

# Culture, Institutions and Policy\*

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## Abstract

We review theoretical and empirical research on the dynamic interactions between cultures and institutions. Doing so, we think about culture as a system of values and about institutions as formalized rules of the game. Our presentation is organized around a simple theoretical framework of political agency, which is gradually expanded so as to introduce new links and feedbacks between culture and institutions..

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# 1 Introduction

In this chapter, we highlight how culture, institutions and policymaking relate to each other and how they coevolve over time. While our treatment draws on insights from several existing literatures, these typically deal with only one, or a couple, of the various links we consider.

An important big-picture question motivates much of the existing research. How is it that some societies are more successful than others, in terms of a number of economic and political outcomes? To put it differently, why do successes and failures tend to correlate across many domains? Societies that successfully fight corruption, are also successful in fighting tax evasion, in administering justice, in providing collective services, in growing the economy, in maintaining macroeconomic stability, and in avoiding that political conflicts spill into violence. In the same way as successes, policy failures too are correlated across seemingly unrelated dimensions. It is plausible that these correlations reflect a few fundamental national factors – specifically, country-specific institutions and culture – acting as a common driver of many outcomes.<sup>1</sup>

“Culture” and “institutions” are both vague concepts that different scholars employ to capture different notions. Thus, culture is alternatively used to label *values* that govern people’s behavior, *social norms* that prescribe certain behaviors in certain groups, and *beliefs* that coordinate expectations about the strategic choices by others. Here, we mainly focus on culture in the sense of individually held values, which also map into policy preferences. Throughout, we assume that culture in this interpretation is persistent. It is not exogenous, however, but adapts to incentives and environments. As this adaptation takes place slowly, it is still meaningful to discuss the causal links from culture to other outcomes, at a given time.

When it comes to institutions, we reserve the concept for formalized rules of the game, such as the rules for political and judicial procedures. Institutions are thus different from policy outcomes. We do not adopt the wider definition advocated by some scholars (such as Acemoglu et al. 2005), namely to let institutions also encompass internalized norms that affect how rules of the game shape behavior. But we will treat formal institutions as endogenous and persistent.

These interpretations are reflected in the theoretical framework outlined in the chapter. Policy outcomes are determined in equilibrium, and within each period they are forged by given institutions and a given culture. We thus treat institutions as having more inertia than policy outcomes. When we consider explicit dynamic models, though, we take culture to be the slowest moving variable in the system. This simplifies the dynamic analysis, because culture becomes the single state variable.

Related to this distinction, we postulate different mechanisms for the alterations of cultures

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<sup>1</sup>Evidence that policy outcomes are correlated across several policy domains is provided by Tabellini (2008a) and Besley and Persson (2011).

and institutions. To capture the idea that culture (interpreted as values) changes slowly, we speak about *cultural evolution*. A key aspect of such evolution is that each new generation of individuals tends to adopt a stable set of values – as a result of education and socialization – during their most impressionable years, for example when they have to make their first political decisions. Instead, we speak about *institutional change*. With this terminology, we intend to capture the fact that institutions often change suddenly and as a result of strategic decisions. Such decisions can reflect collective political choices, or bursts of collective action – for example, when polities change their governance from democratic to autocratic, or vice versa.

Our focus on how culture and institutions shape policy outcomes abstracts from the direct effects exerted by culture and institutions on private economic decisions, including investment, innovation, market interactions. These direct effects obviously help determine economic development, and they have been extensively studied in the literature (see, in particular, Acemoglu et al. 2005, Tabellini 2008a, Besley and Persson 2020a). But the joint evolution of culture and institutions in these richer economic environments remains similar to the one described in this chapter.

Though our topics are strongly motivated by data, we center our attention on theoretical ideas and mechanisms. However, we do not want to overburden the reader with different models and different sets of notation. So we stick to one specific example throughout the chapter, in which we gradually allow for more complex interactions. This example is a simple model of political agency, where politicians can extract rents from the political process at the voters expense. But, along the way, we discuss other applications of the same general ideas.

**Referencing** When it comes to the existing literature, the running text comments directly on the initial research that introduced the key ideas that underlie our modeling. Without too much apology, we focus these comments on research that is most closely related to our own work and interests. Comments on subsequent research about the same topic, or similar research on related topics, are collected at the end of each section under the heading "Notes on the literature." Relative to the existing research on culture and institutions, our selection of references is probably biased towards formal theoretical work and direct evidence on the mechanisms emphasized in this work. Our selective coverage also reflects a division of labor, since traditional historical research is the focus of other chapters in the Handbook – in particular, those by Allen, Broadberry, Federico, Mokyr, and Voth. There also exist other excellent surveys of the topic, which focus more squarely on measurement and empirical work – see, in particular, Alesina and Giuliano (2015).

**Organization of the chapter** Section 2 lays out the basics of our simple framework. Here, we take both culture and institutions as given and ask which cultural and institutional conditions allow voters to best limit corruption through political accountability. Section 3 allows for cultural evolution – under given institutions – to illustrate how societies may end up in different long-run equilibria with very different amounts of corruption. Section 4 allows for institutional change – for a given culture – and shows under which cultural conditions stronger checks and balances on corruption are endogenously chosen by an incumbent. Section 5 combines these building blocks and to consider how endogenously chosen institutions might coevolve with endogenously evolving cultures. Finally, Section 6 summarizes the main insights and offers some remarks on further research.

## 2 A Model of Political Agency

This section lays out the simple model that we will explore and gradually extend in the chapter. The model highlights the joint effects of culture and institutions on policy outcomes. As already mentioned, we think about culture as a set of values that guide individual behavior. Postulating that values and the concomitant preferences, together with institutions, matter for policy outcomes is quite uncontroversial. Honesty as well as judicial procedures discourage corruption and tax evasion, reduce transaction costs, and facilitate social and economic interactions in many domains. The chapter focuses on one set of values or cultural traits that are crucial for determining the political behavior of citizens: the extent to which they are willing to stand up to punish government abuse, either at the ballot box or in the streets.

Such political punishments – and the accountability that goes with them – may be lacking for several reasons. Voters may prefer to support a dishonest government, because they expect to be *individually* compensated or receive preferential treatment through clientilism. Alternatively, citizens may be prepared to vote based on *group-specific* (rather than generalized) indicators of welfare, and hence reward a bad government that was kind to their own group. They may have an entrenched *ideology* and give more weight to partisan parochialism rather than to valence traits or other indicators of generalized good behavior. Finally, citizens may simply refrain from informed political participation, because they prefer to *free ride* on others. All these alternatives have been explored in the literature on political economics (see the references in Khemani et al. 2016 and Tabellini 2008a).

A good summary statistic for values that encourage civic behavior is "moral universalism," namely the willingness to apply a value system to socially unrelated individuals (Tabellini 2008b). More universalistic agents are not necessarily more altruistic or generous, but they apply their moral standards to individuals who stand outside a close circle of family or friends. As a result, they are less willing to cheat and free ride on strangers, or to accept policy favors

in exchange for tolerance of political abuse.<sup>2</sup>

Whatever the reason, tolerance of government misbehavior opens the door to poor government performance. To capture how political culture may influence policy in a simple setting, we present a very stripped-down model of political agency. That is, we study policy choices that induce a stark conflict of interest between political representatives on the one hand, and the collective of citizens on the other hand (the model is a simplified version of the agency conflict explored in Persson and Tabellini 2000, ch.4).

**Political institutions and candidate objectives** To explore the scope of political accountability, we use a simple probabilistic-voting model of electoral competition (see Persson and Tabellini 2000, ch.3). There are two given political candidates, labelled  $A$  and  $B$ . Policy choices give rise to rents  $r$  that benefit political incumbents and hurt voters. In particular, all voters have identical policy preferences given by:

$$W(r) = \varpi - r, \tag{1}$$

where parameter  $\varpi$  captures all other determinants of voters' common welfare. For simplicity, we take these determinants as given, neglecting other policy choices, in particular policies that induce conflict between different voters.

The objective of political candidates is to maximize the expected benefits from office, namely

$$v = p_C \left( \frac{1}{\beta} r_C + R \right), \tag{2}$$

where  $p_C$  is the probability that candidate  $C = A, B$  wins the election,  $r_C$  the rents captured by candidate  $C$ , and  $R$  the exogenous value of holding office (on top of endogenous rents  $r$ ). Parameter  $\beta \geq 1$  measures transaction costs in appropriating rents, and we will interpret it as capturing the quality of judicial institutions or other checks and balances. That is, the higher is  $\beta$  the stronger are these institutions: an elected politician can appropriate less of the costs that rents impose on voters (unless  $\beta = 1$ ).

