The Long Shadow of History

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**Abstract.** In societies around the world, history has shaped modern cultures and thereby had large effects on economic and social outcomes today. Shared mental models, which are an aspect of culture under-emphasized in economics, affect how members of a society perceive the world around them and what they want. They shape what people think of as ‘natural’ and their beliefs about how the world works. These mental models provide the cognitive foundations for institutions, which help to perpetuate the shared mental models. Ideas that arise and are adaptive at one point in time – e.g., that other people can’t be trusted, that citizens have little power, that women are ill-suited to the labor force – may become maladaptive once the environment changes. But history is not destiny: new events occur, individuals have agency, and policy can help introduce new mental models to a population. Our book in progress, *The other invisible hand: The power of culture to promote or stymie progress*, shows that taking account of shared mental models can help policymakers develop better, smarter interventions. These interventions, which take into account that individuals are enculturated, not fully rational, actors, change mental models by giving people new kinds of experiences. Such interventions have proven effective on an experimental basis and can be very cost-effective – unlike traditional interventions that must be sustained to achieve their effects, interventions that change mental models can be short-lived because cultural habits can be self-perpetuating. By “the other invisible hand” in our title, we mean the cultural repertoire of shared mental models that influence equilibrium outcomes of an economy. Like Adam Smith’s invisible hand, the “other hand” of culture is a coordinating force. But unlike the first invisible hand, this hand has no efficiency properties; it might promote progress or, alternatively, entrap people in poverty.

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There is a well-known cultural divide between northern and southern Italy. Whether from personal experience or portrayals in the media, many people associate southern Italy with dysfunctional bureaucracy, mafia rule, and behaviors and attitudes that can lead to poverty and violence.\footnote{The cultural divide was compellingly portrayed in the best-selling Neapolitan novels by Eliana Ferrante, turned into an HBO mini-series in 2019.} The culture of northern Italy, by contrast, is often associated with that of neighboring Austria and Switzerland; it brings to mind Italy’s fashion and automotive powerhouses. Why does this cultural divide exist? The question is particularly puzzling because major reforms in the 1970s—a new level of elected regional governments—were intended to narrow the North-South gap in well-being. The regional governments operated under identical formal rules. Yet far from homogenizing economic and social conditions, the new institutions “were themselves pulled ineluctably into conformity with those contrasting traditions” (Putnam et al. 1993, 145). Far from reforming the socioeconomic landscape of the South, the reforms were molded by it.

Italy is just one example among many of divergence between regions with similar economic opportunities (and we will return to it later in the chapter).—Looking around the world, it’s easy to see that economies are not converging to a single path of development, as a good deal of economics and social philosophy predicted. The point of this chapter is to show how history shapes the present by influencing how people think and what they want. History is about much more than the amount of physical capital (factories and infrastructure), human capital (how well-educated citizens are), natural capital (the environment), and the debt that a nation inherits from the past. Historical experiences also influence how people in a community see the world around them and what they value. Children are socialized into the ideas, stories, norms, and beliefs of their elders as well as by the social patterns created by institutions. In these ways, individuals absorb mental models about the world. These cultural mental models may persist, generation after generation. The tentacles of history, operating like the fingers of an invisible hand, may reach from the distant past to shape modern societies—sometimes in very helpful ways, and sometimes in very hurtful ways. The taken-for-granted nature of existing social patterns (Berger and Luckmann 1966) gives people the idea that how those around them see, think, and behave is ‘natural’, not based on social constructs that can be changed. The process through which history shapes us is not visible to the untrained eye. It tends to go
unrecognized by people subject to its influence. The power of social constructs has long been missed by economists, too (see, however, Greif and Mokyr 2017).

Beginning with the late 20th century, economists are embracing the fact acknowledged in all other social sciences that “history matters.” Recent research uses rigorous methods of scientific investigation to provide evidence of history’s long shadow and of the precise specific mechanisms through which history influences progress. We will discuss three kinds of forces in history that have had durable effects on the cultural mental models that predominate in a society: first, political events, such as the African slave trades and the formation of medieval city-states in Italy, which influence on trust and self-efficacy today; second, topography, such as the suitability of land for particular agricultural practices, which and their influence gender roles today (other chapters will examine how topography has influenced racial stereotypes and cooperative relations); and third, natural events of nature, such as the Black Plague, which led to the end of feudalism in the West. We will give evidence that a set of beliefs—for example, that most people can’t be trusted, or that women’s place is in the home—can emerge and be adaptive at one time in history and then persist in another era in which they are dysfunctional.

With its assumptions about “economic man,” standard economics misses out on these influences on social and economic well-being. Real individuals are not "economic man," who rationally updates his beliefs and adapts his behaviors to suit his environment and available information. And it is unreasonable to think of people as having ‘chosen’ their culture; if people were made conscious of all their options, they might choose something else.

But history is not destiny; new events occur, individuals have agency, and policy can influence how individuals understand the world around them. We can bend the arc of history.

In this sense, this chapter is an important link between Parts I-III and Part IV of this book: it presents research findings that show that taking account of history’s influence on our perceptions, beliefs, and desires makes it possible to develop better, smarter interventions. It can help policymakers anticipate that identical reforms may produce wildly varying results in places with different histories, as we’ll see when we return to the cultural divide in Italy. Our book in progress, The other invisible hand: The power of culture to promote or stymie progress, shows that mental models act like lenses on people’s perception and understanding. By the “other invisible hand,” we mean the cultural mental models that the environment activates. People are
enculturated and quasi-rational (an overview is Hoff and Stiglitz 2016). Novel interventions have proven effective on an experimental basis in influencing attitudes and behaviors in ways that make people much better off. The interventions can be very cost-effective: unlike traditional interventions that must be sustained to achieve their effects, interventions that change mental models can be short-lived.

A new focus on the historical roots of economic development

In a recent article in *Science*, the economist Nathan Nunn (2020) notes that a perfect predictor of the ranking of regional prosperity in 2000 is the ranking in 1800. This is a puzzle for economics, which has long predicted that in a globalized market, appropriate infusions of capital, technology, and skills would gradually close the per capita income gap between different regions. In line with this perspective, the economics of development has traditionally taken an *ahistorical* approach to explain economic outcomes, arguing at first that all that was needed to close the gap between poor countries and rich countries was to provide more capital and education to poor countries. The separate field of economic history did not relate historical events to present-day economic outcomes (Nunn 2009, 2020). This left economics with little power to explain the stubborn persistence of regional gaps in levels of development.

