Culture, Institutions and Social Equilibria: A Framework*

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Abstract

This paper proposes a new framework for studying the interplay between culture and institutions. We follow the recent sociology literature and interpret culture as a "repertoire", which allows rich cultural responses to changes in the environment and shifts in political power. Specifically, we start with a culture set, which consists of attributes and the feasible connections between them. Combinations of attributes produce cultural configurations, which provide meaning, interpretation and justification for individual and group actions. Cultural configurations also legitimize and support different institutional arrangements. Culture matters as it shapes the set of feasible cultural configurations and via this channel institutions. Yet, changes in politics and institutions can cause a rewiring of existing attributes, generating very different cultural configurations. As such, cultural persistence may result from the dynamics of political and economic factors—rather than being a consequence of an unchanging culture. We distinguish cultures by how fluid they are—whereby more fluid cultures allow a richer set of cultural configurations. Fluidity in turn depends on how specific (vs. abstract) and entangled (vs. free-standing) attributes in a culture set are. We illustrate these ideas using examples from African cultures, England, China, Islam, the Indian caste system and the Crow. In all cases, our interpretation highlights that culture becomes more of a constraint when it is less fluid (more hardwired), for example because its attributes are more specific or entangled. We also emphasize that less fluid cultures are not necessarily "bad cultures", and create a range of benefits, though they may reduce the responsiveness of culture to changing circumstances. In many instances, including in the African, Chinese and English cases, we show that there is a lot of fluidity and very different, almost diametrically-opposed cultural configurations are feasible and can emerge in response to political changes.

Preliminary and Incomplete. Please Do Not Circulate.

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1 Introduction

Cultural theories have once again become popular in economics and political science, offered as explanations for economic, social and political differences between countries, regions, ethnic groups and families. The political scientist Samuel Huntington was at the forefront of this revival, proffering cultural differences as the primary driver of economic and political divergences and international conflict (Huntington, 1993). In the 2000 book *Culture Matters: How Values Shape Human Progress*, he argued: "South Koreans value thrift, investment, hard work, education, organization, and discipline. Ghanaians have very different values" (Huntington, 2000, p. xiii). The economic historian David Landes in the same volume agreed with this perspective, stating "Culture makes almost all the difference" (p. 2) for economic growth and cross-country differences. Many economists and political scientists have reached similar conclusions, even if sometimes less extreme and emphasizing different aspects of culture.[1]

One thing common to much of this literature is an approach and definition of culture based on the conceptualization championed by the great sociologist Talcott Parsons. Parsons (1951) viewed culture as a stable and coherent "normative pattern of value-orientations" that help individuals make decisions and adapt to different circumstances (1951, p. 171). He emphasized the congruence and "logical consistency" of these value orientations as a way of coordinating social interactions (1951, p. 9). Culture thus defined naturally lives at the level of well-delineated groups, such as nations, regions, ethnicities or religions. Because of its coherence and logical consistency, culture will tend to be sticky and will matter for all sorts of decisions and social outcomes, even if it is, in DiMaggio's (1997, p. 264) terminology, a "latent variable" that is not observed directly. This Parsonian approach has been adopted by the recent culturalist revival. In the preface of the same book, Huntington, joint with Lawrence Harrison, defines culture as "the values, attitudes, beliefs and orientations, and assumptions prevalent among people in a society," (p. xv) and proposes that culture is stable, coherent and persistent, in fact almost unchanging, at the level of such broad groupings. A particularly clear articulation for economists is provided by Guiso, Sapienza and Zingales (2006, p. 23) who define culture "as those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation". Given this approach, it was natural for this literature to view culture as a major independent variable impacting economics and politics, which could be measured from its various symbolic and behavioral footprints

[1] We discuss the related literature in detail in Section 9, and do not provide references here unless they are important for the argument or necessary for specific attribution.

(religions, rituals, kin relations, family structure, certain rituals, observed civic behaviors such as willingness to donate blood, reciprocity, reported trust in others and even strategy choices in games).

In this paper, we depart from this Parsonian paradigm, following the more recent literature in sociology, which has successfully argued that cultures tend to be more fluid, less coherent, less stable but also more adaptable. In the terminology of Swidler (1986, p. 277), culture should be viewed as

> a "toolkit" or repertoire from which actors select differing pieces for constructing lines of action. Both individuals and groups know how to do different kinds of things in different circumstances.

This more recent literature starts, in many ways, with Clifford Geertz's "thicker" description of cultures, emphasizing both their intricate fluidity and often incoherence (rather than Parsons's emphasis on coherence). Based on Geertz, but adapted to our focus on economic and political outcomes, we define culture as *historically transmitted patterns of beliefs, relationships, rituals, attitudes and obligations that furnish meaning to human interactions and provide a framework for interpreting the world, coordinating expectations and constraining behaviors.*[2] Critically, culture is not just about "values". Nor does it typically determine a specific type of behavior. Rather, it provides a set of justifications and associated choices that individuals can make while finding consistent meaning in social interactions. This departure from the Parsonian paradigm has many far-reaching implications. Most importantly for us, as DiMaggio (1997, p. 265) notes, it implies that culture becomes adaptable and can be used "strategically", and thus:

> once we acknowledge that people behave as if they use culture strategically, it follows that the cultures into which people are socialized leave much opportunity for choice and variation.

