn in passing that are open to question. In inferring from Abu Taqiyya's successes that Islamic institutions adequately supported economic activity, Hanna gives the impression that they could not have contributed to the Middle East's subsequent loss of economic stature. In fact, as Abu Taqiyya was building his fortune, signs of Egypt's looming retardation had already emerged. The organizational possibilities open to Egyptian merchants of the seventeenth century encompassed nothing more complex than temporary partnerships. Abu Taqiyya and his many partners could not pool resources within joint-stock companies resembling the Levant Company of the English traders already active in the eastern Mediterranean. Unlike his western contemporaries, a native Egyptian merchant could not designate a single child to take over his commercial affairs after his death.

At the time, the prevailing differences in organizational scale and longevity did not amount to a major handicap for the Middle East. However, eventually they enabled the West to dominate the global economy. The West developed organizational means to exploit emerging technologies of mass production. Other civilizations became organizational laggards and, beginning in the nineteenth century, eventually organizational imitators to improve their economic performance.

Just as Rodinson disproved that Islam has blocked the use of interest, so Hanna successfully discredits the claims, common in culturalist writings, that Islam is hostile to commerce, discourages risk taking, and promotes fatalistic attitudes inimical to business. Without denying that Islamic law could have mattered, she holds that in the period she considered it did not. Her approach amounts to soft materialism, as distinct from Rodinson's strict materialism. But does her biography really show that religion, or culture in general, did not matter to the economic trajectory of Islamic civilization?

Although Abu Taqiyya was indeed a tireless entrepreneur who expanded markets by taking calculated risks, his exploits excluded the development of new organizational forms. The Islamic contractual forms through which he pooled resources with others limited the opportunities of his descendants. Hence, certain obstacles to economic development are evident in Hanna's own research. Another clue to later problems lies in the range of Hanna's primary sources. Unable to find a private archive of documents related to her subject's professional life, she relied exclusively on transcripts of court cases in which Abu Taqiyya was a litigant or witness. Evidently he operated within a largely oral commercial culture and did not enter into complex or long-term contracts that would have necessitated an archiving system. Hanna's work illustrates, then, that the region was failing to develop a business culture conducive to the organizational forms that would prove vital to industrialization.

In contrast to Rodinson, Hanna does not seek to advance the methodology of investigating the effects of cultural traits. Her purpose is neither to debate whether Islam has mattered to economic performance nor to test competing culturalist and materialist hypotheses with regard to the Middle East's economic development. Nevertheless, she takes Abu Taqiyya's record to imply that Islamic law could not have hindered business in the Middle East. In reaching this conclusion, she abstracts,

[9] Had Middle Eastern societies actually enforced the presumed ban on interest, their financial markets would have remained primitive even by medieval standards. Hence, the ban would have ranked among the direct causes of economic underperformance.

of course, from the secondary consequences of the institutions under which Abu Taqiyya operated. She misses the seeds of trouble buried in the commercial patterns that she describes elegantly.

It bears re-emphasis that Hanna's empirical findings, like those of Rodinson, contribute to the study of links between Islam and economic performance. They establish that Islamic institutions could support production and commerce at a respectable scale by pre-industrial standards. They offer valuable clues to anyone who tries in earnest to make sense of why the Islamic world became underdeveloped. They even suggest what may have gone wrong elsewhere, for instance, in India and China. It is only her interpretations concerning the commercial possibilities provided by Islam, in other words by the cultural realm, that appear simplistic and misleading.

4. Materialism vs. culturalism

The argument that culture in general, or religion in particular, is essentially irrelevant to economic development is not limited to Middle Eastern or Islamic studies. Some scholars claim that South and East Asia fell behind mainly because Europeans used American silver to subordinate once flourishing economies (Frank, 1998; Bose, 1991). China became underdeveloped, others propose, because of geography and natural resources: Europe could extract coal relatively cheaply, and the primary products of the Americas were relatively less useful to China (Pomeranz, 2000). Such materialist accounts put little weight, if any, on factors commonly considered cultural. Just as many Ottomanists dismiss the possibility of links between economic development and Islam, many Indologists disregard the lasting influences of the caste system, and many Sinologists the impact of the Chinese conceptions of the ideal civil servant.[10]

Only a shrinking minority of the materialist scholars who eschew cultural factors consider themselves Marxists, yet most accept, at some level, Karl Marx's distinction between the "base" and "superstructure" of a social system. Marxian historical materialism treats "relations of production" as the engine of history. Societies advance, it holds, through the adoption of more powerful means to control and transform nature. Communal bonds, cultural identities, ideologies, religions, and, for some scholars, even laws are epiphenomena that reflect relations of production. Whereas changes in productive forces may transform them, they themselves have no reciprocal effects on relations of production. In other words, causal effects go from base to superstructure, never the other way around.[11]

Even materialist accounts of history are compatible with the view that cultural traits are among the defining characteristics of civilizations. Middle Eastern specialists who subscribe to materialist accounts of history readily place religious life among the factors that differentiate early modern Egypt from coeval India or France. They agree, too, that in the Middle East Islam has served as an overarching source of identity and object of loyalty. Few of them object to treating Islam as a key element of Middle Eastern or Islamic civilization, provided the economic system is relegated to a compartment of its own, effectively a "material" compartment governed by the exigencies of production and trade and thus isolated from "culture." Thus, Rodinson and Hanna assert not that Islamic doctrines are irrelevant to social life in general, only that they have a negligible impact on basic economic trends and indicators.