A new approach in economic history is now connecting contemporary economic outcomes to historical events and institutions. This approach matches modern-day outcomes—using data from surveys and experiments—with historical data, often from archival sources, to show how an historical event or institution influences attitudes and behavior today. Scholars distinguish causal relationships from correlations with techniques that mimic an experimental research design but use observational data from history (see the appendix to this book for more on this topic). The research seeks to understand the specific routes through which history exerts its influence and how policy makers can leverage these processes.

In this chapter, we look at several studies, chosen for their strong methodologies, where historical “accidents” created differences in the ideas and practices of a group—its internalized
culture—that were passed down across generations and that guide individuals’ cognition and behavior today. Four examples are central:

— The more slaves that were taken from an African country in the slave trades that ended in 1900, the greater the level of distrust today and, through that mechanism, the poorer the country is likely to be.

— Within Italy, a history as a self-governing city-state in the Middle Ages contributed to higher levels of civic capital and self-efficacy that today make regional and local governments much more effective and enable citizens to act collectively to solve common problems.

— In India, a history of an oppressive land tenure regime under colonialism impedes the ability of the elite and the masses to cooperate to get public investments from state governments that could greatly increase their crop yields, health, and literacy;

— Globally, where topography made it profitable to use the plough in past millennia, occupations were gendered—women at home, men in the field (since males have the upper body and grip strength to handle a plough), and these representations and norms lower female participation in the workforce and politics today.

In these and many other cases, history has shaped many beliefs and values that affect success in the modern world. Later chapters of the book will emphasize that sometimes the footprint of history is smaller or policy can change it. For instance, some countries emerged from years under the oppression of the Soviet Union with more vibrant economies and democracies than did others.

The ‘natural’ level of trust

As scholars have taken a deeper interest in the role that inherited beliefs, habits, and values play in development, one particular cultural trait often comes to the fore: trust. Trust can be broadly defined as a cooperative attitude towards others. It is often thought of as the glue that holds society together. Trust and trustworthiness underpin commercial transactions conducted over a period of time, since no contract can ever fully specify all possible future events and no relationship has been tested through every possible contingency. To trust is to make yourself vulnerable to others who could take advantage of you (Coleman 1990). If people seized most of
their opportunities to cheat, you would have only weak incentives to innovate, to accumulate physical capital, and to invest in specialized education. Economic systems would crumble (Arrow 1972), and social life would also suffer (Schilke, Reimann, and Cook 2021). Alexis de Tocqueville, a pioneer in the ‘old’ perspective in the social sciences to which this book returns, thought that to maintain a liberal society, interpersonal trust was probably the moral orientation that most needs to be diffused among people (see the discussion in Putnam, p. 89). He saw trust as an outgrowth of democratic participation that helped establish understanding and common interests among groups; he lamented (1856) that by historically granting tax and legal immunity to the aristocracy, France had severed it off from the rest of the population, who seemed destined to plunge the country repeatedly into despotism.2

There is now extensive cross-country evidence that trust is essential for good economic performance. Knack and Kiefer (1997) find that generalized trust and civic norms of cooperation are strongly related to growth in per capita income across all 29 market economies included in recent World Values Surveys. To measure trust, they used responses to this simple question: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?” To measure the strength of civic norms, they used responses to a series of questions about whether certain things can always, never, or sometimes be justified: for instance, claiming government benefits that you aren’t entitled to, cheating on taxes, and keeping money that you have found. An experiment shows that the responses really do capture generalized trust and trustworthiness: Wallets containing $50 in cash, names, and addresses were dropped in 26 cities in the US and Europe. The percentage of wallets with their contents intact that were returned in each country closely tracks the World Values Survey measures—with trust, the correlation is .67, and with the question about whether a person is justified to keep another person’s money that he finds, the correlation is .52. These are very high correlations. The association between trust and growth is intuitive: trust expands economic activity. Knack and Keefer find that trust is almost as strongly associated with growth as primary education is.

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2 One key way in which our perspective differs from Tocqueville’s turns on this determinism. While we aim to show that history can help explain the present, we emphasize that history is far from deterministic – political events, acts of nature, and intentional policy interventions are all capable of shaping the trajectory of a society.
But perhaps the level of trust does not explain economic development but rather, these cross-country results pick up influences on growth of a third factor—like the quality of institutions—that is associated with both economic development and trust. To address that problem, the economists Yann Algan and Pierre Cahuc (2010) find a measure of trust with intertemporal variation: the level of trust (as reported on US surveys) that individuals in the US have inherited from their forebears who immigrated from different countries at different dates. With that measure, it is possible to detect changes in trust in the country of origin. Algan and Cahuc trace back the level of inherited trust over the 20th century in 24 countries. They show that changes in inherited trust substantially affected changes in per capita income over the period 1935-2000.

Having established that trust affects economic growth, we next ask, Does remote history affect trust? Or do people in a given time and place quickly size up the situations they are in and update their beliefs? It turns out that history has a major effect on trust. We consider next two cases that show this—variations in Africa in the level of ‘slave exports’, and the presence or absence in history of a participatory government in regions of Italy.

*The African slave trades*

The African slave trades, which lasted from 1400-1900, were among the most consequential forces in recorded history to disrupt trust. The business of slave trading involved the largest amount of capital investment in the world in the 18th and 19th centuries. By 1850, Africa’s total population was only half of what it would have been had the slave trades not occurred (Nunn 2008, 142). Beyond the 12 million Africans brought to the Americas in the slave trades, it is likely that another six million were killed in the hunts associated with enslavement. The decimation of the population alone may have wrecked Africa’s ability to compete with the rest of the world at the dawn of the globalizing period (French 2021).