Another implication, once again vital for our focus, is that in contrast to the approach common in economics, cultures are not determinate social equilibria (for example as Greif, 1994, defines

[2]This definition heavily borrows from Sewell (2005) and especially from Geertz's (1973, p. 89) famous definition of culture as: "historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes towards life." Here, symbols are defined as: "tangible formulations of notions, abstractions from experience fixed in perceptible forms, concrete embodiments of ideas, attitudes, judgments, longings or beliefs" (1973, p. 91). Relative to this definition, we drop the emphasis on symbols, which are central in many settings, but less important in the context of our focus here, and also less in line with the economics and political science literatures in this area. See also Bourdieu (1977), Giddens (1984), D'Andrade (1995) and Patterson (2014).

them as). Though they are historically transmitted, they offer a set of options and they can change and adapt when circumstances change.

Our conceptual framework leverages this alternative (and, as we will argue, empirically richer and better-founded approach). Inspired by Swidler, we define a culture by a *culture set*, consisting of (cultural) *attributes*, and a collection of feasible connections between these attributes. Subject to these feasible connections, attributes can be wired together to form a *cultural configuration*. Critically, a cultural configuration is not the same as a culture or its culture set. While a culture set is persistent, the realized cultural configurations can be ephemeral and change and adapt depending on circumstances. Also notably, a cultural configuration is determined together with institutions. This is of course very different from the view that follows from the Parsonian approach, which tends to suggest that culture is more fundamental than institutions. Or as Huntington (2000) emphasizes, quoting from Daniel Etounga-Manguelle, "Culture is the mother; institutions are the children" (p. xxviii). In our approach, culture and institutions are more like siblings, each affecting the other, and sometimes one emerges as primary and sometimes the other.

To make all of this more concrete, let us pick an example related to politics and political institutions, which we discuss in greater detail below. English culture in the 16th and 17th centuries had a number of distinctive characteristics that were well in place, going back to Anglo-Saxon times and overlaid with the practices and hierarchies that the Normans brought after their conquest of the isles in 1066. During the Tudor and Stuart dynasties, these gelled into a cultural configuration that can be called the "Divine Right of Kings", enshrining a patriarchal hierarchy in which the king is the divinely-anointed sovereign with the right and obligation to rule over his subjects. However, as economic change and especially violent political upheavals began to disrupt English institutions in the first half of the 17th century, a new cultural configuration emerged as a very different way of viewing social relations and the responsibilities and obligations of rulers. This configuration, which we call "popular sovereignty" can be seen most famously in the writings of John Locke. It was based on a different combination of the same underlying attributes and came to motivate the parliamentarians during the English Civil War as well as fringe groups such as the revolutionary Levellers, with their pioneering commitment to popular sovereignty, a broad franchise and equality among people. Later it underpinned the movement that led to the Glorious Revolution in 1688-89. The difference in these two almost polar cultural configurations was rooted in which attributes were selected from the culture set as important and even more majorly, how they were wired together to generate social meaning and interpretations. We explain below how this happened as a result of the changes in the social basis and balance of political power in English society.

We argue similarly that Chinese culture has had a number of fairly stable attributes at its core, but these have been wired together in a bewildering array of different ways both during the long periods of imperial rule and during the post-imperial era of Chinese politics.

Though the principles emphasized by these examples are general, there is a sense in which the English and Chinese cultures are a little different than many others. In our framework, they are examples of relatively *fluid cultures*, which enable a rich set of feasible cultural configurations In contrast, we argue, with several examples and a detailed exploration of key aspects of their culture sets, that Islamic cultures and the culture defined by the Indian caste system are less fluid or more *hardwired*, making them less likely to change seamlessly in response to varying circumstances.

Why are some cultures more fluid? Our framework links this to two features of the attributes and their feasible connections. An attribute can be *abstract* or *specific*, and this determines how easily it can be combined with other attributes. Abstract attributes can also play different roles in different configurations and thus generate a larger set of feasible cultural configurations than specific attributes do. Echoing Geertz's and the more recent sociology literature's emphasis on lack of coherence in cultures, abstract attributes can sometimes stand for two very different things depending on what other attributes they are combined with, a possibility we illustrate with the notion of "The Way", as a directive to be "virtuous", in Confucian culture. When contrasted to key attributes of the Indian culture based on the caste system, which generates a definite hierarchy based on caste status, we interpret this as a much more abstract attribute, and illustrate how it has played very different roles in different Chinese cultural configurations.

While abstractness or specificity are features of an attribute, another factor that also shapes the fluidity of a culture is related to collections of attributes: whether these attributes are *entangled* or *free-standing*. Notions related to hierarchy and respect for ancient institutions in English culture are not only abstract but also fairly free-standing, meaning that they can be wired with several other attributes. In contrast, the notion of "pollution" in Indian culture, which is related to caste hierarchy and specific religious rituals, is highly entangled, because it cannot be divorced from the subservient nature of the Dalits and other lower castes. Abstract attributes, especially when they are free-standing, create greater fluidity, which means a richer menu of cultural configurations and thus greater adaptability. Specific and entangled attributes generate more hardwired cultures.