Materialist interpretations of economic history may be contrasted with interpretations that treat cultural traits as key determinants of civilizational economic fortunes. There are works that focus on how religions differ in the extent to which they promote a work ethic conducive to economic development. Other works draw links between religion and labor mobility. Max Weber's seminal writings accord religious beliefs such as the Calvinist belief in predestination, Islamic fatalism, Buddhist escapism, and the Hindu belief in the transmigration of souls central roles in the economic divergence of the second millennium (Weber, 1904–1905/1958a, 1916–1917/1958b, 1956/1978). In the same vein, modernization theorists of the mid-twentieth century took it for granted that religions other than Christianity were essentially incompatible with modern capitalism. They wrote about the religious reinterpretations, ideological changes, and attitudinal transformations ostensibly necessary for underdeveloped societies to catch up with the West (Lerner, 1958; Inkeles, 1975; Adelman and Morris, 1973). Recent years have brought widely read culturalist treatises that identify cognitive and attitudinal factors as critical to economic development.[12] Although less popular than materialist works within academia, they resonate with the broader educated public.

Culturalist accounts of social evolution agree with materialist accounts that certain components of a social system will develop autonomously. They differ only in what they consider immune to changes elsewhere in the system. Both polar approaches neglect feedback effects and unintended consequences that are critical to understanding long-term economic development.

To repeat, these inadequacies of the polar approaches as tools for elucidating the differences among civilizational trajectories do not negate the usefulness of investigations limited to unidirectional relationships. Especially over short periods, much can be learned from focusing on relationships in one particular direction, provided one avoids overgeneralizations. The longer the time period, the more problematic it becomes to limit analysis to unidirectional relationships that mask feedback loops. Over the long run, every important variable influences every other, and the effects may cross the presumed

[10] Goldstone (2002) synthesizes this class of arguments. For a critique of currently fashionable materialist approaches to global history, see Bryant (2006).

[11] For an interpretation of the primacy that Marx gives to relations of production, see Elster (1985, pp. 267–272).

[12] Landes (1998), who sometimes ascribes some weight also to geography and natural resources, offers an example. Jones (2006) critiques culturalist interpretations of global history.

"cultural–material" divide. Thus, in studying the economic performance of civilizations over many centuries, the analytical challenge is not to pinpoint unidirectional causal relationships. Rather, it is to identify the dynamics of systems involving clusters of variables. Although effects in one direction may work faster or carry greater force than the counter-effects, the base-superstructure distinction has no practical value.

5. Identifying civilizational success and failure

People standing atop Mount Catherine, Egypt's highest point, feel they are at the peak of the world. In fact, Mount Everest stands three times taller. The illusion stems, of course, from the shape of the earth, which limits individual horizons. The erroneous interpretations identified in earlier sections (the alleged irrelevance of Islam to financial development, the presumed optimality of Islamic contract law) stem from analogous methodological constraints. Each claim is too general in relation to the supporting analysis. The neglect of secondary consequences causes local optima to be treated as global optima and static efficiency to be equated with dynamic efficiency.

This neglect, evident even in high-caliber works such as those just critiqued, tends to be shared by subjects of historical inquiries. The subjects of historians are individuals who were themselves bounded in their capacity to acquire, store, retrieve, and process information.[13] Inevitably, therefore, their choices had consequences that they themselves did not intend and could not possibly have anticipated. Basing their decisions on necessarily partial models of their environment, they achieved outcomes that would have seemed globally optimal, when in fact they were merely local optima: hilltops surrounded, distances away, by tall mountain ranges. For centuries on end, Indians, Chinese, and Middle Easterners lacked awareness of the unfolding global process of economic divergence. Thus, the borrowers, lenders, merchants, and producers who populate the narratives of Rodinson and Hanna did not know that their economic choices were contributing to their region's organizational retardation. None of these groups left analytical accounts that offer modern scholars clues about the unfolding difficulties.

However, the illusions of historical subjects need not prevent social scientists from identifying, retrospectively, emerging opportunities and troubles. Interpreters of historical data, precisely because they know where the world was headed, can spot dynamic failures linked to static successes. They may also recognize future dangers inherent in immediate solutions. They can avoid misinterpretations by familiarizing themselves with the fundamental transformations that cumulatively brought about the modern economy. Knowing the transformations and their logic will help them identify whether outcomes that look impressive by the standards of a particular locality or period affected economic modernization.