But the impact of the trades on trust is another important factor that impairs its growth today. The African slave trades turned members of a community against each other. Early in the slave trades, African states organized raids and warfare between villages to capture slaves, but later on, the source of most slaves changed: individuals kidnapped members of their own communities and sometimes even their own families, or they tricked them into boarding a slave
ship and sold them into slavery on the spot. The trades penetrated deep into the social fabric of many African societies. The trades gave people good reason to distrust even those closest to them.

Africans cooperated with the foreign slave traders because the constant threat of capture made people desperate to buy weapons to defend themselves. To buy a gun, they needed money. Often the only way to obtain the money was to kidnap someone and sell him to the slave traders. The result was a “gun-slave cycle”: insecurity and the risk of enslavement amplified each other and grew over time (Nunn 2008, 143). (Other cases in which fear led members of communities to turn on each other are the Stasi and Stalin’s gulags, discussed below.) In one small sample collected in the 1840s by a German missionary and linguist, 40% of slaves were taken by kidnapping; 20% were sold by siblings, spouses and other relatives, or friends; 16% entered slavery through the judicial system; and the rest (24%) were captured during wars (Nunn and Wantchekon, 3225). It is not known if these percentages are representative of the African slave trades, but historians have documented that each of these processes of enslavement occurred on a large scale (Nunn 2008, 144).

There is a sad similarity between the corruption of the judicial system by community leaders in Africa to obtain slaves, and a dynamic in the US South after the adoption of the 13th Amendment, which abolished slavery. In Africa, it became common to obtain slaves by falsely accusing others of crimes, and judicial penalties that had earlier taken other forms were converted to enslavement. Leaders could protect themselves and their communities from being raided for slaves by paying tributes in the form of slaves, which they obtained through the judicial system (sentencing convicts to enslavement). Such processes weakened pre-colonial political structures (Nunn 2008, 144). In the US South, local leaders also accused freedmen of crimes, and the judicial penalties entailed doing forced labor on White landowners’ plantations—a modern form of slavery. But an important difference between the corruption of the governance structures in Africa and the US South is that only in the former case did the corruption weaken states: the slave trades derailed the evolution of complex state systems that had emerged in parts of Africa in the pre-colonial period. In 1528, the King of Kongo (today the Democratic Republic of the Congo) wrote to Portugal complaining that
there are many traders in all corners of the country. They bring ruin to the country. Every day people are enslaved and kidnapped, even nobles, even members of the king’s own family. (Nunn 2008a, 143, who cites Vansina 1966, 52)

By the time the slave trades were brought to an end, small bands of slave raiders had replaced most of the governance structures in Africa that pre-existed the slave trades. Most of these bands were unable to develop into stable states, with an established system of succession (Nunn, 143-144).

Africa’s poor economic performance today was for a long time one of the largest puzzles in the field of development economics. In the year 2000, Africa had an average level of per capita income below $1,800, compared to $4,900 in the rest of the developing world. In his PhD thesis in economics, Nunn (2008a,b) provided a novel type of evidence to explain this gap. To do so, he collected data from extensive secondary sources and national archives that reported the ethnicities of slaves. He used this and other data to link each slave to a modern African country. His findings show that the greater the number of slave exports in history, the lower is a country’s per capita income today. Nunn (2008a,b) estimated the impact of ‘slave exports’ on each African country and then added that figure to each country’s actual per capita income. On this basis, he finds that if the slave trade had not occurred, the average annual per capita income of African countries would be between $2,700 and $5,200—that is, African countries might be on average at the same level as the rest of the developing world.

Nunn and the political economist Leonard Wantchekon (2011) connected the size of the slave trade from each country to the trust of Africans today. They drew on the 2005 Afrobarometer, which asks respondents how much they trust their relatives, neighbors,

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3 The data was, in general, carefully reported, since for the slave traders a lot was at stake: the ethnicity of a slave influenced his market value, and too many slaves from the same ethnic group in the hold of a slave ship created a large risk of rebellion, since the slaves, who vastly outnumbered the crew, would be able to communicate with each other.

4 Conditions in Africa that pre-existed the slave trades do not explain the link between slave exports and contemporary incomes: those parts of Africa that were initially the most developed supplied the largest number of slaves, since in those areas, because the market system was more developed than in other regions, the Europeans who came to Africa could most easily induce people to sell them slaves. As one check on the estimates, Nunn calculated the effect of slave exports on per capita income if the only reason that slave exports varied among countries was variation in the distance from the places that had high demand for slaves. Nunn got the same qualitative results as before: the shorter the distance, the greater the number of slave exports and the poorer the country today.
coethnics, and locally elected government council. Respondents choose one of four answers: not at all, just a little, somewhat, or a lot. Individuals belonging to ethnic groups heavily targeted by the slave trades are less trusting of others today (Nunn and Wantchekon 2011, 3222).

Individuals exhibit more trust in those closest to them (relatives) than those further from them; yet in the countries with lowest trust, 7% report that they don’t trust their relatives at all, and 18% report that they trust them only a little.

The effect of the slave trade on mistrust arises much more from the level of slave exports from an individual’s ethnic group than from the level of slave exports in the location in which he currently lives (3249). This suggests that a key influence on an individual’s beliefs are the beliefs of his cultural group, rather than the current situations he is in. This is consistent with the idea that a person accepts as truth many of the beliefs of his family and forebears; a person doesn’t have time to discover everything for himself; if he is in a low-trust area, he will surely feel better off not trusting. The shared experiences within the group shape the widely shared mental models of how the world works. The mental models are passed down across generations. Without generalized trust, it is hard for the group to build effective government institutions. As we write this chapter, a coup by the armed forces has just occurred in Burkina Faso. It is the second coup there in the past eight months and one of many other recent coups in West Africa.

Why has there been no opportunity in the intervening centuries for Africans to experience trust in some relationships and then build on it? We speculate that many factors may have played a role. The intervening era—a century—may be too short a period. The colonial regimes, which did not end till the mid-20th century, provided little scope for local participation in government and limited security of property rights. Perhaps most important, a history of political corruption erodes civic values. The economist Nicolas Ajzenman (2021) shows that following revelations of corruption by local officials in Mexico, a large increase in cheating occurred among Mexican high school students and persisted for over a year. The revelation of government cheating changed attitudes: compared to individuals interviewed right before the corruption was revealed, individuals interviewed right afterwards reported being more prone to think that cheating is necessary to succeed.
Stalin’s gulags

Many places in the world have been deeply scarred by violence (a survey is Cassan, Grosjean, White 2013). An example with a lot in common with the African slave trades is the system of forced labor camps in Russia, which peaked under Stalin’s rule (1929-1953). The camps took 20 million people into captivity and created an environment of extreme political repression (Nikolova et al. 2022).