Two observations are called for in this context. First, our framework suggests that more hardwired cultures are more likely to be binding constraints on economic and political arrangements and so will approximate the scenario envisaged by many culturalists, where culture rules in or rules out certain arrangements and thus directly influences economic and political development. Yet, we

argue no culture is fully hardwired, and fluidity are parts of all cultures. Islam, for example, spread so successfully starting in the 7th century because it was very successful in fusing with different traditions, including the tribal mores of the Arabian Peninsula. Second, in contrast with the basic tenets of the Parsonian approach, clearly encapsulated in the celebrated works of Banfield (1958), Putnam (1993, 2000) and their followers, hardwired cultures are not "bad cultures", nor are fluid cultures "good cultures". Hardwired cultures can be very successful during certain stages, as again illustrated by the spectacular geopolitical and economic success of early Islamic civilizations, while fluid cultures can maintain various inefficiencies and hierarchies very successfully because of their greater durability.

Cultures may not only adapt to circumstances because of their fluid nature. They can also change their attributes and may collapse as their incipient meanings and tenets are challenged or as members of the said culture convert to different religions or orientations. We also discuss the factors that may lead to cultural collapse and the possibility of cultural rejuvenation under the leadership of cultural entrepreneurs.

In sum, this paper offers what we hope is a new framework for the analysis of culture, institutions and social equilibria. As we have emphasized, it is very different from what has become dominant in economics and much of political science because of its departure from the Parsonian perspective. It emphasizes the fluidity of cultures as its attributes are rewired in response to changing circumstances, and it highlights how political factors play a critical role in shaping the joint evolution of cultures and institutions, especially for fluid cultures that engender a rich set of possible cultural configurations. Our approach, though inspired by recent scholarship in sociology, such as the works by Clifford Geertz, Ann Swidler, William Sewell and Paul DiMaggio, is also quite different from this literature. This is both because of our focus on political and economic development, but also more importantly because of the microfoundations we offer for cultural fluidity. Our framework emphasizes the role of politics and the joint evolution of culture and institutions, which is not this literature's focus (though see Sewell, 2005), and more significantly offers new microfoundations in terms of attributes, their rewiring and their properties, such as being abstract or entangled.

We now provide a brief overview of the rest of this article. The next section explains our conceptual approach in greater detail, introduces our key concepts, such as attributes and whether they are abstract, specific, entangled or free-standing. It thus provides the broad outlines of how politics, institutions and culture co-evolve and why this co-evolution depends on how fluid or hardwired culture is. In this section, we also discuss how the way in which culture matters for economic and political outcomes is more nuanced in our framework than in the more traditional

approaches and why cultural persistence should be re-thought in light of the factors emphasized in our framework. The rest of the paper applies this framework in a number of cases, with the explicit aim of clarifying its constituent parts and how they work.

We start in Section 3 by showing how partial the view in economics and political science of coherent and stable "ethnic cultures" is. Using the example of the Igbo in what is today Nigeria, we document how a given culture set has been highly adaptable and generated almost diametrically opposed cultural configurations, in some instances upholding the rule of hereditary kings, and just a few miles away, with exactly the same attributes, supporting highly participatory, essentially democratic political institutions. Using the African context, we also argue against the emphasis on pro-social values and generalized trust as deep cultural properties in Banfield, Putnam and many works in economics today. In particular, the Tswana people in Botswana, with essentially an unchanged culture set, has been able to start with an African analogue of Banfield's amoral familism and over time expand the circle of in-group and trust, ultimately building a cultural configuration inculcating generalized trust and highly pro-social attitudes.

Section 4 turns to the English case, explaining in detail where key attributes of English culture come from, and how they were initially fused together to bolster absolutist rule. But how they rapidly adapted in the 17th century to become the basis of a different cultural configuration that advanced the view that sovereignty rests with the people and rulers can only rule if they are delegated that power by and remain accountable to the people. We stress how the key attributes were abstract and free-standing in English culture and why this was critical for their fluid rewiring. We also explain why these changes took place and how culture and institutions co-evolved in this case. Section 5 parallels Section 4, but focusing on Confucian culture. After outlining several distinctive attributes of the Chinese/Confucian culture set and emphasizing that some of these key notions are even more abstract than in the English case, we discuss how they have generated very distinct cultural configurations, once again associated with a rich variety of political arrangements, both during Imperial times and in post-communist China. Section 6 turns to Islamic culture, this time emphasizing some of the more specific and entangled aspects of important attributes and how these have created a more hardwired culture. We stress, however, that even though Islamic culture was less fluid than their English and Chinese counterparts, there was quite a bit of fluidity and change, so that even Islamic culture is far from the model envisaged by the Parsonian approach.

Section 7 draws out some of the implications of our approach, helps us highlight the fundamental difference between our hardwired-fluid distinction and the more common good-bad culture distinction. We start with a discussion of the costs of hardwired cultures, illustrated with our other

examnple of one component of a relatively hardwired culture, the Indian caste system. We then bring out the potential benefits of hardwired cultures using the emergence of "Big God" religions. These religions produced many layers of specificity, as compared to the polytheistic cultures that prevailed before, but also generated cultural configurations much more conducive to state-building, coordination and territorial expansion. We then revisit the Islamic culture highlight how some of the benefits of hardwired cultures can later turn into significant barriers to economic and political development.