In Section 4, we turn this institutional parameter into a variable that is endogenously chosen by incumbent politicians. Clearly, an analog to our simple model could be applied to any policy that generates a conflict of interest between politicians and voters, and is determined via the platforms presented in the course of electoral competition. Settings where citizens hold the incumbent accountable through retrospective voting can also be fitted in this general

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<sup>2</sup>Feddersen and Sandroni (2006) propose a resolution to the so-called voting paradox – that voters cast a ballot, even though they are atomistic and hence very rarely will affect the outcome – based on Kantian values. Enke et al. (2020) show that moral universalism is correlated with political ideology and affects policy preferences over a large number of issues.

framework through suitable changes (see, for instance, Persson and Tabellini 2000 ch.4, and Nannicini et al. 2013).

**Political culture and voter values** Voters trade off their policy preferences  $W(r)$  against their preferences for one candidate or the other. Specifically voter  $i$  votes for candidate  $A$  if the following inequality holds:

$$\delta + \sigma^i + \lambda^i[W(r_A) - W(r_B)] > 0, \quad (3)$$

where  $\delta$  is an aggregate popularity shock in favor of candidate  $A$ , while  $\sigma^i$  is a random shock that captures the idiosyncratic preference of voter  $i$  for candidate  $A$  (for example, his ideological preference for  $A$ , or his preference for  $A$  based on other policies chosen after the election). We assume that  $\delta$  has mean 0 and a uniform density of 1, and that  $\sigma^i$  is distributed in the population with mean 0 and a uniform density.

Parameter  $\lambda^i$  denotes the weight that voter  $i$  gives to common economic welfare  $W$ , compared to his candidate-specific preferences captured by  $\sigma^i$ . Thus, the higher is  $\lambda^i$ , the more likely is  $i$  to vote for the candidate whose policy announcement entails lower rents. Because all voters evaluate rents  $r$  in the same way, a voter with higher weight  $\lambda^i$  is more likely to vote on the basis of public interest, as opposed to partisan or parochial interests. A higher value of  $\lambda^i$  thus indicates a more civic political culture and more universalistic values, in the sense that the individual cares more about social outcomes.

We consider two (given) types of values held by voters. They can hold "civic values", a high value of  $\lambda^i$ , which we set at  $\bar{\lambda} > 1$ , or "partisan values", with a lower  $\lambda^i$ , which we set at 1. Let  $\lambda = \bar{\lambda} - 1 > 0$  denote the difference between civic and partisan values – i.e., the difference in political culture. The distribution of candidate preferences  $\sigma^i$  is the same for voters whichever their values. Finally, let  $\gamma \in [0, 1]$ , denote the fraction of civic types in the population at a given point in time. This will be our measure of culture throughout the chapter. In Sections 3 and 5, this cultural variable will evolve endogenously over time, as people actively chose which values to adopt – that is, whether to evaluate the policy effects on (common) welfare via parameter  $\lambda^i = \bar{\lambda}$  or  $\lambda^i = 1$ .

**Electoral competition** As in standard models of probabilistic voting, the candidates simultaneously announce their policies  $r_A$  and  $r_B$ . Readers who find it implausible that candidates would announce rents can think about them as announcing public consumption (valued by voters) and taxes, with political rents residually determined from the government budget constraint. As long as the utility from private consumption is linear, voter utility takes the form in (1).

Candidates announce  $r_C$  before knowing the realization of aggregate and idiosyncratic

popularity shocks  $\delta$  and  $\sigma^i$ , but with full knowledge about the distributions of these shocks. They also know the distribution of values – that is, they know political culture as captured by  $\gamma$  – but they do not know which individual voters hold which values. Finally, the popularity shocks are realized and citizens vote, based on their common preferences and alternative cultural values.

Using these assumptions – together with the voter and politician objectives in (1) and (2) – it is easy to show that the probability that candidate  $A$  wins the election satisfies:

$$p_A = \frac{1}{2} + (1 + \lambda\gamma)(r_B - r_A). \quad (4)$$

To summarize, our simple model contains many ingredients discussed in the literature on culture and institutions. Values and political culture are captured by parameters  $\lambda$  and  $\gamma$ , which determine the voters' willingness to punish politicians for their misbehavior. Institutions are captured by parameter  $\beta$ , which influences the incentives of politicians to misbehave. As should be clear – and as we show next – it is the interactions of these forces that shape policy outcomes.

**Equilibrium policy** The two political candidates simultaneously announce their policies, so as to maximize their expected benefits from office in (2), while taking into account the probability of winning the election in (4). They face a simple tradeoff: extracting more rents makes them better off for a given election probability, but it also lowers this probability (and thus their benefit from inframarginal rents). Solving for candidate optimal choices along this tradeoff and exploiting the symmetry of the model, we find the same equilibrium policy announcements by both candidates. Assuming that the non-negativity constraint on  $r$  is not binding, we obtain equilibrium rents as:

$$r^*(\beta, \gamma) = \frac{1}{2(1 + \lambda\gamma)} - \beta R. \quad (5)$$

The comparative statics are straightforward. Not surprisingly, stronger institutions, higher  $\beta$ , map into lower equilibrium rents, because politicians have weaker incentives to exploit the voters when institutions make rent extraction less efficient. A larger share of the electorate with civic cultural traits, higher  $\gamma$  (or a higher degree of civicness, higher  $\lambda$ ), has the same dampening effect on rent-extraction incentives, because a larger group of voters are more willing to punish candidates for bad policies.

This prediction is supported by the evidence in Nannicini et al. (2013). They compare Italian electoral districts with different levels of "civic values," measured by average blood donations (or other types of civic behavior). Members of Parliament elected from districts that score lower on this measure do engage in more misbehavior, as gauged by criminal inves-

tigations or absenteeism. More importantly, misbehaving political incumbents are punished more severely by voters in electoral districts with higher civic values, consistent with the idea that a good political culture discourages politician misbehavior through stricter accountability via voter punishments.

**Substitutes or complements** In this static formulation, the policy effects of civic cultures and good institutions are additive rather than interactive. However this may be an artifact of our simple framework. In a dynamic model, where the same incumbent may stay on for multiple periods – like the accountability model of Persson et al. (1997) – the value of office  $R$  would capture the expected present value of future rents, which depend on both culture and (future expected) institutions. If the value of office  $R$  were a decreasing function of  $\gamma$  (that is, a more civic culture reduced the personal value of office), then strong institutions and civic culture would be substitutes. The same interaction would apply if  $R$  were a decreasing function of  $\beta$  (i.e., stronger institutions reduce the future value of office). In other words, strong institutions (high  $\beta$ ) would be more effective with an partisan culture (associated with high  $R$ ), while a civic culture would have a larger effect with weak institutions (because the dampening effect of a higher  $R$  would be smaller with  $\beta$  small).

The question whether institutions and culture are substitutes or complements in their consequences has been discussed in the literature on economic development. An argument for substitutability is that reputational mechanisms based on reciprocity are easier to sustain if formal institutions are weak, because the punishment of exclusion is harsher and thus the need for civic culture is strongest when institutions are weak (Kranton 1996, McMillan and Woodruff 2000, Dhillon and Rigolini 2007). Some empirical results are also suggestive of substitutability: Guiso et al. (2004) find that social capital boosts financial development more in Italian provinces with less efficient courts. Following Nunn (2007) and Levchenko (2007), Tabellini (2008a) contrasts culture and institutions as sources of comparative advantages in international trade. He too finds evidence of substitutability: civic culture has a larger positive effect on exports of "contract-intensive" sectors in countries where law enforcement is weak.

But the observed long-run clustering of low corruption (and good development outcomes more generally) and strong institutions points in the other direction. As we shall see in the subsequent sections, the dynamic analysis builds a convincing case for (dynamic) complementarity.

**Notes on the literature** The general notion that economic and political institutions are central for economic and political outcomes goes far back in time, at least to the 18<sup>th</sup> century treatises by Smith (1759, 1776), Montesquieu (1748), and Hamilton et al. (1788). The idea that institutions govern economic outcomes and economic change has also been emphasized

by 20<sup>th</sup> century scholars, perhaps most convincingly by Douglas North (1990). Drawing on English history, North famously argued that the 1688 Glorious Revolution was central for establishing the protection of property rights and that these rights, in turn, played a key role in paving the way for the Industrial Revolution (see also North and Weingast 1989). The survey by Acemoglu et al. (2005) provides more recent references.

To home in more closely on the specific issues modeled in this section, several papers have studied empirically whether specific institutional features do discourage corruption. The main findings are in line with the predictions of our simple model: politicians do respond to institution-based incentives. In particular, Ferraz and Finan (2008) and Avis et al. (2018) find evidence that (randomly imposed) government audits of municipal budgets in Brazil reduce the incidence of corruption. One channel is that these audits provide information to voters about government. Another, separate channel is that the audits raise the non-electoral expected cost of corruption. Khemani et al. (2016) obtain related findings.

Additional evidence suggest that the information *cum* electoral-accountability channel is important. Using the same Brazilian audit data, Ferraz and Finan (2011) show that elections discourage politicians from appropriating rents: mayors who do not face re-election because of term limits misappropriate about 25 percent more resources than mayors who do face re-election. Cruz et al. (2020a, 2020b) document the importance of institutions that allow voters to make more informed choices. In field experiments in the Philippines, they show that informing voters about campaign promises, or about what voters could do, increase the leverage they exercise over incumbents.