A distinctive feature of that environment was the degree to which the authorities encouraged people to spy on one another. Soviet authorities criminalized many ordinary aspects of life, including certain thoughts and the lack of certain actions. They sent victims to the gulags based on accusations of anti-Soviet activity and failure to report such activity of others. A 1935 Community Party report documents a network of 27,650 resident police agents and an informant network of 270,000 individuals (Shearer 2004, in Nikolova et al). Based on the word of one person—a spouse, neighbor, or colleague—a person could be taken in the middle of the night. In this environment, people had an incentive to report on their neighbors, teachers, even spouses to avoid repression and signal party loyalty. Because the smallest action could be interpreted as dissent and lead to one’s arrest, “mistrusting others was an essential survival strategy” (p. 4).

Does this infamous history affect modern day trust within the former Soviet Union? Milena Nikolova and her colleagues combined contemporary survey data with information on the location of the gulags to answer the question. They show that living near a site of past repression created an enduring culture of mistrust. A comparison of people living within 10 km of a former gulag and those living farther away shows that the former are substantially more likely to report either “complete distrust” or “some distrust” of others and less likely to express “some trust” or “complete trust” of others. In particular, proximity to a gulag is strongly associated with distrust of one’s neighbors but not distrust of foreigners and people one meets for the first time – consistent with the political situation under Stalin’s regime. Overall, the mean value of trust in others is 2.9 on a scale of 1-5. At this level, an individual living within 10 km of a gulag would have 3.8% less trust on average than his counterpart living more than 10 km away. The authors argue that although these estimates are small in magnitude, they are economically

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5 Living within 30, 50, or 100km of a former gulag site are likewise linked with distrust.
meaningful given that they have persisted for over half a century – notably, the effects are stronger where camps closed down more recently. Residency near a gulag also influences some (though not all) forms of civic engagement: living within 10 km of a former gulag is associated with lower levels of voting, socializing with friends and family, and membership in political parties.6

The literature on trust makes a distinction between trust in people (‘generalized trust’) such as that reported above, and trust in institutions such as the government, courts, police, hospitals, and the like (‘institutional trust’). While the theoretical and empirical links between these concepts are difficult to disentangle, both are important for society. Beyond its impact on generalized trust, proximity to a former gulag also leads to a mistrust of almost all of the institutions associated with the horror of Stalin’s repression (e.g., the local government, courts, political parties, police and army). However, it does not affect trust of non-state actors that were either non-existent during Stalin’s time or unassociated with terror (e.g., banks, foreign investors, NGOs, trade unions and religious organizations).

The gulags ended half a century ago, yet their legacy of mistrust continues. It is also interesting to consider whether the former Soviet Union’s long history of political repression, neighborly spying, and lack of a normal market economy have had more extensive effects on trust than those just described. Compared to other countries at similar income levels, contemporary Russia has about average generalized trust and trust in national government7, but trust in organizations is abysmally low. For example, in their annual trust barometer survey conducted in 2022, the global consulting firm Edelman found that Russia ranks dead last among 28 countries in an index measuring citizens’ average trust in NGOs, business, government and media.8 The gulags were a “lasting symbol of repression” (Nikolova et al, p. 13) that made the horrors of the totalitarian past more salient and visible to those living nearby. But the shadow of

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6 It does not affect membership in civic groups or engaging in collective action (such as participating in a strike, demonstration, or signing a petition).
7 https://ourworldindata.org/trust#country-specific-surveys
Russia’s history may extend well beyond these areas, making low trust the ‘natural’ attitude to adopt towards others—family, friends, neighbors, and many aspects of government.

The ‘natural’ level of civic community

*Northern versus southern Italy*

We return to the issue of civic culture, including attempts to create participatory democratic local governments. We begin with the case of Italy. As mentioned earlier, it is a commonplace that a cultural divide exists between the North and the South. Putnam (1993, 12) ran an experiment in 1983 in which Italians sent letters to three major departments of regional governments to request information about (fictitious) problems that were within the jurisdiction of each of the departments. In the most efficient regional governments, which were all in the North, two of the three inquiries received careful replies within a week and in the third case it required a single phone call. In the least efficient regions (all in the South), none of the mailed inquiries received a reply, and two of the three required many telephone calls over many weeks and a personal visit before they were addressed. A funny story once reported in *The New York Times* is that when a government office in southern Italy cracked down on worker absenteeism, it discovered that there were too few chairs to permit all the staff to sit down to do their work. ⁹

The political scientist Robert Putnam and his colleagues brought rigor to the study of the Italian cultural divide and to political culture, in general, with their landmark book, *Making Democracy Work* (1993). They asked why governments sometimes do and sometimes do not serve the public interest. They examined this question in the aftermath of a rare natural

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⁹ Putnam and his colleagues give the following anecdote on two regional governments. At the headquarters of Puglia, a region in the heel of the boot of the Italian peninsula, there is an obscure entry to an office with ghostly rows of empty desks since the staff are protected by a rampant spoils system and don’t need to show up. In contrast, in Bologna the glass-walled regional government headquarters looks like a high-tech firm, and officials may address people’s problems by calling up computerized data base on regional policies. The activities of this regional government are visible in dozens of day care center, industrial parks, and vocational training sites. Yet the two regional governments have identical constitutional mandates and funds provided by the national government.
experiment: in the 1970s, a national law in Italy created from scratch 15 regional governments with identical formal rules and transferred to them resources and major responsibilities. The borders of the new governments closely corresponded to the territories of historic regions (such as Tuscany and Lombardy) (5).

Despite the intention, the creation of identical regional government institutions did not standardize government performance across the regions. Many of the regional governments in the North became strong, responsive, and effective; but most in the South did not. Within the North and the South, there were also differences, but smaller ones, in government effectiveness. The standard argument that government effectiveness is a function of economic development can explain the difference between the regional governments in the North and the South, but not differences within the North and South. Putnam and his colleagues argued that something else must be going on.