There is a growing literature on the fundamentals of the economic modernization process.[14] It focuses on advances in the means of economic organization as measured by the corresponding opportunities for trade, production, and consumption. It will be useful here to outline one set of pertinent findings to illustrate how organizational forms may have mattered. In the course of economic development, Cooter and Schaefer (2008) observe, economic cooperation undergoes several stages. The most primitive involves "relational cooperation": the pooling of resources among family and friends. Provided basic property rights exist, relational cooperation is easily sustained through the trust that develops within tightly knit communities. Its limitation is that business stays small and local. A more advanced form is "private cooperation," which involves business relationships within larger networks. In addition to third-party enforcement of property rights, it requires a law of contracts to support financial markets. Examples of institutions supportive of private cooperation include the courts that enforced Islamic contract law, the mercantile courts of the Champagne Fairs, the Hanseatic League, and the inter-caste councils of premodern India. Most pre-industrial civilizations found ways to promote private finance.

The main limitation of private finance is that investors retain substantial control over how borrowers use their capital. It does not leave the management of capital to specialists.[15] Under "public cooperation," a third form of cooperation, investors do exactly that. Protecting the investments of such investors against managerial fraud requires more than property and contract law. It requires laws of corporations and securities. Although the mix of relational, private, and public cooperation varies across today's prosperous countries, every leading economy boasts institutions that enable the mobilization of capital in amounts inconceivable under private or relational finance.

A plethora of observed institutions solve problems of cooperation. If the underlying problems are defined narrowly enough, the corresponding solutions will seem optimal. Thus, the legal system that sustained Abu Taqiyya's exploits would have been optimal had he lacked reasons to use commercial organizations more complex or more durable than Islamic partnerships. If he or his descendants could have benefited from organizational longevity, the same legal system will seem suboptimal globally. In fact, largely because of inheritance rules designed to spread wealth, Abu Taqiyya's business empire, based on myriads of short-term contracts, dissipated within a decade of his death. Hence, given the direction of the global economy, the legal system that served Abu Taqiyya was anything but optimal. It led to a decline in the global economic standing of the Middle East, and Islamic civilization in general. It also set the stage for defensive institutional transplants to make up for

[13] The concept of "bounded rationality" goes back to Simon (1957). On its methodological implications, see Gigerenzer and Selten (Eds., 1999). Hayek (1973–1979) explores how bounded rationality affects social evolution.

[14] For a few of the prominent contributions, see Lamoreaux (2004), North (2005), Greif (2006), and Hansmann et al. (2006).

[15] Various forms of medieval partnerships, including the Islamic *mudāraba* and the Latin *commenda*, gave active partners some discretion over the capital invested by passive partners. However, ordinarily it was decided jointly what exchanges the active partners would pursue. In relation to modern investors, the passive members of medieval partnerships knew more about, and had more control over, the utilization of their capital.

lost time. Though statically efficient in relation to Abu Taqiyya's known objectives, the Islamic legal system was dynamically inefficient.

A statically efficient economic choice could never cause dynamic inefficiency if switching institutions was always costless. In fact, institutional change imposes costs dependent on past trajectories. Confronted with the same challenges, two societies may respond differently because of historic contingencies that affect the costs of particular options. It was in the late sixteenth century, as Abu Taqiyya was building his reputation, that durable companies with dozens, if not hundreds, of shareholders were spearheading the expansion of global trade. The early overseas companies originated in the West, where merchants had a long history of forming effectively permanent organizations to pursue common interests.[16] Egyptian long-distance traders of the period had no formal organizations, not even guilds. Hence, they were ill-prepared for forming large and durable global trading companies.

Might Abu Taqiyya have sensed that durable companies, what we now call firms, would play a growing role in cross-Mediterranean trade? We have no way of knowing. If he did and wanted to form a durable company himself, his task would have been harder than that of the English merchants who formed the Levant company. He would have had to make bigger institutional leaps.

By and large, civilizations that fell behind in organizational modernization remain economic laggards. Except for East Asia, the late modernizers have stayed behind the regions that initiated the modern economy. Moreover, they have had to modernize through imitation and under duress.

6. The systemic approach to civilizational analysis

The gist of the argument thus far is that historical works replete with new facts and clever insights frequently promote interpretations that overlook social processes of great significance. Feedback effects and secondary consequences are missed, or brushed aside as trivial, because of aversion to crossing disciplinary boundaries, or ideological commitment, or simply lack of methodological rigor; and grand lessons are drawn from analyses limited in scope to a short period, or one sector, or one particular transformation, or first-order effects. Furthermore, distinctions among local and global optimality and between static and dynamic efficiency are blurred, resulting in exaggerated evaluations. Such errors are not harmless, for discourses on broad economic trends depend on focused empirical studies. Sowing confusion, unjustified inferences lead scholars down unpromising research paths.