The notion that a civic culture is a central determinant of well-functioning institutions and of development is also an old one (de Tocqueville 1840). In more recent 20<sup>th</sup> century work, this idea has commonly appeared in social sciences outside of economics, including prominent research by anthropologists (Murdock 1965), historians (Landes 1998), and political scientists (Putnam 1993, 2000). From the 1990s, the topic has also been increasingly picked up by economists. Guiso et al. (2006) and Fernández (2011) survey this first wave of work. Tabellini (2008a, 2010) provides evidence that a more civic culture favors economic development. Gorodnichenko and Roland (2011) argue that the individualism-collectivism cultural dimension – which had originally been suggested by Hofstede (1984) – is a robust predictor of long-run growth. Mokyr (2016) discusses how specific European cultural traits facilitated the onset of the industrial revolution.

Closer to the specific topic of this section, the influence of civic culture on corruption has been studied by Nannicini et al. (2013). They consider the accountability model in Persson and Tabellini (2000), and allow the incumbent to choose not only rents, but also targeted benefits to different voter groups. Voters can condition a retrospective vote for or against the incumbent on either an aggregate measure of welfare, or on group-specific welfare, depending

on their cultural traits. That richer model has implications equivalent to those of the simple model in this section. In particular, a more universalistic and civic culture is one where voting is based on aggregate (rather than group-specific) welfare. The greater is the fraction of voters that hold such a culture, the larger is public-good provision and the lower are political rents. Their evidence is also consistent with these predictions.

Yet another channel for influence runs via the *selection* of politicians rather than the behavior of existing politicians. If an environment has high equilibrium rents (legally or illegally extracted), due to weak institutions and an partisan culture, it is likely to attract into politics individuals with poor values and with poor earning prospects in other careers. This is what Brollo et al. (2013) find using data on Brazil: larger federal transfers to municipalities raise local corruption and this in turn deteriorates the quality of local political candidates.

A large literature in comparative politics discusses how specific features of political institutions, such as the electoral rule and the form of government, shape economic policy and political outcomes in democracies. Some of these ideas are discussed in Persson and Tabellini (2003). The empirical links between corruption and different aspects of electoral systems is explored by Persson et al. (2003).

Another line of research has explored the effects of democratic transitions on economic growth and other policy outcomes, finding a positive – though small – effect of democracy on subsequent economic growth (Barro 1996, Przeworski et al. 2000, Giavazzi and Tabellini 2005, Persson and Tabellini 2006, 2008, 2009, Acemoglu et al. 2019). Giavazzi and Tabellini (2005) specifically find that economic liberalizations, as well as democratizations, are associated with subsequent reductions of corruption.

### 3 Cultural Evolution

Neither culture nor institutions are fixed, but change endogenously over time. In this section, we study cultural evolution under given institutions. In the next section, we do the opposite, modeling institutional change for a given culture.

The general question how various aspects of human behavior – in particular human cooperation – change over time has been treated in the field of evolutionary anthropology, which was started off by Cavalli-Sforza and Feldman (1981) and Boyd and Richerson (1985). Similar questions have been the subject of evolutionary game theory, surveyed by Weibull (1995) and Sandholm (2010). In economics, a growing literature has discussed the evolution of cultural traits, beginning with the seminal work of Bisin and Verdier (2000a, 2001) on cultural transmission across generations. Given that Bisin and Verdier (2011) already provides an excellent survey of that literature, we focus this section on illustrating how cultural values may evolve in our specific model framework, and how this evolution may depend on (for now)

fixed institutions.

Different mechanisms of cultural evolution and transmission have been studied in the literature, but most of these share a “Darwinian” property: cultural traits change in the direction suggested by their *relative fitness*. Traits that prove more successful thus tend to spread, while those that do not fit the prevailing social environment tend to disappear.

**Relative cultural fitness** The model in the previous section allows for two sets of values that correspond to different weights  $\lambda^i$  on general outcomes and partisan outcomes. Citizens who hold civic values ( $\lambda^i = \bar{\lambda} > 1$ ) care more about common policies than those holding partisan values ( $\lambda^i = 1$ ).

At any moment in time, the relative fitness of civic vs. partisan values can be captured by the difference in the expected welfare of holding them. We thus compute the expected welfare levels under equilibrium policies, taking into account both political and policy preferences. Specifically, using (1), (3), and (5), the expected fitness of civic relative to partisan values can be written as:

$$\begin{aligned}\Delta(\gamma, \beta) &= E[\delta + \sigma^i + (\bar{\lambda} - 1)W(r^*)] = \lambda[\varpi - r^*(\gamma, \beta)] \\ &= \lambda\left[\varpi + \beta R - \frac{1}{2(1 + \lambda\gamma)}\right].\end{aligned}\tag{6}$$

In writing (6), we have taken the expectation under a veil of ignorance about the popularity shocks  $\delta$  and  $\sigma^i$ , that both have expected values of 0. Evidently, the relative fitness of holding civic vs. partisan values depends on the prevailing culture – the share  $\gamma$  – and institutions – the value of  $\beta$ . Since citizens with civic values attach a greater weight to rents in their welfare function, whatever reduces equilibrium rents increases the relative fitness of civicness. Thus, a greater share of civic citizens and stronger institutions, by reducing equilibrium rents, increase the expected fitness of being civic rather than partisan. Formally,  $\Delta$  is globally increasing and continuous in  $\beta$  and  $\gamma$  in its full domain: we have  $\Delta_\gamma > 0$  and  $\Delta_\beta > 0$ .<sup>3</sup>

**A threshold culture** Note that  $\Delta(\gamma, \beta)$  can be either positive or negative, depending on parameter values. To obtain a rich cultural dynamics, we assume that:

$$\frac{1}{2(1 + \lambda)} < \varpi + \beta R < \frac{1}{2},\tag{7}$$

which in turn implies

$$\Delta(0, \beta) < 0 < \Delta(1, \beta).\tag{8}$$

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<sup>3</sup>Implicitly, we assume that equilibrium rents are non-negative for any  $\gamma \in [0, 1]$  and for all feasible institutions  $\beta$ .

That is, if all citizens are civic, then civic traits have higher fitness than partisan traits for all institutions (because equilibrium political rents are sufficiently low). Conversely, if all citizens are partisan, the relative fitness of partisan traits is higher.<sup>4</sup>

By continuity of  $\Delta(\gamma, \beta)$  in  $\gamma$ , the inequalities in (8) imply that there exists an intermediate culture (share of values)  $\hat{\gamma} \in (0, 1)$  – defined by  $\Delta(\hat{\gamma}, \beta) = 0$  – such that the two values are equally fit. By (6), we can solve for this threshold critical culture as:

$$\hat{\gamma} = \frac{1}{2\lambda(\varpi + \beta R)} - \frac{1}{\lambda}. \quad (9)$$

Hence, threshold  $\hat{\gamma}$  is a decreasing function of institutional quality,  $\beta$ . This is intuitive: as institutions improve, the relative fitness of civic values rises, and hence a lower share  $\hat{\gamma}$  of civic values in the population is sufficient for the two cultural traits to be equally fit.

**Dynamics** We are now ready to discuss how culture evolves over time. Let  $t$ -subscripts stand for time periods, such that  $\gamma_t$  is the population share of civic-minded people at the beginning of period  $t$ . Elections are held at the end of each period, after a round of electoral competition over policy, in the same way as in Section 2. We assume that  $\gamma_t$  evolves over time as:

$$\gamma_{t+1} = \gamma_t + q(\gamma_t)(1 - q(\gamma_t))Q(\Delta(\gamma_t, \beta)), \quad (10)$$

where  $q(\gamma_t) \in [0, 1]$  is an arbitrary, continuously increasing function with  $q(1) = 1$  and  $q(0) = 0$ . Further,  $Q(\cdot)$  is an arbitrary, continuously increasing function with  $Q(0) = 0$ , and  $\Delta(\gamma, \beta)$  is the relative fitness of civic vs. partisan values defined in (6). The share of civic citizens is thus growing (shrinking), whenever the relative fitness of civic values is positive (negative).

A subtle – substantive and methodological – question is whether the cultural share  $\gamma$  that enters  $\Delta(\gamma, \beta)$  should be dated by  $t$  or  $t + 1$ . The first, backward-looking case – with  $Q(\Delta(\gamma_t, \beta))$  – turns equation (10) into a form of replicator dynamics, which is widely used in evolutionary game theory – see Weibull (1995) or Sandholm (2010). Besley (2017) and Besley and Persson (2019a) give explicit microfoundations for this kind of assumption in the recent economics literature on cultural evolution. The second, forward-looking case – with  $Q(\Delta(\gamma_{t+1}, \beta))$  – turns equation (10) into a cultural-transmission mechanism that captures the consequences of purposeful socialization. Bisin and Verdier (2000a, 2001), Tabellini (2008b), and Besley and Persson (2019b) give explicit microfoundations for this formulation in the recent economics literature on cultural evolution. However, it turns out that the important lessons we want to draw here do not hinge on which of the two cases we adopt. As it is slightly simpler, we go with the backward-looking version.