Almost like botanists who study plant development by comparing the growth of genetically identical seed sown in different plots, Putnam and his team studied, over the next 20 years, the performance of the regional governments and factors that could explain why they differed in performance. Their assessment of government performance closely matched the evaluations that constituents and community leaders gave the governments in surveys conducted by Putnam’s team over a decade. The findings, depicted in the upper panel of the next figure, are that there are no good governments in the South, and no bad governments in the North.

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10 The 15 new regional governments were similar to five regional governments that had been created a few years earlier in border areas of Italy, and so the researchers included all 20 regional governments in their study.

11 Government performance was measured with 12 indicators, including (a) the comprehensiveness and coherence of the government’s legislation to address regional problems, e.g., strip mining and pollution control; (b) the number of regionally supported day-care centers and family clinics (standardized by the size of the relevant population); (c) the percentage of actual disbursement of funds allocated by the national government to the region for agriculture, local health units, and housing and urban development; and (d) bureaucratic responsiveness as measured in the experiment with letters to government offices, described above. Some regional governments were ranked high by almost all of the measures, while others were ranked low by almost every measure. That is, the regional governments that spent their most of the fund appropriated to them and that pioneered legislation to solve regional problems were the same ones that provided day care centers and family clinics.
Figure 1: The upper panel shows the institutional performance of the 20 Italian regional governments in 1978-85. The lower panel shows the ‘civic-ness’ of these regions.

Source: Putnam et al. 1993, chapter 3.

Putnam and his team’s leading candidate to explain this is a cultural factor that they call ‘civic community’. Civic community or ‘civic-ness’, for short, is the degree to which an area has strong networks of association between individuals who interact as equals to address common concerns (pp. 86-94). Putnam and his team measured civic-ness in a region by a composite index of (a) the density of civic associations, such as sports clubs and singing clubs; (b) the fraction of households with at least one newspaper reader (knowledge of public affairs by
large numbers of citizens is a potential check on corruption and poor public services; (c) turnout in referenda (a measure of issue-oriented voters); and (d) the incidence of preference voting (since membership in patron-client networks implies that the voter indicates a preference for a particular candidate from the party list). Notice that these measures are all *objective*. They are not about individuals’ perceptions. Helliwell and Putnam (1995) show that controlling for initial income, regions of Italy with more “civic-ness” had higher growth rates in 1950-90.

Putnam and his colleagues made a survey and found much greater trust in more civic regions than in less civic regions. The percentage of people who say you can usually trust people is 33% in regions with high civic-ness, and only 17% in regions with low civic-ness. That is a factor that may explain differences in the effectiveness of the regional governments. Figure 1 shows two maps of Italy. The first map codes with shading and cross-hatching the level of *institutional performance* across the 20 regions of Italy based on the measures discussed above. The second map codes the level of *civic-ness* across the regions. The two maps look almost the same! The map suggests that civic-ness is needed for a participatory democracy to work well.

The civic networks that Putnam describes—primarily social groups such as amateur sports teams and singing groups—can give individuals who might normally not interact as social equals opportunities to do that. (We return in Part IV to this issue, where a field experiment compares the effect of participating in single caste versus mixed-caste cricket teams in India). Participation in a social group of people with diverse backgrounds may give a person experiences that reinforce the belief that one’s voice can be heard and that he can make a difference.

Putnam’s analysis of the historical determinants of civic-ness in Italy suggests that three intermediary variables explain the strong association in Italy between civic-ness and the performance of institutions: trust, self-efficacy, and the willingness (for the sake of pursuing common objectives) to treat as social equals people across a social cleavage such as class or gender. Where did the differences in civic-ness originate? We turn to this next.
Determinants of civic-ness

Around the turn of the last millennium, the South was brought under the Norman Empire, while in the North, with the weakness and eventual collapse of the Holy Roman Empire, many cities became self-governing. Putnam and his team present extensive evidence that these historical governments have shaped the cultures of the regions in ways that made effective participatory democracy impossible in the new governments created in 1970 in the South, and vibrant in many parts of the North.

In the South, an authoritarian monarchy with lord-and-serf feudalism emerged. This hierarchical structure endured for seven centuries essentially unchanged (121-124). In the North, the city-states sprang from voluntary associations formed when neighbors swore to render one another mutual assistance and provide for common defense and economic cooperation. For four centuries, the city-states were distinguished from all other regions of Europe by the extent to which men were able to take part, largely by persuasion, in the decisions governing their lives. (124). These old institutions did not persist beyond four centuries, but what we, following Douglass North and others, call the mental models of collaboration did. The networks that made possible past success at collaboration served as a template for future collaboration. As North writes, the mental model persists in people’s minds; “the informal solution to exchange problems in the past carries over into the present” (North 1990). Similarly, the sociologist Ann Swidler notes (1986, p. 284), “culture provides a repertoire of capacities from which varying strategies of action may be constructed” (both quotes are cited by Putnam et al., 244 n. 63). An example of medieval collaboration that persisted was the aiutarella, a network of families that provided mutual aid, such as the exchange of labor between families at crucial moments like threshing time (Putnam et al. 142).

In the South, however, obsequiousness to the landlord was more important than horizontal solidarities and society “was dominated by distrust” (143). This was captured by many proverbs:

“Damned is he who trusts another;”

“He who behaves honestly comes to a miserable end”;

“Everyone things of his own good and cheats his companion” (143-144).
The distrust forestalled collaboration. Peasants had recourse to patron client relations as a response to an atomized society with limited markets (145). Patron-client relations were the only associations that showed real energy. For exchanges of great value, people had recourse to Mafia enforcers (147).

The patterns of civic involvement between 1860 and 1920 had large economic consequences: civic-ness in earlier period, even when holding constant earlier level of economic development, predicted economic development in later periods, as measured by industrial employment and infant mortality 155-156. By the mid-1980s, per capita income was more than 80% higher in the North than in the South (176).