Section 8 briefly discusses issues of cultural evolution, cultural collapse and cultural entrepreneurship, while Section 9 more systematically compares and contrasts our approach with some of the famous works in economics and political science. Section 10 concludes with several ideas and areas for future research. The Appendix provides a simple mathematical formalization for our notions of cultural configurations produced from constituent attributes and how this can represent more or less fluid cultures.

2 Culture, Institutions and Social Equilibria: A Framework

Our purpose in this section is to provide a conceptual framework that clarifies how different cultures may affect and facilitate or constrain behavior and how they may themselves be changed and transformed by political factors, institutions and innovations. We start with a conceptualization of a "culture set" and how this impacts other aspects of social equilibria. We then embed this in a more dynamic framework. Throughout, our objective is to introduce the main ideas, and we adopt an informal approach. We provide a modicum of formalism in the Appendix, clarifying some of the key terms mathematically.

2.1 Culture Sets, Attributes and Possibilities

Our approach emphasizes three aspects of cultures, already highlighted by our definition in the Introduction: (1) they attempt to provide "meaning" or a coherent framework for interpreting diverse situations (e.g., as religions do); (2) they coordinate expectations and behavior within a group and thus enable certain actions that may not have been possible otherwise; (3) they constrain certain behaviors (e.g., try to prevent violence, theft, adultery or usury). We capture these aspects by considering that cultures consist of a set of interlinked (cultural) *attributes*.

Attributes could be such things as the type of social hierarchy (patriarchy, gerontocracy, meritocracy), the identity of "in-groups", the meaning, definition and importance of virtue, the structure

of social responsibilities, the role of honor and violence in conflict resolution, respect for ancient customs and traditions, the extent of segregation and mixing between different types of people, family structure, certain rituals, religious precepts, regulation of sexual behavior, the role of higher ideals, etc. For example, some cultures specify a social hierarchy based on age and enshrine various responsibility of younger and older individuals. This could then be combined with a lineage identity or nuclear family, in each case with varying degrees of control over sexual reproduction and extra-marital affairs. It can be further fused with a religious or national identity, or sometimes both. Another culture may specify a caste-based social hierarchy, cement this hierarchy with onerous responsibilities for some groups. Or it can replace the national identity with an identity defined in terms of ancestors (e.g., as in segmentary lineage societies), ethnicity or religion.

Crucially, however, most cultures do not just specify a single meaning to each attribute. For example, an emphasis on social hierarchy could lead to a cultural configuration in which rulers have to be obeyed all the time, or in cases where there is also the expectation that the ruler has to be virtuous, it may allow for disobedience to an un-virtuous ruler, as we will emphasize in the context of our discussion of virtue and "The Way" in Confucian culture (see Section 5). As a result, the same attributes can play distinct roles in different contexts and potentially have very different meanings depending on which other attributes they are combined with (and change this meaning from time to time). In addition, many cultures will have numerous attributes, perhaps in part because they have evolved over time with the fusion of different cultures and civilizations. For example, post 7th-century Arabian Peninsula combined pre-Islamic tribal customs and attributes together with the basic tenets of Islam. But not all attributes may be feasibly combined together. The pre-Islamic emphasis on the kin-based order could not be easily fused with Mohammed's efforts to supplant kin relations, which were enshrined in the Quran and the Hadith. Hence the nature of a culture also depends on the collection of feasible connections.

To capture these ideas, we define the *culture set* of a society as the collection of attributes and their feasible connections (thus containing all feasible combinations of attributes).[3] Finally, we define a *cultural configuration* as a particular set of combinations of attributes that is contained in the culture set and emerges at a particular point in time. Figure 1 provides a simple illustration of a culture set with five attributes. In this example, we suppose that any collection of connections

[3]Dynamically, there is an important distinction between culture and its culture set. A culture can evolve over time by adding new attributes or dropping some or by modifying the set of feasible connections. Thus, a culture should be thought of as a collection of "admissible" culture sets (meaning the set of culture sets that can still be consistent with the culture in question). We discuss the evolution of culture sets in Section 8. Until then, we fix the culture set in question, and thus with a slight abuse of terminology, we use culture and its culture set interchangeably.

are feasible, and show two cultural configurations, one in blue and the other one in red.

Cultural configurations provide meaning and interpretations for individual and group actions, and crucially for our focus, they support (economic or political) institutions by legitimizing them and justifying their social consequences. For example, a culture that creates a clear hierarchy where any two individuals in society can be ranked in terms of status, and the low-status individual has to obey and respect the high-status one, generates a worldview based on obedience and hierarchy, and supports political institutions that legislate and rely on a rigid hierarchy.

Our discussion highlights that a culture is not the same as the current cultural configuration. As we will clarify momentarily, for all but the most extreme hardwired culture, there will exist a multitude of feasible cultural configurations. In terms of the example in the previous paragraph, the same culture set may support a different cultural configuration emphasizing meritocracy and associated political institutions. This may be the case, for example, if the attributes related to hierarchy do not specify the identity of who is high status and allow it to evolve over time according to who is viewed as successful. Anticipating our discussion of Confucian culture, if a culture were to emphasize the importance of individuals voluntarily submitting their will to a virtuous ruler, then feasible cultural configurations may legitimize either an absolutist monarchy (where the king is presumed to be virtuous) or more democratic political institutions (where rulers are appointed according to their presumed virtue or skills, and non-virtuous rulers can be opposed).