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<sup>4</sup>Note that these conditions are consistent with non-negativity of rents, as long  $\lambda$  is sufficiently large and/or  $\varpi$  is sufficiently small.

**Dynamic complementarity of culture** Equation (10) says that the population share holding civic, rather than partisan, values rises over time if this trait gives a higher expected utility in the current social environment ( $\Delta > 0$ ), and falls in the opposite case ( $\Delta < 0$ ). This property together with the earlier result that  $\Delta_\gamma > 0$  produces a dynamic complementarity. A rising share of citizens with civic values – a higher  $\gamma$  – makes it more attractive to espouse such values, which further raises  $\gamma$  in the case when  $\Delta > 0$ . Conversely, a lower share  $\gamma$  makes it less attractive to hold civic values, which further lowers  $\gamma$  in the case when  $\Delta < 0$ .

This dynamic complementarity implies that equation (10) generates unique, but divergent, dynamics with three possible steady states: two “monocultural” ones and one “multicultural” one. The results can be summarized as follows:

**Proposition 1** The model has two stable steady states:  $\gamma = 1$  where everyone is civic, and  $\gamma = 0$  where everyone is partisan. The interior steady state,  $\gamma = \hat{\gamma}(\beta)$  depends negatively on the quality of institutions, but is unstable. Society converges to the civic steady state  $\gamma = 1$  from any initial population share  $\gamma_0 > \hat{\gamma}(\beta)$ , and to the partisan steady state  $\gamma = 0$  from any initial  $\gamma_0 < \hat{\gamma}(\beta)$ .

The instability of the multicultural (internal) steady state and stability of the monocultural (corner) steady states both follow from the facts that  $\Delta_\gamma > 0$ , and that  $\Delta \lesseqgtr 0$  and hence  $\gamma_t \lesseqgtr \gamma_{t+1}$  as  $\gamma \lesseqgtr \hat{\gamma}(\beta)$ .

To put the proposition in words, if initially a civic culture is sufficiently (insufficiently) diffused, society eventually reaches a good (bad) state with a civic (partisan) monoculture. Intuitively, a civic culture is relatively more fit only with sufficiently many civic types around, so that the equilibrium entails low political rents. If this condition is not satisfied, civic types experience a form of cognitive dissonance. They are thus permanently disappointed, such that partisan types have higher expected welfare, and society gradually evolves towards the steady state with a partisan monoculture. The dynamics are illustrated in Figure 1 for two values of  $\beta$ .

Importantly, the critical threshold (unstable steady state)  $\hat{\gamma}(\beta)$  that governs the cultural dynamics depends on the institutional strength. As discussed above, stronger institutions (higher  $\beta$ ) raise relative fitness  $\Delta_\beta > 0$ . This, in turn, lowers the critical threshold for culture  $\hat{\gamma}(\beta)$ , which makes it more likely that society reaches the civic steady state for any given initial values  $\gamma_0$ . This is illustrated in Figure 1, where the upper and lower curves refer to strong institutions  $\beta^S$  and weak institutions  $\beta^W < \beta^S$ . In other words, strong institutions can breed a civic culture, because they increase the relative fitness of civic cultural traits by generating (rational) expectations of lower corruption.

Insert Figure 1

**Discussion** Historical evidence is consistent with the prediction that strong institutions exert a positive long-run influence on culture. Environments that centuries ago had stronger checks and balances on the executive and more participatory institutions currently display a more civic and universalistic culture. This finding emerges from a variety of empirical studies carried out on different types of data. These include analyses of Italian and European municipalities and regions that vary by the quality of historical local political institutions (Banfield 1958, Putnam 1993, 2000, Guiso et al. 2008, Tabellini 2008a, 2010), of the cultural traits among second-generation US immigrants whose parents arrived from countries with different degrees of democratic government (Tabellini 2008a). Similar results show up in experiments run with individuals in Central Africa (Lowe et al. 2017) and Switzerland (Rustagi and Veronesi 2016) who were historically exposed to different political institutions, and in the attitudes of individuals whose ancestors were raided by slave traders (Nunn and Wantchekon 2011). The survey by Nunn (2009) provides further references. These studies do not explore the precise mechanisms behind cultural evolution, but the reduced-form association from past institutions to current cultural traits is very robust and in line with the predictions of our simple model.

**Notes on the literature** Tabellini (2008b) contrasts the evolution of universalistic vs. limited morality. He shows that cultural evolution reflects the spatial patterns of social interactions and of external enforcement. Universalistic values are discouraged if interactions and external enforcement of cooperation are mainly local. Conversely, well-functioning legal institutions breed universalistic values, since law enforcement facilitates transactions and cooperation between unrelated individuals. Thus, his model predicts that clan-based societies develop very different value systems compared to societies relying on the abstract rule of law. Greif and Tabellini (2010, 2017) apply this insight to the coevolution of culture and social organization, contrasting the historical bifurcation of China (where dynastic organizations prevailed) and Europe (where instead corporate organizations and legal institutions sustained cooperation between unrelated individuals). Hauk and Saez Marti (2002) is an early study of how the intergenerational transmission of values may affect corruption. See also the survey by Francois et al. (2019).

In this chapter, we think about culture mainly as manifested in a set of values. An important branch of the political-science literature considers socialization into political values, in the sense of which party to support, and shows that these are very persistent across an individual's life. This literature has recently been surveyed by Neundorff and Smets (2017). For an example of high-quality empirical work that focuses on identifying such persistence in cross-sectional and time-series data, see Ghitza and Gelman (2014).

## 4 Institutional Choice

Ultimately, institutions are endogenous as well. To introduce new elements simply and gradually into the analysis, we postpone until the next section a full discussion of how (discrete) institutional change interacts with (gradual) cultural evolution. In this section, we take the necessary first step towards that discussion. Thus, we study how politicians choose institutions in a given time period, where culture (the share of people with civic values) is parametrically given (from the past).

We assume that the outgoing incumbent from the last period chooses institutions (checks and balances,  $\beta$ ) at the beginning of each period before elections are held. Citizens also have a chance to protest against the incumbent, which may prevent her from running in the upcoming election. The chosen institutions then act as a constraint on subsequent policy choices (rents,  $r$ ) announced by both candidates in the course of the electoral competition.

**Within-period timing** Formally, the timing of events in period  $t$ , is as follows

1. The election winner from period  $t - 1$  chooses institutions,  $\beta_t$
2. Civic (but not partisan) citizens may protest against the incumbent's choice of institutions, and a successful protest prevents the incumbent from running as a candidate at stage 3.
3. If the incumbent is not ousted, she runs against an opponent candidate with an identical objective. If the incumbent is ousted, two new candidates run against each other. The two candidates announce policy,  $r_t$ , taking institutions as given.
4. Elections are held and the winner's policy is enacted.

The same sequence is repeated in every period. In equilibrium, institutions have to be incentive-compatible, in the sense of maximizing the expected utility of the incumbent. The only difference between the incumbent and the opponent is that the former sets the institutions at stage 1, which will constrain the effects of the policy platforms announced by both candidates. The incumbent also faces prospective protests at stage 2. However, as all prospective candidates have the same objectives, they would pick the same institution if they had this opportunity.

At electoral stage 3, candidates act as described in Section 2. Below, we discuss the behavior at institutional stages 1 and protest stage 2, in reverse order.

Our timing not only endogenizes institutions, but assumes that they act as a constraint on subsequent policy choices. This is related to the recent political-economics literature. Starting with Acemoglu and Robinson (2000), endogenous political institutions are indeed

viewed as a commitment device that impacts on subsequent equilibrium policies. The only difference is that in our model there is no commitment beyond the current period, whereas in the recent literature institutional commitments are typically made for one period into the future. This distinction will matter in the dynamic analysis of Section 5. Given our assumed timing, institutions are not a state variable, whereas they are a state variable in the theoretical literature on institutions.

To simplify the formal treatment, we adopt an analogous assumption to the treatment of the franchise by Acemoglu and Robinson (2000, 2006). That is, we assume that the institutions limiting political rents – like citizen values – come in only two forms, which we call strong and weak. Formally,  $\beta_t \in \{\beta^S, \beta^W\}$ , with  $\beta^W = 1 < \beta^S \leq \frac{1}{2(1+\lambda)R}$ , where the last equality guarantees that rents are non-negative even when everybody in population is civic ( $\gamma = 1$ ). Castañeda Dower et al. (2020) provide a full-fledged treatment of the franchise-choice model, when the institutional variable is chosen on a continuous domain.

**Civic protests (stage 2)** Picking the weaker institution at stage 1 of the within-period game will confer benefits on all incumbents, since it raises the equilibrium rents that can (probabilistically) be extracted. To have a meaningful tradeoff, the incumbent must also face a cost from choosing  $\beta_t = \beta^W$ . Such costs arise if elections are not the only mechanism for disciplining politicians. This is the rationale behind stage 2, whereby the incumbent can be ousted as a stage-3 election candidate, if her stage-1 institutional choice triggers citizen protests.