In an ideal world, no causal claims would be made about historical trends without considering all possible interactions among every single factor that might have been relevant. In practice, even a very broad social study, one that incorporates multitudes of causal effects, necessarily involves simplifications. For the very reason that the subjects of historians had to be oblivious to many side effects of their actions, the feasible breadth of any given study is limited. One cannot bring everything that might have mattered, say, to China's economic trajectory in the second millennium even into a series of wide-ranging books completed over a lifetime. Whatever relationships a research project covers, it will necessarily exclude empirically important factors. However many feedback effects it recognizes, it will have to treat as exogenous certain trends that co-evolved with variables treated as endogenous.

Legitimate concerns about omitted variables and effects can be raised, then, about any investigation that links economic trends with social factors. For a causal explanation with a genuinely autonomous independent variable, one would have to fall back on geography or climate. Yet the fixity of these factors rules them out as determinants of civilizational dynamics and changing economic rankings. A stable climate cannot explain why China turned from economic leader to laggard. Geography cannot explain why the Islamic world conducted commerce under Islamic law for more than a millennium, only to undertake sweeping legal reforms involving the transplant of foreign commercial codes.

If an analysis aimed at elucidating a civilization's trajectory must include a restricted number of social variables, its conclusions will inevitably leave room for doubt. This is not a counsel for despair, because imperfection is a matter of degree. A person who cannot climb Mount Everest may manage to scale lesser mountains. If we define intellectual progress as broadening what is known and understood rather than solving every imaginable puzzle, there is no need to avoid the big questions of history. By the same token, to get as far as possible, we need to ponder about the right methodology. Specifically, we need to identify the most effective way to explore the determinants of broad trends.

To that end, I will propose five steps to guide researchers. None will come as a surprise to the many competent scholars (economists, historians, political scientists, sociologists, and others) who follow these steps anyway, often instinctively. They are meant, on the one hand, to enlarge the community of scholars producing new insights, and, on the other, to reduce the "noise" generated by claims lacking empirical or theoretical foundation.

There is a body of research concerned explicitly with the methodology of interpreting civilizational trajectories. Works by Greif (2006), North (2005), Aoki (2001), Platteau (2000), and Lal (1998) are among the recent contributions that offer pertinent and highly valuable methodological lessons through mixes of abstraction and application. All treat economies as systems that consist of co-evolving variables linked through bidirectional relationships. Students of civilizations have much to learn also from methodological works on social mechanisms, including those of Elster (1989) and Hedström and

[16] Rulers supported these organizations in the hope of appropriating some of their rents through taxation. See Wood (1935), Gelderblom and Jonker (2004), and Harris (2005).

Swedberg (1998). A social mechanism is usually more than a causal relationship between a set of variables. It may incorporate feedback effects that form a system. However, it is less general than a "social law" in that it may represent a constellation of forces unique to a place and time. Although the concerns of the social mechanism literature transcend the illumination of major historical trends, it makes clear that the study of civilizations can benefit from a systemic approach.[17] There are other valuable methodological contributions. However, the cited sources offer a solid springboard to anyone wishing to conduct civilizational research that will stand scrutiny.

The second step is to recognize that in every domain of history exemplary scholars have already laid some of the groundwork. Researchers exploring why India became one of the laggards, or why in the late twentieth century Africa performed worse than any other continent, need not start from scratch. Classifying and contrasting the existing explanations will alert them to already identified trends, relationships, mechanisms, and puzzles. This may sound like an obvious point, for in every field new researchers are instructed to begin by surveying what is already known. It is critical, however, that the survey be conducted with an awareness of the steps to follow.

7. Isolating pertinent mechanisms

The next step launches the analysis. Its goal is to eliminate from consideration factors known to have varied greatly without any visible effect on outcomes to be explained. For a demonstration, suppose that we want to explain the trajectory of a particular society's commercial organization. The list of potentially relevant variables is immense. To name a few possibilities, it includes property rights, family structure, military organization, architectural fashions, average life spans, inheritance practices, and communication technologies.

Some of these can be excluded quickly by applying the principle just given. Architectural styles have varied greatly among regions with essentially identical organizational forms. Comparing medieval Venice and Genoa, or Tunis and Aleppo, establishes the point. In the fourteenth century building materials and conventions varied between each pair of cities, but there were no critical differences involving commercial organization. By the same token, certain variables can easily be identified as closely relevant on the basis of patterns reported in existing works. In Europe the average size of partnerships declined during the Black Death, recovering after the plague subsided (Hunt and Murray, 1999, pp. 154–155). We may infer that the life expectancy of commercial partners influenced the choice of organization. For another telling fact, the pre-modern commercial treaties that regulated trade between Europeans and Middle Easterners contained clauses on inheritance rights. Evidently merchants perceived a link between commercial profitability and inheritance practices. This suggests that they might have made organizational adaptations to the inheritance regimes of regions in which they conducted business.