It is also useful at this point to note that, as hinted in the Introduction, we think of *norms* not as part of a culture but as a critical component of cultural configurations. In particular, a culture can support very different norms, for example, on whether individual success is valued or not, whether marriages should be based on love, whether extramarital sex is allowed, how much authority and respect elders command and how rivals and adversaries should be treated. Even more importantly for some of our applications, different cultural configurations can generate varying political norms and support distinct political institutions—for example, concerning whether corruption is accepted or laws should be obeyed or whether sovereignty rests in rulers or the people (see Section 4).

2.2 Fluid and Hardwired Cultures

A critical notion for our discussion is the *fluidity* of a culture. We say that a culture (or a culture set) is *more fluid* than another, if it allows a richer set of cultural configurations. Conversely, a culture is *more hardwired* if it allows fewer cultural configurations. In terms of our representation of cultural configurations as graphs, this implies that a fluid culture contains more feasible combinations of

attributes.[4] For example, in Figure 1, a culture set that only permits the cultural configuration shown in red would be less fluid than another culture that allows both the red and the blue ones. Most cultures are non-comparable—of two cultures being considered, neither may be strictly more fluid than another. Nevertheless, the notion of fluidity is useful, because it enables us to think counterfactually, asking questions such as: what is the role of cultural configurations in explaining economic and political divergences? Or how would various economic and political outcomes have differed if a culture had been more fluid?

Because cultures, and cultural configurations, justify and legitimize different behaviors, they may preclude (or conversely encourage) certain economic, social and political arrangements. Our discussion so far makes it clear that a more hardwired culture will rule out more (and rule in fewer) arrangements. To illustrate the implications of this observation, let us return to the case of an *extreme hardwired culture*, which only enables a unique cultural configuration. An extreme hardwired culture that, say, categorically bans any type of financial transactions will preclude economic arrangements based on financial markets, even if these would be useful economically. However, for less hardwired cultures, there may be adaptations to take advantage of financial transactions. For example, even though usury was forbidden in Christianity, the broader fluidity of this culture ultimately allowed a rich array of financial innovations and transactions (sees Section 6).

Similar conclusions apply when we consider political arrangements. A hardwired culture might specify that authority is always given by God to a chosen leader. This may preclude all political arrangements that are not tightly hierarchical and may rule in only a monarchy or a theocracy as permissible political regimes. But many cultures, such as Confucianism as we discuss in detail in Section 5, are much more fluid than that, and allow both highly hierarchical imperial regimes and more democratic alternatives.

For most of the discussion in the current paper, we focus on a cultural configuration prevailing among the members of a well-defined group.[5] But this is clearly a huge abstraction. A fluid culture that allows different cultural configurations to emerge over time also generates different meanings

[4] In addition, the meaning, interpretation and worldview implied by a cultural configuration matter as well. A culture set that allows several cultural configurations but each justifying minor variations of the same institution is not particularly fluid, and a culture set that allows a few cultural configurations that correspond to very different institutional arrangements can be viewed as fairly fluid. In the Appendix, we provide a more mathematical discussion of this point.

[5] This is the common approach in the literature. For example, Swidler notes "The middle-class Americans I interviewed draw from a common-pool of cultural resources. What differentiates them is how they make use of the culture they have available" (2001, p. 5).

and interpretations among members of the group at a given point in time and in a given location. Hence, fluid cultures will generate some degree of within-group cultural discordance (consistent with Swidler's emphasis on cultural incoherence). Though this is not our focus here, it does have an important implication we will return to later: achieving coordination among group members may be more difficult in the case of fluid cultures, because different subgroups may have different interpretations and expectations. This is one of the reasons why, as we discuss in Section 7, hardwired cultures are very different from the Banfield, Putnam and Huntington's "bad cultures": they may be effective in achieving successful coordination in the short run, potentially with big economic payoffs under certain conditions, but they may sometimes reduce adaptability to changes in circumstances over time.

Away from the extreme hardwired culture, how does a society end up in a cultural configuration? The answer to this question constitutes a central part of our conceptual framework. We will argue that the prevailing cultural configuration will be determined, out of the attributes provided in the culture set, by history (past cultural configurations), institutions (in particular, institutional arrangements that shape and regulate economic and political power) and "politics", meaning the ability of certain groups of individuals to form coalitions, come up with new ideas and innovations and exercise power.[6]

Though there is much theory to be developed about how various factors, political and otherwise, shape which cultural cultural configurations are chosen, in the rest of this essay, we focus on specific examples to illustrate the main ideas. Before doing this, however, we discuss the dynamics of cultural configurations, why social and political institutions persist and what makes cultures more or less fluid.