Specifically, we assume that: (i) civic citizens – but not partisan ones – may protest in the streets, (ii) a larger share of civic citizens turn out to protest if they expect higher rent extraction under the chosen institution, (iii) a successful protest prevents the incumbent from running as a candidate. A simple way to formalize assumptions (i)-(iii) is to postulate that the period- $t$  incumbent is ousted at stage 2 with probability

$$z_t = z(\gamma_t, \beta_t) = \gamma_t F(r^*(\gamma_t, \beta_t)), \quad (11)$$

where  $F$  is an increasing protest function with  $F(0) = 0$ . Clearly,  $z(\gamma_t, \beta^S) < z(\gamma_t, 1)$  as stronger institutions bring about lower rents.

**The incumbent objective** Relying on these assumptions and normalizing an ousted incumbent's payoff to zero, we can write the incumbent's objective at stage 1 of period  $t$  as the expected value

$$\phi(\gamma_t, \beta_t) = (1 - z(\gamma_t, \beta_t))v_t = (1 - z(\gamma_t, \beta_t))p_t \left( \frac{r(\gamma_t, \beta_t)}{\beta_t} + R \right). \quad (12)$$

To study the decision problem, we define the expected payoff difference between strong and weak institutions  $\Phi(\gamma_t) = \phi(\gamma_t, \beta^S) - \phi(\gamma_t, 1)$ . Using this definition, (12), and our earlier result that in equilibrium  $p_t = 1/2$ , we can write

$$\begin{aligned} \Phi(\gamma_t) = & \frac{1}{2} \left[ \frac{1}{\beta^S} r^*(\gamma_t, \beta^S) - r^*(\gamma_t, 1) \right] \\ & + \frac{\gamma_t}{2} \left[ F(r^*(\gamma_t, 1))(r^*(\gamma_t, 1) + R) - F(r(\gamma_t, \beta^S)) \left( \frac{1}{\beta^S} r^*(\gamma_t, \beta^S) + R \right) \right] \end{aligned} \quad (13)$$

What are the properties of  $\Phi(\gamma_t)$ ? The first term on the right-hand side is negative (as  $\beta^S > 1$  and  $r^*(\gamma_t, \beta^S) < r^*(\gamma_t, 1)$ ), since rents are lower with strong institutions. But the second term is non-negative (for the same reasons, and as  $F$  is increasing), since protests are less vigorous and the incumbent's probability to be ousted lower when institutions are strong. Clearly, we have  $\Phi(0) < 0$ , as the second term is zero at  $\gamma_t = 0$ : no ousting takes place when no civic citizens can take to the streets. To cut down on the taxonomy of possible cases, we assume that  $\Phi(1) > 0$ . Finally, it is easy to show that  $\Phi$  is monotonic in the share of citizens with a civic culture, with  $\Phi_\gamma > 0$  (due to the direct effect as well as  $r_\gamma < 0$ ).<sup>5</sup>

**Equilibrium institutions (stage 1)** With these properties, we have the following result:

**Proposition 2** There exists a threshold value of culture  $\tilde{\gamma}$  defined by  $\Phi(\tilde{\gamma}) = 0$ , such that the incumbent's optimal institutional choice satisfies:

$$\beta_t = \begin{cases} \beta^W = 1 & \text{if } \gamma_t < \tilde{\gamma} \\ \beta^S & \text{if } \gamma_t \geq \tilde{\gamma}. \end{cases}$$

Given  $\Phi(0) < 0$ ,  $\Phi(1) > 0$  and monotonicity of  $\Phi$  with  $\Phi_\gamma > 0$ , the existence of critical value  $\tilde{\gamma}$  follows from the intermediate-value theorem. Because  $\Phi(\gamma)$  is defined as the expected-payoff difference to the incumbent between strong and weak institutions, the institutional choices are immediate by monotonicity of  $\Phi$ .

Let us summarize and give the intuition for the formal result in Proposition 2. The incumbent faces a tradeoff: stronger institutions cut expected rents conditional on survival, but they also raise the probability of survival. Moreover, the slope of that tradeoff varies with the prevailing culture, as measured by  $\gamma_t$ . When more people are civic, the probability of non-electoral ousting increases (as more people are prepared to take to the streets). Moreover, equilibrium rents fall as  $\gamma_t$  rises (as electoral punishments are stronger), and this makes weaker institutions less appealing to the incumbent (because institutions determine what fraction

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<sup>5</sup>Formally,  $\Phi(\gamma_t)$  also depends on the level of  $\beta^S$ . That relation is ambiguous in sign, however, since the first term in  $\Phi(\gamma_t)$  is decreasing in  $\beta^S$  while the second term is increasing in  $\beta^S$ .

of rents is appropriated by politicians). Both forces thus push in the same direction: a more widespread civic culture (a higher  $\gamma_t$ ) makes strong institutions more attractive to the incumbent.

**Discussion** The analysis in this section is related to Acemoglu and Robinson (2000, 2001, 2006) and some of the research inspired by their work. Our framework focuses on agency conflicts within a democracy with an open franchise, rather than redistributive struggles and the choice of whether to install or repeal the franchise. However, as in their analysis, the threat of non-electoral removal from political privilege can make an incumbent forego the direct benefits from less constraining institutions. Moreover, even though institutions constrain policy only within the current period – rather than across periods – the reason for reform is analogous: changing institutions allows incumbents to influence future equilibrium policies. In other words, institutions allow the incumbent to make commitments that cannot be credibly made directly over policies.

In Acemoglu and Robinson (2006), institutional reforms have an additional feature: they are hard to reverse. Once the franchise has been introduced, it is difficult for an incumbent to repeal it, and vice versa once a coup has occurred. This irreversibility is particularly important in a stochastic setting – for example, when the protest function  $F$  is affected by exogenous shocks. Contingencies that make protests more effective – say, coordination of collective action becomes easier, or the incumbent is weakened by external events – create opportunities for institutional change. If institutions are irreversible, or can be reversed only at additional costs, then these critical junctures have long-lasting effects. Clearly, irreversibility is more natural for institutional reforms that drastically change the overall rules of the game, like fully extending the suffrage or devolving decision-making powers. This important aspect is missing in our model, since institutions are not a state variable (they are chosen at the end of each period, and existing institutions do not constraint institutional choice).

In some instances, irreversibility (or partial reversibility) of institutions reflects how power is allocated in society or across different offices. In this sense, it is a technological assumption about the consequences of institutions. But institutional inertia can also result from behavioral features. Protests do not take place in a vacuum, they also reflect emotions and feelings of entitlements. These behavioral features have been modeled in the literature with the idea that institutions and other state variables affect individual reference points. Then, people’s sense of entitlements reflects expectations of what it is reasonable to obtain in a given environment. Institutional reforms change these expectations, making protests more or less likely. Once suffrage has been extended, the decision to remove this fundamental right is likely to trigger outrage and protests, in excess of what would have happened if the status quo of limited suffrage had been preserved. This may create institutional inertia.

Passarelli and Tabellini (2017) study a model of protests where citizens have reference-dependent preferences. They focus on the choice of state variables like public debt, and show that, by issuing public debt, governments can mitigate both current and future protests. A similar mechanism can be used to study institutional reforms. Besley and Persson (2019a) do so in their study of democratic values and democratic reforms. Specifically, they assume that citizens with democratic values who contemplate defending democracy against an autocratic threat (demanding a democracy in an autocracy) uses the outcome under autocracy (democracy) as a reference point, against which they evaluate the outcome with the existing institution.

**Notes on the literature** Both economists and political scientists have done early theoretical research on endogenous democratic institutions, along similar lines as in this chapter and in Acemoglu and Robinson's research. Among the former, one may mention Lizzeri and Persico (2004), who argue that the introduction of the franchise may reflect benefits tied to general versus particularistic spending. Among the latter, one should mention Boix (2003), who also proposes a model of endogenous democratic reforms, where the latter not only resolve commitment problems but coordination problems.

Economists and political scientists have long debated which cultural and economic features are favorable to the emergence and stability of democracy. Lipset (1959) advocates the thesis of modernization (a positive link between democracy and economic development), while Almond and Verba (1963) emphasize that a well-functioning democracy requires a civic culture. More recently, Glaeser et al. (2007) stress that democratic institutions are endogenous and reflect the accumulation of human capital, while Acemoglu et al. (2008) argue that the time-series evidence is inconsistent with the idea of modernization.

The idea that institutions are chosen strategically to influence future policy choice is also at the heart of the important literature on state capacity. While the powers of the state have been discussed informally by political scientists and sociologists, the first formal modeling of state capacity can be found in Cukierman et al. (1992), Acemoglu (2005), and Besley and Persson (2009, 2010, 2011). The empirical and historical work on the topic includes Levy (1988) and more recently Dincecco (2017), and Dincecco and Onorato (2018). (See also the survey by Dincecco and Wang 2018).