Imagine, then, that we have isolated several factors that appear relevant to organizational choice. The fourth step of the research process is to identify the key social mechanisms that link the isolated factors. Data do not speak for themselves, so the task cannot be fulfilled inductively, merely by reproducing historical records. Models must be used to classify information, rank factors in importance, connect variables, define success and failure, in short, make sense of historical data. Most scholars deploy models implicitly, without pausing to outline a methodology. Others do so self-consciously, and they make a point of reporting their assumptions, inferences, and analytical principles. Explicitness offers several advantages. Facilitating comprehension and providing a check on inconsistencies, it allows researchers studying other places, contexts, or time periods to test the generality of causal claims.

At one level or another, generality is an objective of all social research. If we are trying to understand why some town's population is shrinking, a parsimonious account ("rising crime induces flight") is more instructive than a plethora of explanations, one for each departure ("Jim emigrated after his home was burglarized," "Leila left because the homeless people loitering around her store frightened customers," and so on). The larger the unit, the broader will be the generalizations. In civilizational research one looks for social mechanisms common to huge populations and in play for long periods. The objective is to identify mechanisms that illuminate multitudes of case studies involving numerous places. If an identified connection between a given set of inheritance practices and a specific organizational pattern holds across a large region, and for centuries on end, it may qualify as a core attribute of a civilization.

Once a mechanism is identified as a civilizational attribute, one proceeds to the fifth and final step of the inquiry: to determine whether the attribute relates to economic performance. Might the same mechanism have been at work in another civilization that performed measurably better or worse? Multiple outcomes can flow from the same mechanism.[18] A mechanism that links inheritance regimes with organizational development can elucidate why one regime facilitated organizational innovation while another hindered it. Discovering that the mechanism in question was operative in multiple civilizations, with diverse results, will suggest that it may be among the determinants of observed patterns of divergence. By contrast, if it turns out that the mechanism was inoperative in certain places, we may infer that fresh thinking is needed about what was critical to the economic divergence of civilizations.

The available data might allow one to determine only that different mechanisms were at work in different civilizations. Further research could then show several distinct mechanisms to be special cases, or sub-mechanisms, of a shared, deeper

[17] Exposés of common fallacies encountered in historical publications, such as those of Fischer (1971), complement these other literatures through abundant examples of logical errors committed in influential works.

[18] Consider the demand-supply relationship that governs price. If the relevant parameters differ, the resulting price, too, may differ.

mechanism. For reasons already given, it will never be possible to find a single set of mechanisms to explain all historical patterns, but broadening the generality of the employed mechanisms would amount to progress.

It bears repetition that distinguished researchers proceed through the foregoing five steps routinely, though often without articulating their methods of analysis. These steps accord with the philosophy of scientific progress identified with Lakatos (1977). Our understandings deepen, says Lakatos, as theories that explain n observations give way to ones that explain all n, plus more. The goal of scholarship is thus to integrate as many facts as possible. If mechanism M_2 explains everything M_1 does as well as some patterns that the latter leaves unexplained, it is preferable.[19] The process of elimination draws, of course, on comparative research.

The process of elimination is necessarily iterative. Just as identified mechanisms stimulate and guide empirical investigations, so new empirical findings support the discovery of new mechanisms at play and the modification, even the discarding, of mechanisms believed to have been operative (Greif, 2006, especially chap. 11). Historical information that spawns theoretical advances may come from anywhere. The fact that Abu Taqiyya's biographer found no private archive of her illustrious subject yields insights into the mechanisms responsible for the Middle East's economic underdevelopment. Apparently, in the early seventeenth century the region was at best at the start of the transition from personal to impersonal exchange, that is, from trade among people who can unleash communal sanctions on cheaters to trade among strangers able to enforce contracts only through specialized institutions of third-party enforcement. It is significant that in coeval Europe major merchants did leave elaborate archives. With that information, historians of the Middle East could ask why their own sources include far less documentation preserved by entities other than the state.[20] In turn, the Middle Eastern and European experiences could supply new clues to historians of Japan, China, and India.

Ordinarily one can identify multiple mechanisms likely to have contributed to a given outcome. Looking at the Middle East in the nineteenth century, one notices that it was underdeveloped not only organizationally but also technologically, militarily, and politically. Just as it lacked a law of corporations, its engineering schools were teaching globally outmoded technologies. Middle Eastern entrepreneurs acquired, then, multiple handicaps. Can these dimensions be ranked in terms of their contribution to underdevelopment or its persistence?