2.3 Culture, Politics and Institutions

We next discuss how the dynamics of cultural configurations can be represented. To do this, we follow the approach in Acemoglu, Johnson and Robinson (2005a), and distinguish "state variables", which are predetermined at a given point in time but can evolve over time, from "equilibrium/flow variables", which are determined at that point. The current cultural configuration is a state variable, in the same way as we think of institutions as a state variable. Economic outcomes, including

[6]We follow the definition of "institutions" provided in Acemoglu, Johnson and Robinson (2005a), thus combining political and economic institutions. Political institutions include such things as constitutions, electoral system, political regime, laws relevant for political participation, assembly and civil rights, and for the purposes here they can include certain political norms of behavior as well. Economic institutions include commercial laws, property rights, contracting institutions, and such.

the distribution of resources and the growth performance of an economy, and various social outcomes, such as who has high status, are equilibrium variables, and for this reason, we refer to their joint determination as a "social equilibrium". There are of course some gray areas. Norms can be viewed as partly determined with current expectations and behaviors (as emphasized in Acemoglu and Jackson, 2015), but are also sticky, so can sometimes be considered state variables, and in the context of our schematic representation here, they can be included in cultural configurations.

There are several points that are central to our framework, which we now explain by means of Figures 2 and 3. First, cultural configurations themselves are produced from a culture set. Hence, in both Figures 2 and 3, we see the culture set at the top, influencing cultural configurations. For our focus in these two figures, we take this culture set to be given and unchanging (though, as we have already noted in footnote 3, cultures themselves can change, collapse or metamorphose as well).

Second, and more importantly, we have two other blocks in these two figures: institutions and politics, by which we mean the distribution of de jure and de facto political power that often enables some groups to impact institutions and other social arrangements (see Acemoglu, Johnson and Robinson, 2005a).[7]

Third, the two figures together draw a central distinction. In Figure 2, we consider the most extreme hardwired culture, where there is only a single cultural configuration. As we have already pointed out, we do not think this corresponds to any real-world culture, but it is useful as a pedagogical device. Because there is only a unique feasible cultural configuration, the realized cultural configuration is unchanging. This case then captures the ideas of culturalists such as Huntington, Banfield and their followers, including the statement that "culture is the mother; institutions are the children". As a result, politics may impact institutions (for example, when there is a civil war but no cultural change); yet, crucially, institutions and politics themselves do not impact the cultural configuration.

Away from this extreme hardwired culture, we have the pattern shown in Figure 3. Now there are multitudes of cultural configurations that can be produced from the same culture set, and these can support distinct institutions. This opens the way to the central role of politics and the two-way interactions between cultural configurations and institutions. Politics, in particular, directly affects institutions and the evolution of cultural configurations, and institutions, as a critical

[7]See Acemoglu, Johnson and Robinson, (2005a) for the definitions of de jure and de facto power.

Factors other than politics, such as demographic shocks or major changes in economic conditions, likely matter as well (see Acemoglu and Robinson, 2012). We focus on politics both because it plays a more important role in our historical case studies below and because we did not want to include too many items in the figure.

state variable, shape cultural configurations as well (highlighted by the red arrows in the figure). Culture (the culture set) still matters, because cultural configurations may have various dimensions of persistence, depicted by the green arrows (influencing both tomorrow's cultural configuration directly and also impacting politics, for example, by influencing collective action).

In sum, we argue that only the most extreme hardwired cultures look like what is depicted in Figure 2. The real world, instead, resembles Figure 3, as suggested by our discussion of the rich set of cultural configurations in the English and Chinese cases and how we often fairly seamlessly transition from one cultural configuration to another in response to changes in politics and other factors. This potential fluidity of cultural configurations, even though they are produced from the same underlying culture set, is the leitmotif of our theory.

2.4 Abstract vs Specific Attributes

Why are some cultures more fluid than others? Our conceptual framework emphasizes two factors, one related to the nature of the attributes, and the other to the collection of feasible connections. For the first, we distinguish between abstract and specific attributes. By *abstract*, we mean an attribute that can have multiple meanings. In terms of our graphical/network representation, this can be captured as abstract attributes allowing for more feasible links.[8] Confucian notions of virtue and English interpretations of Christian teachings are examples of abstract attributes that can mean different things in different contexts. So, as we will see, English Christianity gained a very different interpretation, and very different implications for political institutions, when combined with notions of hierarchy than when fused with ancient and folk customs emphasizing political participation by regular people.

In contrast, a *specific* attribute has a determinate meaning that does not change depending on the nature of the other attributes it is combined with and hence allows fewer connections.[9] As an example, consider the idea of "pollution" generated by Dalits and other lower castes in the Indian caste system. In our conceptualization, this is a highly specific attribute related to caste hierarchy, as it has a definite meaning, and as a result cannot be easily combined with attributes that are against this hierarchy. Another telling example of a specific attribute comes from the identity of

[8]The only possibility that this formalization rules out is the one where two attributes that are sufficiently abstract and connected together may have more than one meaning. Instead, it only allows an attribute to have a different meaning depending on which other attributes it is linked with. We do not find this restriction to be problematic in the cases we study below. Nevertheless, in the Appendix, we outline how this richer representation of the effects of abstract attributes can be introduced by allowing the mapping from a cultural configuration to economic or political institutions to directly depend on whether attributes are abstract or specific.