Grillo and Prato (2020) study reference-dependent preferences in elections, in a model with endogenous institutions. They show that in some instances this mechanism can lead to democratic backsliding (that is, a process of gradual and progressive institutional weakening). As already mentioned, Castañeda Dower et al. (2020) consider a franchise model, when the institutional variable also can be chosen continuously. Alesina and Giuliano (2011) show a link from culture to politics more generally, in the sense that strong family ties relate negatively

to political participation.

A literature in economic history studies the evolution of state institutions in Europe, and how they constrained the absolutist powers of the sovereign – see the survey by Johnson and Kom (2017).

## 5 Cultural Evolution and Institutional Change

We are now ready to discuss the full-equilibrium dynamics as culture evolves over time (like in Section 3) and incumbents are free to pick whichever institution they see fit in each period (like in Section 4).

An early application of this approach can be found in Tabellini (2008b), who studies how endogenous culture dynamically interacts with endogenous law-enforcement institutions. The dynamic complementarities between culture and institutions give rise to hysteresis: depending on initial conditions, societies can remain trapped in bad steady states with weak institutions and particularistic values, or converge to a steady state with strong institutions and universalistic values. In his model, however, law-enforcement institutions are a policy outcome and not a constraint on subsequent policy choices.

The dynamic interaction of proper political institutions and culture features in Persson and Tabellini (2009). They study how the appreciation of democratic institutions (called democratic capital) is associated with transitions from autocracy to democracy and the stability of the latter (and vice versa). In their model, however, the endogenous accumulation of democratic capital is mechanical.

Besley and Persson (2019a) take a further step, by studying the interaction between democratic reforms and democratic values, when these values are not only endogenous but subject to choice. Similar ideas have also been applied to culture and social organizations in China and Europe (Greif and Tabellini 2017) and organizational cultures and organizational design (Besley and Persson 2020b).

Analyzing how culture and institutions jointly coevolve over time may appear as a difficult task, at least upon a first reflection. However, as will soon be apparent, clear-cut results come relatively easily. Formally, this is because we can carry out the analysis with culture as the single state variable. In the research tradition of Acemoglu and Robinson (2000), endogenous institutions (having the franchise or not) is the only state variable, on the argument that they are more inertial than policy (redistribution from elite to the masses). As per the model in Section 4, we maintain that assumption *within* each period. But when it comes to comparing culture and (formal) institutions, the most plausible assumption – at least to us – is that culture has more inertia than institutions. Thus we maintain the assumption from the cultural-evolution model in Section 3 that culture is predetermined *across* the adjacent

period. The alternative, where both culture and institutions are predetermined across periods would make the analysis much more difficult, as we would have two state variables (see Ticchi et al. 2013, Bisin and Verdier 2017 for such analyses).

**Combining the building blocks** To pursue the full analysis, we first recall the results on cultural evolution in Proposition 1 and define the critical cultural value (unstable steady state) for each of the two institutions as  $\hat{\gamma}(\beta^S)$  and  $\hat{\gamma}(\beta^W) = \hat{\gamma}(1)$ . It follows from the results in Section 3, that  $\hat{\gamma}(\beta^S) < \hat{\gamma}(1)$ . By Proposition 1, culture evolves monotonically towards the civic (partisan) steady state, whenever the initial culture  $\gamma_0$  is above (below) its relevant critical value.

Next, we recall the results on institutional choice in Proposition 2, which say that the incumbents pick strong (weak) institutions, whenever the current value of culture exceeds (falls below) the threshold  $\tilde{\gamma}$ . As explained in Section 4, the latter is defined by the indifference condition  $\Phi(\tilde{\gamma}) = 0$ .

Putting these pieces of analysis together, we can describe the equilibrium dynamics as follows:

**Proposition 3** There are three possible parameter configurations with different cultural and institutional dynamics:

- (a)  $\tilde{\gamma} > \hat{\gamma}(1)$ . If  $\gamma_0 > \tilde{\gamma}$ , society starts out with strong institutions  $\beta^S$  and its culture converges to  $\gamma = 1$  without any institutional reform. If  $\gamma_0 < \hat{\gamma}(1)$ , society starts out with weak institutions  $\beta^W = 1$  and its culture converges to  $\gamma^s = 0$  without any reform. If  $\hat{\gamma}(1) < \gamma_0 < \tilde{\gamma}$ , society starts out with weak institutions with culture converging towards  $\gamma = 1$ , then makes a reform towards strong institutions as  $\gamma_t$  reaches  $\tilde{\gamma}$ , which further boosts civic values until they have converged to a civic monoculture.
- (b)  $\tilde{\gamma} < \hat{\gamma}(\beta^S)$ . If  $\gamma_0 < \tilde{\gamma}$ , society starts out with weak institutions  $\beta^W = 1$  and its culture converges to  $\gamma = 0$  without any institutional reform. If  $\gamma_0 > \hat{\gamma}(\beta^S)$ , society starts out with strong institutions  $\beta^S$  and its culture converges to  $\gamma^s = 1$  without any reform. If  $\hat{\gamma}(\beta^S) > \gamma_0 > \tilde{\gamma}$ , society starts out with strong institutions with culture converging towards  $\gamma = 0$ , then makes a reform towards weak institutions as  $\gamma_t$  reaches  $\tilde{\gamma}$ , which further boosts partisan values until they have converged to a partisan monoculture.
- (c)  $\hat{\gamma}(\beta^S) < \tilde{\gamma} < \hat{\gamma}(1)$ . If  $\gamma_0 < \tilde{\gamma}$ , society starts out with weak institutions  $\beta^W = 1$  and its culture converges to  $\gamma = 0$  without any institutional reform. If  $\gamma_0 > \tilde{\gamma}$ , society starts out with strong institutions  $\beta^S$  and its culture converges to  $\gamma = 1$  without any reform.

The proposition provides an exhaustive list of possibilities. Its taxonomy of cases could be reduced by specific assumptions regarding the general form of functions  $F$ ,  $q$ ,  $Q$ , and  $W$ ,

the distributions of shocks  $\sigma^i$  and  $\delta$ , and parameters  $R$ ,  $\lambda$ , and  $\beta^S$ . The three possible cases in Proposition 3 are illustrated in Figures 2a, 2b and 2c, respectively.

**Mutual feedbacks** Proposition 3 conveys a basic dynamic complementarity between cultural evolution and institutional change. For certain configurations – essentially when initial cultural values are predominantly civic (partisan) – electoral accountability is high (low), so rents are low (high). In those cases, the gains from weak institutions are relatively small (large), so politicians tend to pick strong (weak) institutions. This, in turn, further raises the fitness of a civic (partisan) culture and society converges to a civic (partisan) monoculture without any institutional change. Such cases are illustrated in Figure 2c, and would also occur in Figure 2a when initial culture  $\gamma_0$  satisfies  $\gamma_0 > \tilde{\gamma}$  or  $\gamma_0 < \hat{\gamma}(1)$ , and in Figure 2b if  $\gamma_0 > \hat{\gamma}(\beta^S)$  or  $\gamma_0 < \tilde{\gamma}$ .

Insert Figure 2

For more intermediate cultural values – the last possibility in cases (a) and (b) – culture starts developing either towards a partisan monoculture with weak institutions, or towards a civic monoculture with strong institutions. This starts changing equilibrium rents, which feeds back to cultural evolution via the expected payoffs of civic vs. partisan values. As culture reaches its critical juncture  $\tilde{\gamma}$ , however, incumbents undertake a reform towards strong or weak institutions, respectively, which further boost the relative fitness of civic or partisan values. These cases are illustrated by Figure 2a when initial culture  $\gamma_0$  fulfills  $\hat{\gamma}(1) < \gamma_0 < \tilde{\gamma}$ , and by Figure 2b, when initial culture  $\gamma_0$  fulfills  $\hat{\gamma}(\beta^S) > \gamma_0 > \tilde{\gamma}$ .

**Discussion** Since the empirical work by Acemoglu et al. (2001), historical research has documented the surprisingly persistent effects of past institutions on economic and political development. Three good examples out of a large and growing literature are Dell (2010), Nunn and Wantchekon (2011), and Dell et al. (2018). The dynamic and two-way complementarities between culture and institutions we have illustrated in this section can shed light on the mechanisms behind the persistence documented in this kind of historical research. Weak institutions allow those in power to extract rents at the expense of citizens at large. Such a political environment breeds a culture of clientilism and discourages the emergence of strong civic values. Partisan cultural traits, in turn, may be counter-productive in several ways. They amplify political distortions and enable those in power to get away with even more rents. This in turn strengthens political incentives to keep institutions weak, because the advantages of weak institutions are enhanced by a partisan culture. Finally, if few citizens have civic values, few are willing to fight for institutional improvements, which further undermines institutional development. Hence society remains trapped in an environment of high rents, weak institutions and a clientelistic culture. We have not modelled economic development here, but it is easy to

see how political rents and a partisan culture may also undermine economic growth. Dynamic complementarities operate in reverse in an environment with strong institutions and a strong civic culture.