Physical production methods could be borrowed relatively easily. The machines of a mass production plant could be shipped from an industrializing country, along with technicians armed with the requisite know-how. Transplanting the organizational means to exploit the machines was bound to take more time. An efficient stock market requires an intricate legal system, various specialized occupations, and schools to train and certify appropriate professionals. It also requires the existence of norms that facilitate anonymous exchange by promoting generalized trust, in other words, trust that transcends ties based on kinship, ethnicity, religion, or region (Platteau, 2000, chap. 7; Fukuyama, 1995; Greif, 2006, chap. 9). By this logic, the absence of organized equity markets posed a greater obstacle to economic advancement than delays in mechanization. Although the region suffered from both technological and organizational handicaps, the latter were relatively more intractable.

There is a reason, then, to give analytic priority to institutional transformation. Analytic priority is not to be confused with absolute priority, which is the presumption, discredited here as a fallacy, that undergirds the strict forms of materialism and culturalism. To give analytic priority to one source of retardation over another is to recognize that it posed a relatively vexing social problem, not that the causal relationship between them was unidirectional. The Middle East's organizational and technological capacities co-evolved, with each influencing the other. On the one hand, the delay in developing technologies of mass production diminished incentives to develop permanent organizations commanding huge amounts of capital. On the other, organizational stagnation distorted incentives for technological innovation, because many advanced technologies can be exploited only through complex organizations. For reasons given, the vicious circle was easier to break through technological borrowing than through organizational transplants. Whereas machines could be imported in a matter of weeks, the task of overcoming organizational inertia was bound to take decades.

The foregoing logic does not rest on an a priori distinction between base and superstructure. A system consisting of interconnected mechanisms can be disturbed through any number of interventions. If some interventions are less effective or work more slowly than others, it is because they require the modification of a broader range of behaviors.

8. Civilizations as units of analysis and living organisms

The last observation may be rephrased in terms of institutional complementarity: the more significant the complementarities, the harder the intervention. Two institutions complement one another insofar as each enhances the usefulness of

[19] The sets of explained phenomena may overlap incompletely, with each mechanism illuminating phenomena that the other does not. In that case, there are no grounds to reject one decisively. This is a common situation in the social sciences, which is why we observe so many fruitless debates that go on ad nauseum.

[20] The famous Geniza documents of mainly the eleventh-thirteenth centuries, so named because they were found in the storeroom or "geniza" of a Cairo synagogue, constitute a major exception that proves the point. This geniza served as a repository of discarded writings. The court depositions, wills, partnership contracts, and business correspondence found therein were not meant to form a private archive. They ended up together to accommodate the Jewish belief that unneeded writings bearing the name of God should be laid to rest in a special location (Goitein, 1999, pp. 9–13). Since these documents had lost their usefulness, they were not expected to be consulted again. Accordingly, prior to their discovery in modern times, no one bothered to classify them. The Jewish merchants who appear in the these documents did business under Islamic or Jewish contract law. Neither was conducive to the formation of lasting business enterprises.

the other.[21] Standardized accounting and corporate law are complements in this sense. Accounting conventions are vital to the daily operations of a corporation; and the availability of a law of corporations boosts the value of those conventions.

In the presence of complementarities, successful reforms will involve clusters of institutional changes. Consider two civilizations: 1 and 2. In the first, institutions $A_1, B_1, \ldots, F_1$ all complement one another. A_1 is a set of organizational forms, B_1 an accounting convention, C_1 a court system, D_1 a set of schools for training judges, E_1 a banking network, and F_1 generalized trust, as opposed to trust limited to family and acquaintances.[22] All of these institutions have distinct counterparts in the second: $A_2, B_2, \ldots, F_2$. In the second civilization, the menu of organizations (A_2) is more limited than in civilization 1. Moreover, lack of trust in strangers induces individuals to exchange primarily with people known to them or their friends (F_2). Over time, let us say, the second civilization falls behind the first, and it becomes the conventional wisdom that substituting A_1 for A_2, along with C_1 for C_2, would catalyze a convergence process. The two reforms are carried out, so that the second civilization now has institutions A_1, B_2, C_1, D_2, E_2, and F_2. The transplanted institutions will not equalize economic performance instantly because their complements, which play a vital role in civilization 1, are absent in civilization 2.