Putnam’s book required the social science community to take seriously the idea that culture could be a major roadblock to effective government. In 2016, a trio of economists (Guiso et al 2016) provided evidence for a final link in the chain connecting Italy’s history to its present culture by assessing the impact on individual psychology. First, they replicated and extended Putnam’s findings regarding the greater civic-ness of former city-states by showing that cities with a history of self-government had a greater number of non-profit organizations, a greater probability of having an organ donation program, lower frequency of cheating by 8th-grade students in a national math exam, more resistance to the Nazis during World War II, and higher participation of citizens in referenda. Indeed, the longer a city was autonomous and the greater its independence, the stronger were the effects.

Civic-ness is the opposite of personal helplessness (“la miseria”) and “amoral familism,” a term that the political scientist Edward Banfield invented in the 1950s to describe a worldview that he found to be common among peasants in southern Italy. He and his wife examined local records, conducted psychological evaluations of residents, and asked some of them to keep diaries. He showed Italians pictures and asked them to spontaneously make up stories about them. The stories told by southern Italians were very different from those generated by northern Italians: 64% of the southerners’ stories ended in calamity or misfortune, but only 24% of the stories told by northerners did (Guiso et al 2016). In The Moral Basis of a Backward Society

12 Some cities were autonomous but under the protection of the Holy Roman Emperor, while others were so independent that they fought and won against the emperor. The researchers found that cities that participated in the Lombard League to fight the emperor today have more civic capital than cities that chose to be allied with him.
(1958), Banfield writes that the cause of the poverty of southern Italy was an ethos of non-cooperation (‘amoral familism’) in which individuals maximized their family’s short-term interests and assumed that others would do the same. Banfield lamented the “inability of the villagers to act together for their common good, or indeed, for any end transcending the immediate material interest of the nuclear family.” Putnam and his team returned to Banfield’s concept of ‘la miseria’ – the lack of empowerment. They argued that self-governing city-states fostered self-efficacy beliefs – beliefs in one’s own ability to complete tasks and reach goals – that were transmitted across generations, whereas cities without a history as independent city-states would lack these beliefs. To assess this, the researchers examined the answers to eight questions that appeared on a national exam given to students. These questions asked the students to interpret successes and failures in school tasks. Here is one of the questions:

Your teacher asks you to do a project for Christmas. Your performance is so bad that you have to do the assignment over. How do you explain this?

The set of possible answers are:

- No one helped me.
- I was unlucky.
- It was difficult.
- I lack ability.
- I did not put effort on it.

The answer that indicates high self-efficacy is the last one. It suggests that the respondent expects his or her own effort to determine the outcome. Individuals with stronger self-efficacy expect that they largely determine their own fates.13

The researchers found, as they expected, that eighth-graders in cities that had had the free city-state experience displayed a higher degree of self-efficacy than their peers living in northern cities that were not city-states. The cities with residents with higher self-efficacy also had higher levels of civic-ness. Guiso and his coauthors conclude that the experience of being a medieval city-state influenced cities’ psyches (p. 1434) and the effect persisted, making it possible for the citizens in those municipalities to form more effective regional governments in modern times than cities without that history.

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13 The questionnaire asks students to interpret eight different situations they might encounter at school, five of which are positive (successes) and three of which are negative (failures).
The results of the study of southern and northern Italy are suggestive but not definitive. We next present findings from India that lend support to the belief that a history of collaboration as equals helps to create the attitudes and trust needed for different social groups to act collectively to pursue common interests.

*The colonial land tenure institutions of India*

Under the British colonial system in South Asia, agricultural land was taxed. In 1841, the revenues provided 60% of Britain’s total revenues (Banerjee and Iyer 1192). Historical accidents placed different districts of India under one of two main land revenue systems, called the landlord system and the cultivator system. Under the *landlord system*, the revenue liability for a village lay with a single landlord, who collected it from the peasants. He had virtually arbitrary power over the property they tilled and over their bodies, since the British handed over a large part of their political and judicial power to the landlord (Banerjee 2002). He was free to dispossess a peasant who did not pay whatever liability that he had set.

In contrast, under the *cultivator system*, the cultivator had legal rights to the land he tilled. The revenue he owed to Great Britain was based on a share of his estimated average annual output.

The landlord system created distrust and hostility between the elite and the masses that persisted after the system was abolished at India’s independence. Anthropological case studies show that with the abolition of the landlord system, the poor asserted their rights, tensions arose, and the conflicts were often settled to the advantage of the landlords, who continued to dominate village politics in the areas historically under the landlord system. The landlords moreover retained much of their initial landholdings. The class and caste inequalities have reinforced each other, since most landlords are high- or mid-caste (Pandey 197). The social cleavage limited cooperation between the elite and the masses to induce their state governments to invest in public goods in their districts. In areas of India that had a history of the landlord system, compared to areas that did not, the state governments were much less active in building fertilizer delivery systems and disseminating the new high-yielding varieties of seed. By the 1980s, districts that had not had the landlord system had a 24% higher proportion of irrigated land area and a 43%
higher level of fertilizer use than those that had had the landlord system. On approximately 20% more of the rice and wheat areas, high-yielding seed varieties planted. Over all crops, agricultural yields were, on average, 16% higher in districts that historically had not used the landlord system.

Differences also emerged in education and health. Being an entirely non-landlord district under British colonialism increases modern-day access to primary school by 50% and to primary health care centers by 100% (Banerjee 2002). In historically non-landlord areas, infant mortality is 40% lower. This bleak picture of the landlord areas does not arise from selection of particular outcomes by the researchers; a similar pattern characterized all goods and services provided to a district by its state government (Banerjee 2002).

Inequality today in the distribution of landholdings, across districts, and differences in soil fertility also cannot explain the differences in investments and outcomes.

Instead, the obstacle to cooperation can be explained in terms of mental models. Banerjee and Iyer implicitly do that, although they do not use that term (or a similar one). They explain that the masses in the landlord areas might remember what a grandfather in the elite class had done to their own grandfather. The images that the masses and the elite have of each other are abstracts from historical events. These images can make it hard to recognize how one loses by not cooperating across social cleavages to get valuable publicly provided goods and services. One may (mis)perceive his group’s interests as all being opposed to that of the other group. The elite may oppose public investments in the district because, by helping the masses, they would challenge the traditional hierarchical social order. (Until India became independent, the caste system denied the low caste the right to own land and to work in any but menial occupations; and they were denied entrance to most schools (Pandey 2010,198).)