These arguments also reveal that a debate on whether culture or institutions are more important determinants of economic development is like a debate over chicken and eggs. In the grand scheme of things, both culture and institutions are endogenous and they are jointly determined. Both display inertia and persistence, although in some instances institutions can overcome inertia and change rapidly.

To see the implications of these features, suppose country-level panel data on institutions and culture were generated by a set of models all like the one in this chapter, but with different country-specific functions, parameters, and distributions. Then the simultaneity in these panel data of culture and institutions would make it a hazardous exercise to tease out a causal one-directional link from one of these variables to the other. If one swallows our assumption that culture is the slowest moving variable, however, the *initial conditions* for culture are the first chickens in the system. It is these that govern the joint coevolution of culture (the subsequent stream of chickens) and institutions (the subsequent stream of eggs) over time.

Some evidence do indeed support the causal chains captured by the model in this section. Persson and Tabellini (2009) theoretically postulate that the appreciation for democracy amongst citizens is enhanced by the history of past democracy and by the geographic proximity to other democracies, and that these values induce citizens to support democratic institutions. They then show that the evidence from democratic transitions (in both directions) is consistent with these predictions. Consistent with a channel of cultural transmission across countries, Magistretti and Tabellini (2018) show that trade integration with other democracies increases the quality of home democratic institutions, particularly for countries with lower initial level of economic and institutional development. Along similar lines, Giuliano and Nunn (2013) find that democracy spreads from the local to the national level.

Besley and Persson (2019a) study a setting where political culture in the sense of democratic values coevolves with strategically chosen (by political leaders) reforms between democratic and autocratic institutions. They show that such a setting with minimal persistence of democratic institutions, but persistence in democratic values, can reproduce the strong patterns observed in historical democracy data. That is, one set of countries make a single transition to democracy, another set stay autocratic (or transit once and for all to autocracy), and a third set of countries flip-flop between the two modes of political governance. Besley and Persson (2020b) study a related model at the level of the organization, where organizational cultures, designs and performance interact over time, and where strong organizational cultures can be both a virtue and a vice.

The emphasis on hysteresis and path dependence has induced some scholars to pay attention to critical junctures, and to ask where the key initial conditions come from. Roland (2019) contrasts the broad features of political regimes in ancient history. He argues that where geographic conditions and factor endowments were more conducive to domestic and foreign trade, market-supporting institutions emerged together with an individualistic culture. Where instead initial conditions of production were more homogeneous, leading to specialization and division of labor, a system of state control emerged together with a collectivistic culture. Along similar lines, Talhelm et al. (2014) argue that geographic features led to specialization in rice production in certain areas of China, and that this specialization can explain psychological and cultural within-country differences.

Greif and Tabellini (2017) instead emphasize how religion may shape the initial conditions of culture. They contrast the historical coevolution of culture, social organizations and institutions in China vs. Europe. Because of their different religions, these continents began the second millennium AC with very different cultural initial conditions, which led to starkly different development paths. China's dynastic value system facilitated the evolution of clan-based organizations, and the persistence of an unchallenged autocratic form of government. By contrast the European Church pushed to dismantle large extended families and spread a culture of universalistic values, which facilitated the emergence of corporate organizations, and legal institutions that enforced cooperation amongst strangers. These corporate-governance principles tilted the emerging organization of the state towards the rule of law and participatory institutions, as extensively discussed in Greif et al. (2020, ch. 7).

Consistent with this idea, Schulz (2016) finds that, within Europe, exposure to the Church's medieval prohibition of kin marriage is correlated with the emergence of participatory city institutions. Exploiting evidence from the Ethnographic Atlas, he also finds that weak kin networks in pre-industrial societies are associated with more democratic forms of government. Similar evidence is discussed at length in the monograph by Henrich (2020).

**Notes on the literature** Bisin and Verdier (2000b) is one of the first papers to study the dynamic evolution of culture and public policies in a political equilibrium. Gorodnichenko and Roland (2013, 2018) as well study how culture influences political institutions and economic development, contrasting individualism vs. collectivism. They find that an individualistic, as opposed to a collectivist, culture facilitates earlier adoption of democracy and innovation-led economic development.

Stasavage (2020) discusses how early European state institutions evolved from principles of corporate governance. Acemoglu and Robinson (2018, 2019) stress the important interaction between civil society and inclusive political institutions in the unique path of European institutional development. The evolution of European state institutions, and their interaction

with distinctive elements of European cultural traditions, has also been studied by historians like Hintze (1975), Tierney (1982), Mitterauer (2010) amongst others.

## 6 Taking Stock

The research discussed in this chapter is motivated by two facts. Policy failures and successes – and associated economic and political outcomes – are highly correlated across countries. Moreover, these economic and political outcomes are remarkably persistent. Together, these facts mean that some countries are very resilient in their prosperity and well-functioning institutions, while others are conspicuously stable in their economic and political backwardness. The interaction of culture and institutions can account for these patterns in the data.

Both cultural traits and formal institutions are inertial and – at any given moment – they shape economic and political outcomes. In a static setting, their effects are similar, and possibly substitutable. Efficient market interactions can be sustained by effective law enforcement or, alternatively, by a cooperative and civic culture. Good political outcomes can reflect either well-designed constitutions or, alternatively, informed and well-meaning participation by citizens.

But both culture and institutions are endogenously changing over time, and their dynamics are likely to mirror different forces. While strategic expediency for the incumbent may drive institutional reforms, relative fitness may drive the evolution of alternative cultural traits. Surprisingly, these two drivers give rise to dynamic complementarities and rich two-way interactions. In our simple model of political agency, a culture of strong civic engagement is more fit – and thus more favored – if strong political institutions also discourage political abuse. Conversely, political incumbents are less tempted to weaken political institutions if they fear the reaction of vigilant and engaged citizens.

These dynamic interactions between culture and institutions can explain why economic and political development outcomes cluster together, why critical junctures could make a society change course, and why otherwise similar countries which start off with different initial conditions for culture or institutions can follow very different development paths. Rapidly growing lines of research rely on these general insights to explore a variety of problems at the frontier of economics, evolutionary anthropology, history, political science, and sociology. Some applications are summarized in other parts of this handbook.

Our specific analysis has singled out two particular aspects of institutions and culture. Strong institutions, like checks and balances on the executive, discourage political abuse and rent seeking. Civic cultural traits, like universalistic values, facilitate coordination and cooperation between unrelated individuals. In our simple model, both aspects are captured as parameters, but they can be given more complete microfounded representations in richer

models (for example, Persson et al. 1997, Aghion et al. 2004, Tabellini 2008b, Besley and Persson 2019b).

These insights notwithstanding, our discussion has omitted other aspects of institutions and cultural traits that have received attention in the literature. In particular, culture can be seen as a system of beliefs about the behavior by others, rather than as a system of values. This is the approach taken by many papers on social norms (for example, Kotlikoff et al. 1988, Kreps 1990, Greif 1994, Acemoglu and Jackson 2015). A problem with beliefs-driven models is that they have multiple equilibria and thus less sharp predictions. Another line of research instead views social norms as beliefs about the values of others (rather than about the behavior of others) – see, for instance, Bicchieri (2006), Benabou and Tirole (2011) and D’Adda et al. (2020). There is certainly room for more than one approach to these issues, and the direction of future research will have to be guided by solid empirical evidence.

Ongoing research on culture and institutions is mostly motivated by positive questions. The reason that normative issues have attracted less attention may be that institutions and culture are highly persistent and difficult to change. Yet, normative questions are absolutely vital. How is it possible to exit from a “corruption trap” where a clientelistic culture and weak institutions mutually reinforce each other? What role can education play in promoting values that would induce more (or less) civic behavior by citizens? Do citizens become politically more engaged if they are exposed to more information about the performance of politicians? Should institutional reforms begin with local governments, where democratic interactions may be easier, and only proceed to national government once citizens have learnt how to appreciate their new local institutions? Or – reversing the argument – should one avoid decentralized powers in countries where civic and partisan cultures cluster geographically, to avoid economic, institutional and cultural divergence?<sup>6</sup>

Other equally important questions concern democratic backsliding in well-functioning political systems. Adverse economic shocks can make radical or populist politicians more popular, and bring some of them to office, setting in motion a process of institutional and cultural deterioration.<sup>7</sup> What specific institutional safeguards, if any, can prevent democratic backsliding? How far can free media serve as a channel for alerting public opinion to the dangers of democratic backsliding? Can international pressure prevent the erosion of democratic institutions without further galvanizing domestic nationalistic forces? Addressing these and other normative questions is an important priority for future research on culture and institutions.

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<sup>6</sup>Myerson (2020) argues in favor of letting policymakers be held accountable locally rather than centrally, Martinez Bravo et al. (2017) find that the introduction of local elections in rural China increased public good provisions, Mansuri and Rao (2013) favorably discuss development strategies that are based on community empowerment. Mauro et al. (2020) take the opposite position, and argue that decentralization has been harmful to the Italian South, because it has enhanced the negative influence of local (less civic) political culture.