[9]In reality, of course, there are degrees of abstractness and specificity, but we are simplifying the discussion by presenting it as a dichotomous distinction.

who is in the "in-group" in the Islamic culture. The Quran stipulates (9.29): "Fight those of the People of the Book who do not [truly] believe in God and the Last Day, who do not forbid what God and his Messenger have forbidden, who do not obey the rule of justice, until they pay the tax and agree to submit." This decree, which is a central tenet of Islamic culture and jurisprudence, creates a clear hierarchy. The "People of the Book" are Jews and Christian, it is they who must pay the tax and submit. Neither this Islamic attribute nor the notion of pollution in the caste system can be combined with attributes that emphasize equality of all individuals or change the identity of who is in the in-group. In sum, specific attributes enable fewer links.

These ideas are illustrated in Figure 4, where an abstract attribute is shown in blue and with its corresponding feasible links, while a specific attribute is shown in green together with its fewer corresponding links.

2.5 Entangled vs Free-Standing Attributes

Another important property of attributes is whether they are entangled or free-standing. While being abstract or specific is a property of an attribute, entanglement is a property of a collection of attributes. We say that an attribute is *entangled* if its function or meaning is tightly linked to other attributes, thus limiting how it can be combined with other attributes. In terms of our graphical/network representation, entangled attributes are tied together and thus eliminate configurations that would involve separation between these attributes. In contrast, a *free-standing* attribute has a meaning and function that is independent of other attributes, thus making it easier for it to be combined others. Figure 5 shows a culture set with three attributes. The top two attributes are entangled together, and hence cannot be separated. As a result, only three cultural configurations are feasible, one shown in red, one shown in green and the final one corresponding to the bottom attribute by itself. In contrast, without this entanglement, there would be seven feasible cultural configurations (three singletons, three pairs connected together and all three attributes connected together).

Returning to the English case, religion was a central part of medieval culture as elsewhere in Europe, but Catholicism was not entangled with other attributes, and this is the reason why it could be abandoned, banned and prosecuted, as Henry VIII did, and then rehabilitated as the Catholic Emancipation Act did. In contrast, the Islamic culture once again provides an example of an entangled set of attributes. It emphasizes that the Sharia, as God's law revealed by Archangel Gabriel to Mohammed, is supreme and can never be changed. This entanglement makes things like the Catholic Emancipation Act much more difficult.

In our framework, because entangled collections of attributes cannot easily be separated and may also not be linkable to some other attributes, entanglement is associated with fewer feasible connections and thus a smaller set of feasible cultural configurations.

2.6 Cultural Possibilities

We can now recap our discussion in the previous two subsections in terms of the next table, summarizing where fluid and hardwired cultures come from.

	abstract	specific
free-standing	**fluid culture**	intermediate culture
entangled	intermediate culture	**hardwired culture**

The English culture, which has several key abstract attributes that are also free-standing, thus creates a fairly fluid culture, while the Islamic one, with its specific and entangled attributes, is a less fluid (more hardwired) culture. The table simplifies the presentation by referring to fluid and hardwired cultures, though it should be borne in mind that these are always a matter of degree.

There are reasons why abstract attributes are also more likely to be free-standing. If something is abstract, then it is less likely to have an interpretation that is closely tied to the presence or meaning of some other attributes. Likewise, it is easier to see specific attributes become entangled. This is the reason why, in our interpretation, the English case provides an example of a fluid culture: it has both abstract and free-standing attributes at its core and these properties are symbiotic and support each other. Likewise, the Islamic culture provides a clear example of a hardwired culture, because its attributes are simultaneously entangled and specific. Nevertheless, entanglement and specificity are conceptually distinct and do not always travel together, and this creates intermediate cultures, as we discuss next.

2.7 Off-Diagonal Configurations and Intermediate Cultures

As our term for them suggests, intermediate cultures occupy a middling ground in our conceptual framework. They are not very fluid, but they have important elements of fluidity because some of their key attributes are either free-standing or abstract.[10] An example of an intermediate culture because its key attributes, despite their entanglement, are abstract is provided by the cultures of

[10]We do not mean to suggest that a culture that has some entangled attributes will necessarily be less fluid than another without such entanglement. It is a question of degree how rich the set of attributes is and how abstract the attributes themselves are. For this reason, we will argue that the Chinese culture, which has some entangled elements but whose main attributes are highly abstract, is no less fluid than the English culture, whose main attributes are both free-standing and abstract. See Sections 4 and 5.

several African peoples, including the Igbo, which we discuss in the next section, and the Tiv, discussed in detail in Acemoglu and Robinson (2019). These cultures have several entangled elements, but some of their key attributes, such as egalitarianism notions among both groups and witchcraft among the Tiv, are quite abstract, and are frequently repurposed and applied in very different contexts (see the next section for other abstract elements in Igbo culture). For example, witchcraft allegations among the Tiv are often leveled against politicians to limit their power. But in some conflictual situations, they can be turned against minorities. Witchcraft accusations are sometimes triggered by individual setbacks (illness, economic failure), but at other times, they are used in the context of specific political aims (e.g., against chiefs). Put differently, who is viewed as engaged in witchcraft changes quite significantly depending on context and circumstances.