Priyanka Pandey (2010) gives direct evidence of the causal link between the oppressive pre-independence landlord system and poor economic outcomes today. She measures performance of teachers and students in randomly selected primary schools in 130 randomly chosen villages from a set of 26 districts selected so that a landlord district always borders on a non-landlord district. All districts are in the same state (Uttar Pradesh). Economists sometimes worry that there was something different about those areas that were put under one regime from those that were put under the other, and it is that, not the regime itself, that explains the
differences in performance. But by looking at districts that are next to each other and that were seemingly randomly put under one regime or another, we can ascertain more precisely the historical effect of the regime itself.

Pandey measures teacher activity, student learning, and embezzlement of scholarship money. Her team paid seven unannounced visits over seven months to the schools. Public schools are used mainly by the masses, not the elites, who thus have less at stake in their quality. Pandey found that in the schools in districts with a history of the landlord system, teacher effort and student test scores were lower. The teachers might be sleeping in the school or they might be absent. Controlling for geography, teacher attendance was 18% higher and teacher activity was 31% higher in villages on the non-landlord side of the border. The effects are driven by the behavior of the high- and mid-caste teachers, who may enjoy protection from the local elite. Student test scores were 21% higher in the sample from the non-landlord districts.

Every low-caste student in primary school is entitled to an annual stipend, worth about $8 at that time. The stipends that students received were 42% lower on the historically landlord side of the border; what was not given to students was embezzled by the school staff. To sum up, one might say that the public-school students, who are largely low-class and low-caste, are treated as if they have no place in a primary school.

The parallel between the examples we have discussed of Africa, Italy, and India are striking. In the examples in Africa and India, differences within each continent—in the export of slaves or in the land revenue system—created differences in the trust needed for people to act collectively to pursue common interests. In the examples in Italy and India, the same formal structures of all regional governments and the same property rights system exist in the modern day, but differences within each country in historical institutions shapes trust and civic-ness, with large effects on economic outcomes.

The findings have a clear implication for policy: just giving more resources to the less developed areas may not do much to close the gaps in incomes; changing formal institutions (as Italy and India did) also may not work. If we could only change the mental models, we might have more success.
We turn to gender roles for our last two examples of the long shadow that history casts through the mental models it shapes. We will argue that the mental models of gender across the world are generalizations from historical experience.

The ‘natural’ role of women

Beginning thousands of years ago, there are regions of the world that cultivated some crops with the plough, and other regions that cultivated crops only with the hoe and digging stick. The first type of region today has 10% lower female labor force participation than the second type of region, controlling for all other observable factors that are likely to influence whether women work outside the home. The relationship between gender equality and economic development is complex, but many studies find that more equal gender roles speed up capital accumulation, which increases incomes (see Doepke et al. 2012, Duflo 2012, and Fernandez 2014 for overviews).

Why does a history of use of the plough in pre-mechanized agriculture create a gap favoring males? Imagine yourself in a period before agriculture was mechanized. To pull a plough by hand or with oxen would require tremendous upper body strength. This makes men better suited than women to the task. Only some crops, including wheat, barley, and rye, are profitably cultivated with a plough. These are called “plough-positive crops.” Other crops, such as maize, sorghum, and millet, are more profitably cultivated in pre-mechanized agriculture with a hoe and stick, which can easily be handled by both women and men. These are called “plough-negative crops.” Nunn teamed up with economists Alberto Alesina and Paola Guiliano to examine a longstanding idea in anthropology (Boserup 1970) that societies that used the plough to cultivate crops developed the belief that the natural place of women is in the home. They examined variation in the historic suitability of the environment of ancestors for growing crops that differentially benefitted from using the plough.

Their work involved matching of many sources of data. First, they mapped the geographic distribution of 7,000 different languages (in Ethologue: Languages of the World) to one of the 1,000 ethnic groups (in The Ethnographic Atlas). From this atlas, they learned whether each ethnic group used the plough historically. They coded “plough” as one if an ethnic
group engaged in plough agriculture and zero otherwise. Then they combined this with information on modern boundaries to construct district- and country-level averages of ancestral plough use—i.e., the fraction of the population currently living in a district or a country with ancestors who engaged in plough agriculture.

Use of the plough could be affected by gender attitudes, and so they also collected, as a second body of data for the whole globe, topographical information on the suitability of an area for plough-positive crops. On that basis, one can predict which parts of the world, in pre-modern times, could have profitably used the plough.

The team matched each of these constructed country-level average of ancestral plough use to third set of data—individual-level responses in the World Values Survey in each country. One question in the survey is, “If jobs are scarce, should women take them?” In Iceland, which never used the plough, most people say “Yes”; in many countries that used the plough in traditional agriculture, most people say “No.” Taking all the countries in the world that this survey covers, use of the plough in traditional agriculture has substantial predictive power over attitudes about appropriate gender roles.

Finally, the research team matched the use of the plough in pre-mechanized agriculture with data on behavior in the early 21st century. Treating use of the plough as a natural experiment driven by topography, the proportion of women in the workforce was more than 13 percentage points lower in plough-positive areas than in plough-negative areas. The same contrast holds for the proportion of women in entrepreneurship (17% lower in plough positive areas) and for the proportion of women in the national legislature (5% lower in plough positive areas).

Immigrant studies provide further support for the hypothesis that attitudes towards gender roles are transmitted over generations [details to be added].