Ever since states added economic modernization to their objectives, this scenario has been played out repeatedly all across the globe. An example from the nineteenth century must suffice. In the 1850s Turkey and Egypt launched reforms to enhance the global competitiveness of their merchants and financiers. Each adopted the French commercial code and established new secular commercial courts to adjudicate cases that Islamic courts were poorly equipped to handle. It took many decades for the new organizational forms introduced through these reforms to gain popularity. One reason lies in the teething problems of schools to train judges, another in the inexperience of appointees to the new tribunals. Yet another is that investors accustomed to personal exchange did not immediately warm up to organizational forms involving separation of ownership and control; the necessary generalized trust was lacking.[23]

In the preceding illustration, the entities were defined as "civilizations." Why not regions or states? What is gained by using a concept lacking a geographic or political referent? Britain and faraway New Zealand share many basic institutions, and their commonalities facilitate institutional transplants between them. Thus, traffic regulations developed in one country are easily imposed on the other. It is relatively harder to transplant British institutions to Egypt, which lies much closer, than to New Zealand. When traffic lights were introduced to Cairo, initially they were mostly ignored. For another example, British managers of multinational companies consider themselves in more familiar territory in New Zealand than in Egypt, as regards relationships with employees, customers, and the government. Managers posted in Cairo find local commercial norms significantly different from those to which they are accustomed. If Britain were to start ruling Egypt again, as it effectively did between 1882 and 1922, the differences would not disappear, at least not quickly.

The concept of a civilization is useful, then, precisely because it accommodates institutional commonalities that transcend political boundaries and geographic distance. Two regions, countries, or communities can be said to belong to separate civilizations if their basic institutions differ sufficiently to make institutional transplants across their boundaries substantially more problematic than transplants within. For analytical purposes, Great Britain and New Zealand may be treated as a single civilization because they have similar institutions.

The boundaries among civilizations are naturally fuzzy. Indeed, assigning social entities to civilizations is subject to greater imprecision than identifying which state controls Buenos Aires, or where Argentina ends and Brazil begins. In principle, moreover, states, regions, and peoples may move across civilizations. What defines a civilization are not immutable characteristics, as epitomized by Rudyard Kipling's 1895 couplet: "Oh, East is East, and West is West, and never the two shall meet." Although the concept is commonly used in reference to ostensibly fixed cultural characteristics, the complementarities among them are not insurmountable. The "West" used to be a shorthand for "western Christendom," thus excluding eastern Christians. With the expansion of the European Community, it has come to include areas of Europe dominated by eastern Christians.

Precisely because institutions are changeable, the differences among civilizations need not be fixed. Although Cairo's traffic still leaves much to be desired, its drivers now obey traffic signals more readily than they did just a quarter-century ago. The institutional mismatches generated by the mid-nineteenth century commercial reforms in Egypt and Turkey spurred further reforms that eventually overcame longstanding obstacles to forming large and complex organizations. Modern law schools started producing new judicial cadres, and accounting schools, clerks familiar with modern bookkeeping. Meanwhile, the emergence of local banking sectors supported enterprise growth through the facilitation of borrowing and capital pooling. Today, each country boasts private firms with tens of thousands of employees and assets measured in billions of dollars, magnitudes inconceivable under a traditional Islamic legal system.

Earlier I proposed that physical technologies are easier to alter than institutions. I can now add that differences in complementarities make some institutions more malleable than others. The track record of the Middle East suggests that it takes

[21] For related and fuller definitions, see Greif (2006, pp. 197, 207–208) and Aoki (2001, pp. 85–90, 225–228).

[22] Each of these elements is an institution in the sense of comprising self-enforcing regulations.

[23] On the adjustment problems experienced in these contexts, see Toprak (1995) and Black and Brown (Eds., 1992, chaps. 5, 12). By the standards of the most advanced countries, generalized trust remains low in the Middle East. The only predominantly Muslim country included in the World Values Survey of 1990–1993 was Turkey, and it registered a level of trust lower than all other countries in the sample of 43 countries, save Brazil (Inglehart et al., 1998, table V94). In more recent iterations of the survey, the percentage of people who would not like to have foreigners as neighbors turns out to be very high in most Muslim countries. This is another indicator of low general trust. On the latter finding, see Inglehart et al. (2007, Table 11.1).

less time to institute new accounting standards than to institute generalized trust. Whom we trust depends on family norms, education practices, and child rearing patterns, traits that reach deep into daily life and personal identity. For that reason, we cannot even identify every relevant complementarity, let alone know how to modify the pertinent set of traits. It is the slowest moving institutions (those most resistant to change, least understood, and hardest to distinguish or quantify) that the concept of civilization generally conjures up. Not all slow-moving institutions affect economic performance directly or significantly. Core civilizational traits include religious rituals and beliefs of little economic relevance in and of themselves, and some of these are highly resistant to change.

What matters here is twofold. First, institutions of immense economic significance vary in the degree to which they are modifiable. Secondly, institutions that are relatively resistant to change include traits that are generally treated as part of culture. This observation undermines the soft materialist thesis of Jones (2003, 2006), according to which religions and other cultural traits may slow down economic trends but not prevent desired economic activities for long. There is no basis for believing that every cultural trait is equally malleable, or that malleability is invariant to context. The mechanisms at play may differ, and some will support multiple social equilibria. Both of these facts point to complexities that soft materialism, like the extreme variants of materialism, disregards. The complexities that soft materialism overlooks include second-order effects that operate across many centuries. Hanna's assessment of Egyptian commercial life in the seventeenth century ignores the lack of incentives to develop organizational capabilities.