<sup>7</sup>As shown by Funke et al. (2016), this risk is particularly high after deep financial crises.

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Figure 1

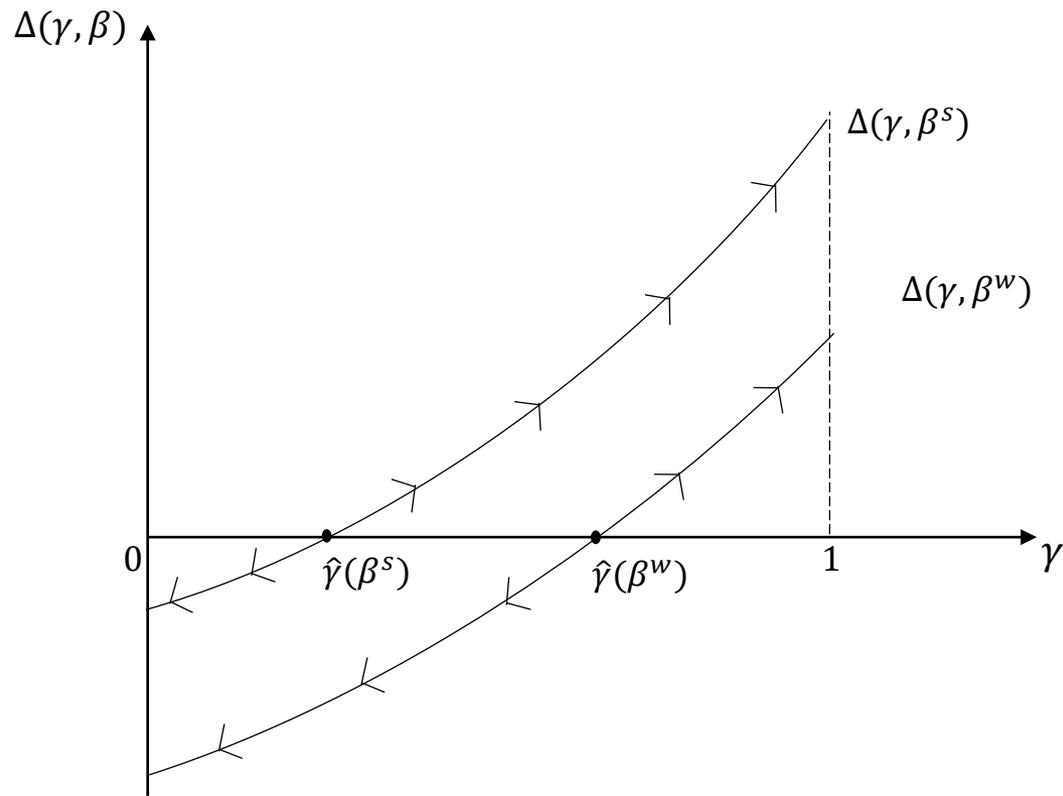


Figure 2(a)  $\hat{\gamma}(\beta^w) < \tilde{\gamma}$

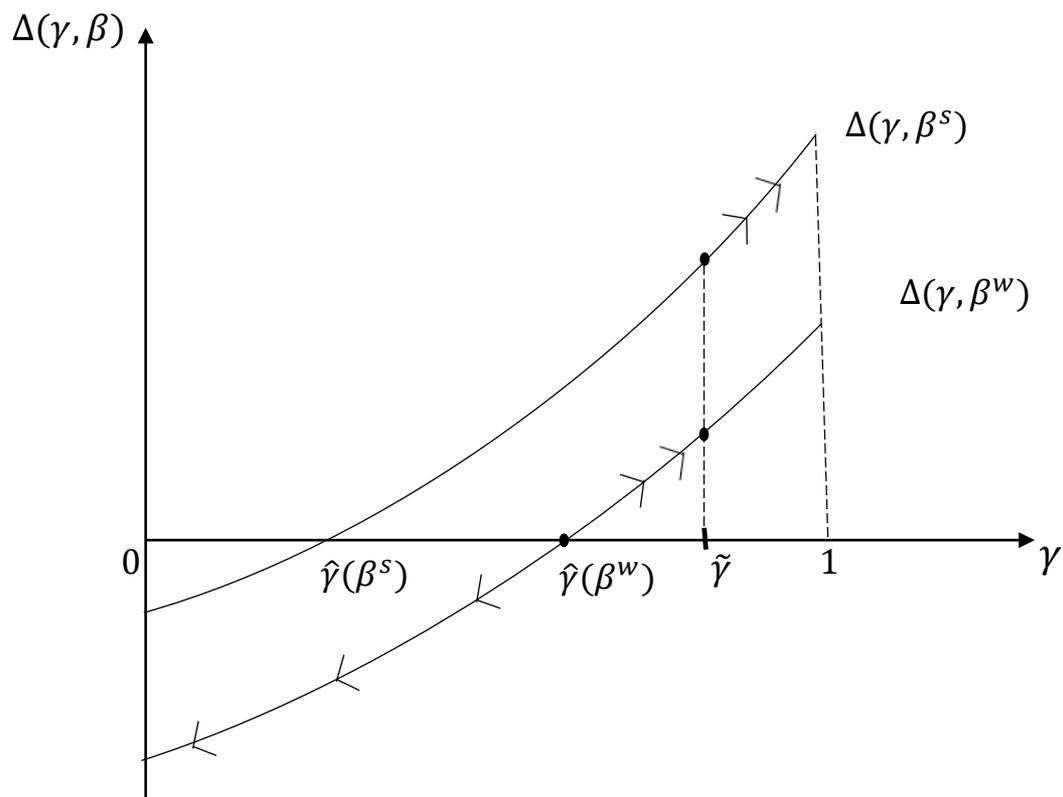


Figure 2(b)  $\tilde{\gamma} < \hat{\gamma}(\beta^s) < \hat{\gamma}(\beta^w)$

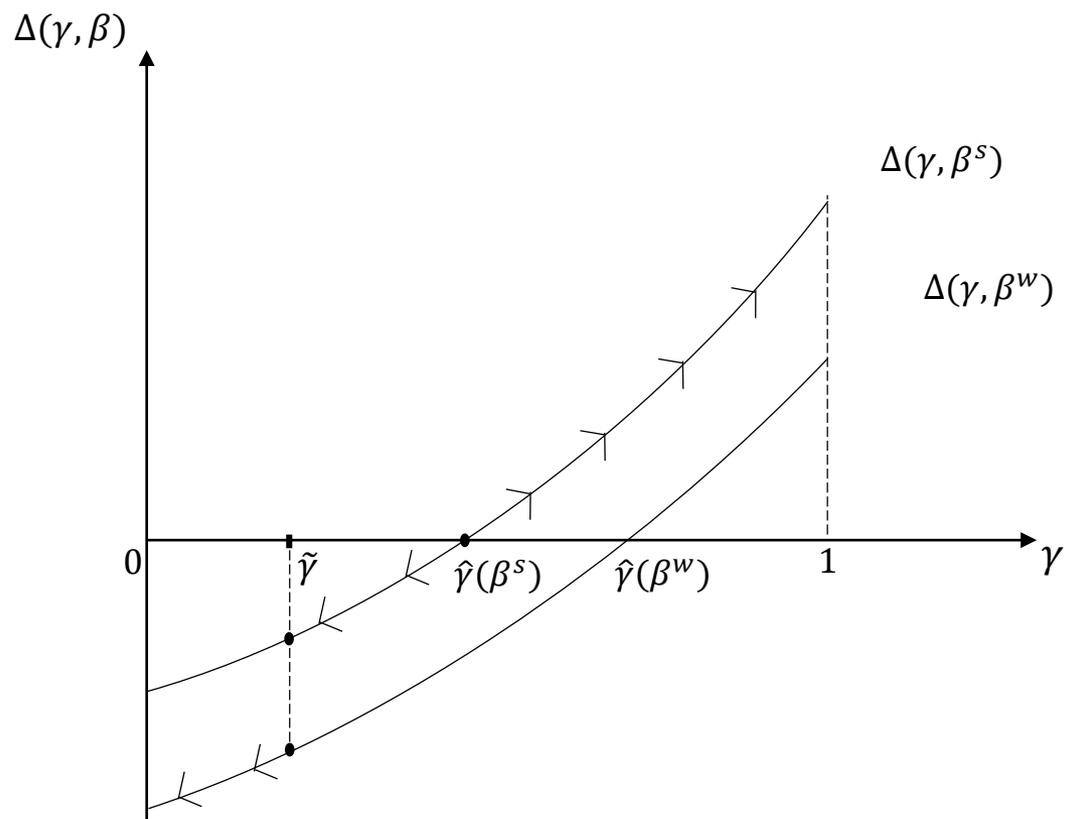


Figure 2(c)  $\hat{\gamma}(\beta^s) < \tilde{\gamma} < \hat{\gamma}(\beta^w)$