We will show in a later chapter, “The social construction of gender roles,” that ideas about gender roles have impacts on many other gender gaps favoring men—in STEM, in salaries, in the allocation of work, and in promotions. In that chapter, we show that beliefs about gender differences can create those observed differences in performance and recognition.
To suggest the generality of the idea that experience and exposure in history give groups of people mental models that durably change how they see the world around them, we consider the long-term effect of the location of British convict colonies in parts of Australia. In the 19th century, to help build an infrastructure in Australia, Great Britain created convict colonies there. The convicts constructed housing and cleared fields to create farmland—see Figure 2. Over approximately 100 years ending in 1868, England sent to Australia 160,000 convicts, 80% of them male. The convicts were poor people who had committed petty offenses. Stealing anything worth more than one shilling, the average day’s wage, was deemed worthy of a one-way ticket to a penal colony in Australia. (Serious crimes like murder and rape were punishable by death.) The ‘export’ of convicts gave some parts of Australia a male-female ratio as high as 9 to 1. Although all convict colonies were closed in 1868, the gender ratio in parts of Australia was unbalanced until 1920. This meant that for more than 100 years, women to wed were scarce. Because a man who married felt lucky to get a wife, he didn’t demand much work from her.

Figure 2. Illustration of a British convict chain gang

Source: © Notwist / Wikimedia Commons
For the past century, the male-to-female ratio has been 1 to 1. But the convict colonies seem to cast a cultural shadow. People in areas that had higher male-biased sex ratios in the past are today more likely to agree that it is better for men to earn money and women to take care of the home and children (Grosjean and Khattar 2019). Census data reveal that these areas have lower labor force participation among women and fewer women working in high-ranking occupations today. In surveys, women living in areas that had higher sex ratios in the past report an extra 2.3 hours of leisure time per week – this is more than half the average gap in leisure time between men and women! Women in these areas also less likely to “feel rushed” and more likely to "enjoy spare time.” As in the comparison of the plough-positive and plough-negative areas around the world, a legacy of the historical pattern appears to be social constructs—mental models—of the ‘natural’ or ‘proper’ role of men and women that give women a different place than men in the working world and at home.

The co-evolution of culture and institutions

Each of the examples in this chapter has a similar form: an idiosyncratic feature or historical institution caused variations across regions and population groups in social patterns, and a comparison of the regions and groups reveals that the historical variations have an impact on modern-day trust and attitudes. In our first example, a high level of slave exports from a region in Africa meant that many individuals were betrayed by family, friends, neighbors, or government and sold into slavery. The higher the historical level of slave exports of a country in Africa, the lower the level of trust and per capita income today.

In our second example in this chapter, historically some Italian cities had the experience of 300-400 years of self-government. The experience is remote history. The governmental institutions associated with the self-governing cities are long gone. And yet certain things that seem normal to people today, and that began based on rational behaviors at a particular time in the past, survive despite the eclipse of those justifications. They have survived in cultural mental models. The mental models influence behaviors that affect the wealth of regions or whole countries.
This body of work raises two important questions: Why, and under what conditions, do cultural mental models sometimes persist and sometimes not? And how does culture interact with institutions to shape behavior? These questions are related because the persistence of cultural traits may depend in part on whether institutions complement or supplant cultural tendencies. We do not yet have a good understanding of when and why some cultural traits persist while others do not. What we can say at this point is that a good deal of the variation in economic prosperity in the modern world is explained by history, and cultural mental models are an important channel through which the effect of history is transmitted (see Nunn 2009 and 2011 for good reviews).

On the second question, studies across countries and across regions of countries indicate that not only do institutions shape culture, but culture also influences the nature and quality of institutions (e.g., Putnam et al. 1993; Greif 1994; Tabellini 2010). This evolutionary perspective emphasizes the interrelatedness of cultural mental models and institutions and the feedback loops that exist between them. The coevolution of culture and institutions can lock a country or region into a path of slow development, or propel it into a path of rapid development. A society with a culture that values cooperation, trust, and equality tends to build institutions that support and enforce these practices and traits, which increases the returns to them and reinforces them. A culture that does not value these practices and traits will do the opposite, decreasing the returns to the practices and reinforcing the low intrinsic valuation.

Economists have long recognized that there may be “multiple equilibrium” outcomes. For example, the poor could be locked into a poverty trap, where low parental income leads to low investment in education and health of their children, leading in turn to low incomes in the next generation; but if only one gave the parents enough money to move out of this poverty trap, they and their forbears could sustain a high income and high education equilibrium. So too, low savings and investment can lead to low incomes, where individuals can only save a little; but if somehow they were given, for at most one generation, more income, they could save and invest more, leading to higher incomes that would be sustained in the future (Hoff and Stiglitz 2001; other references to be added). In the next chapter, we describe situations where there are multiple equilibria involving different degrees of cooperation, enforced by a variety of punishments for not adhering to the (implicitly agreed upon) cooperation. There are, in general,
multiple cultural mental models that can exist in a setting with particular economic conditions, and they will have consequences for the which economic outcomes are sustained. Economists have traditionally been silent about how the economy “selects” an equilibrium or moves from one equilibrium to another. This is where history matters because it influences how value and believe and how they interpret the world.

We have called attention to particular events, such as the slave trades and the adoption of arrangements under colonialism for tax collection. These are human-induced events—something imposed by one group of people on other people. But naturally occurring events also shape mental models. The Black Plague killed more than half of the people it infected and led to population declines of 30-70% across Europe. This dramatic reduction in the population led to labor shortages that set the economies in Western Europe off in a new direction—labor-saving innovation, free labor markets—with enormous consequences (Atkinson and Stiglitz 1969). In Western Europe, the labor shortages weakened the feudal system in, as those who broke their feudal ties could find refuge and employment in bustling cities. But in Eastern Europe, where cities were scarcer and weaker, the stronger effect of the labor shortages may have been to increase prices and the returns to labor coercion, and thus the shortages may have strengthened the feudal system (Findlay and O’Rourke 2007; Acemoglu and Wolitzky 2011). A full account of these differences would take us beyond the scope of this chapter. A full account of these differences would take us beyond the scope of this chapter. What we want to emphasize, though, is that while history matters, how and how much it matters are not always clear. More importantly, as we have emphasized, history is not destiny: we are not bound by the past.

Recognizing the role of cultural mental models in economic development allows us to better understand why some societies progress while others remain stalled, and why an institutional reform can succeed in one place but fail in another. A common expectation when Italy established a new regional-level of government was largely borne out: “Old wine in new bottles” (Putnam et al. 17, who cite Allum and Amyot 1970-1971). An important question—the subject of Part IV of the book—is how can policy makers design better interventions that change cultural mental models that stymie development?
References