Differences in institutional flexibility may help to explain, perhaps, the second great divergence in economic performance that the world has witnessed over the past quarter-millennium: the leap in living standards that propelled Japan, and then several other East Asian countries, from the ranks of the economic laggards into those of the advanced countries. By the nineteenth century, all these countries had fallen way behind in living standards, partly because they were slow to develop, or adopt, modern market institutions. Like the countries of South Asia, Africa, the Middle East, Eastern Europe, and Latin America, they were subjected to top-down institutional reforms, and their entrepreneurs adopted foreign business tools and methods also on their own. If the transplants were more successful as measured by living standards, the reason may be that the slow-moving economic institutions of East Asia were already better suited to the modern global economy. In the World Values Survey of 1990–1993, the percentage of people saying "most people can be trusted" was substantially higher in East Asia than in all other groupings of late developing or underdeveloped countries (Inglehart et al., 1998, table V94; Inglehart, 1997, pp. 172–174.) For two of the three East Asian countries included, Japan and South Korea, the magnitudes may have reflected, in part, the effect of economic enrichment, rather than a cause. But in China, at the time poor even in relation to other underdeveloped countries, the percentage was around the mean of the advanced western countries.[24] Insofar as the operation of the modern economy depends on generalized interpersonal trust, the key to China's breathtaking advances may lie, then, in historical processes that made its people more trusting of strangers relative to those of other economic laggards.

9. Conclusions

The term civilization, we have seen, refers to a system of complementary social traits. The complementarities include, we have also seen, ones between elements of the "material" world and those belonging to "culture." If for no other reason, one should be deeply skeptical of both strictly "materialist" and strictly "culturalist" theories of long-term economic performance. It is easy to identify cultural traits shaped by material incentives and equally easy to find causalities running in the opposite direction. However, examples of unidirectional causality cannot come close to explaining the observed variations in civilizational economic performance. The mechanisms that explain the economic trajectories of civilizations involve causal relationships that cross the presumed material-cultural divide in both directions.

"Softened" polar approaches (softly materialist or softly culturalist) try to accommodate causalities in the opposite direction by allowing exceptions, but the problem is more basic than allowing bidirectional causality. There is no reason to suppose that one set of variables is necessarily more crucial in every context of importance to economic development. A cultural difference such as one involving religious practices could have cascading consequences for the institutional foundations of exchange. By the same token, a material difference such as one pertaining to exchange relationships might have long-term effects on the interpretation of religious texts and the power of the clergy. If the determinants of economic performance form a system composed of both material and cultural variables, no variable may be viewed as irrelevant to any other.

A more fundamental problem with the polar approaches is that traits themselves may stretch across the presumed divide. Trust offers a case in point. Anthropologists have long considered trust (societal, communal, ethnic, sectarian, professional) to be among the characteristics of culture. Their thick descriptions of social dynamics are often replete with observations concerning trust within and across subgroups. Trust happens to be essential to making markets work their wonders. As such, it is integral to economic performance.[25]

On that basis, many distinguished economists hold that economic privatization and liberalization programs should not be expected to yield equal results everywhere. In places where trust or other preconditions of efficient exchange are lacking, they observe, outcomes may disappoint. They also question the merits of liberalizing economically as fast as possible and

[24] In later years, the percentage of people saying they would not want to have foreigners as neighbors was lower in China than in most Muslim countries surveyed (Inglehart et al., 2007). This is another indicator of relatively high generalized trust.

[25] For additional examples of traits that belong to both material life and culture, see Rao and Walton (Eds., 2004).

in as many areas as possible. If some changes are easier to accomplish, an ordered approach may avoid perverse results and political reactions (Rodrik, 2006). The arguments offered in support of these critiques and proposals typically hinge on interactions among variables that "cultural studies" specialists readily treat as elements of "culture."

When students of global history argue that in some places impersonal exchange is relatively harder to institute or that the transition from private to public cooperation occurs relatively less smoothly, they too blur the distinction between cultural and material variables. The factors that they invoke to explain observed patterns include economic institutions embedded in religion or tradition. In systemic approaches these are seen as co-evolving with various other social variables, including ones widely treated as material or cultural. This lessens the analytic usefulness of positing such categories.

The last claim justifies an emphasis on interdisciplinary cooperation and fertilization in inquiries into civilizational patterns. If key variables cannot be classified as strictly economic, sociological, political, religious, or cultural, they cannot be the preserve of any single academic discipline. Although narrowly tailored studies conducted within established disciplines will continue to generate information vital to civilizational research, progress toward solving questions involving civilizational performance will require forays across disciplinary boundaries. These forays must be based on systemic thinking that takes account of institutional complementarities.

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