In contradistinction, an important set of medieval attributes in Europe centered on anti-Jewish beliefs and customs. These are, by definition, very specific; it would not be easy to turn anti-Jewish beliefs as a weapon against Catholics. Nevertheless, they were highly free-standing, and were not entangled with other customs and cultural elements. This is one of the reasons why they could be largely put aside, even if not completely eliminated, after Napoleonic reforms in continental Europe.

2.8 How Culture Matters and How It Persists

Now that we have the main elements of our conceptual framework, it helps us clarify how and when culture matters. Let us go back to Figure 3, which as we noted represents the general case of interactions between culture and institutions. One idea that is made evident by Figure 3 (especially in comparison to Figure 2) is that culture is more likely to matter—in the sense that many cultural economists and political scientists emphasize—when it is more hardwired. Because hardwired cultures allow fewer cultural configurations, a given configuration is more likely to become a "hard constraint" on institutions and social outcomes. In contrast, for the most fluid cultures, though the culture set will influence politics and institutions as illustrated in Figure 3, a given cultural configuration is unlikely to be a major constraint or drag on social equilibria. When political factors change, for example, when power shifts from one group to another, a new cultural configuration is likely to emerge fairly swiftly. Thus, our framework highlights that culture matters, but only under specific circumstances and in specific ways. In particular, as already noted, it will clarify the conditions under which culture may cause maladaptation (for example, when conditions change and the culture in question is relatively hardwired), but also when and how certain cultures, and specifically sometimes hardwired cultures, can facilitate coordination within a group and help

achieve economic, political or military success.

The same perspective also sheds light on the nature of cultural persistence. In the Parsonian view, cultures, as coherent and fairly stable social constructs, tend to persist almost by definition. Viewed from this perspective, the recurrence of some specific customs (certain rituals, tastes, specific linguistic features or behaviors) are viewed as evidence of cultural persistence or even the very slow-changing nature of culture (Roland, 2004). However, our framework suggests two more nuanced interpretations. First, the persistence of some elements of a culture set does not imply "cultural persistence" in the sense of a enduring cultural constraint on political and economic outcomes. Once again referring to the Chinese case, many elements of Confucian culture have been present for 2250 years, which is consistent with a (fairly) stable culture set. Yet this does not imply that cultural configurations are unchanging. Second, viewed in this light, if a cultural configuration persists, especially in the case of a fairly fluid culture, that may be evidence precisely for a social equilibrium in which this cultural configuration is not a binding constraint, but a type of cultural response to persistence generated by other factors. For example, in Section 5, we explain how the persistence of autocratic institutions was not the indelible consequence of an autocratic Chinese culture, but rather, an autocratic cultural configuration was likely selected by the prevailing power dynamics as a way of legitimizing autocratic, imperial political institutions.

3 The Fluidity of African "Ethnic Cultures"

The purpose of this section is to provide a preliminary example of how cultures that are often thought to have major political implications, such as the 'ethnic cultures' in Africa, are in reality far from being hardwired and thus capable of generating a rich set of cultural configurations. We illustrate this point first with the Igbo, an "ethnic group" in Nigeria. Namely, we document that their fairly uniform culture set has generated different political institutions, ranging from versions of herediary rule by kings, where power is concentrated in the hands of a single ruling family, and democratic participation, where leaders are elected regardless of their family background. We then turn to a discussion of another major idea in cultural economics and political science, using the African context: the notion coming from Banfield (1958) and Putnam's (1993) work that there are historical factors shaping whether a group is pro-social or displays generalized trust (beyond one's direct or extended family). Using the history of the Tswana people, who have become the backbone of the state of Botswana, we show that these notions are much more fluid and change over time as the people change their identity and the definition of who is the in-group. They have

also been reshaped by the emergence of the modern state in Botswana.

3.1 The Igbo

It has become commonplace in the economics and political science literatures to consider people in Africa to be members of very stable, almost unchanging "ethnic cultures", which shape their modern economics and politics (though see Posner, 2005, for a seminal deviation from this). This quasi-consensus is supported by Murdock's (1959, 1967) ethnographic atlas and database, which provide data on culture and pre-colonial institutions for hundreds of groups, enabling researchers to link current economic and political outcomes with pre-colonial ethnic cultural elements.

One of the best studied such groups are the Igbo of southeastern Nigeria. The Igbo live roughly in the region between the Niger and the Cross rivers, south of the Benue and separated from the coasts by other groups, such as the Ijaw and Ibibio. The Igbo, everywhere, have fairly uniform and common elements in their culture sets, so would be considered by this literature as a typical "ethnic culture", which should thus have a proclivity for specific types of behaviors, values and institutions.

This expectation notwithstanding, Talbot (1926), who produced the earliest ethnographic map of Igboland and surrounding areas, found something very different. This map, which we reproduce in Figure 6, documents that at the beginning of the 20th century there were four very different types of political institutions across Igboland, ranging from hereditary rulers, with no elections and no institutionalized controls from society, to a type of democracy where rulers were elected and could come from any family. How did the same culture support such different political institutions in areas just a few miles apart from each other? The answer, for the Igbo as well as the English and Chinese cases we will discuss next, turns on the fact that the same culture set can generate many different cultural configurations, each legitimizing and supporting a different type of political arrangement.

The Igbo Culture Set

To understand the rich set of feasible cultural configurations among the Igbo, let us first understand their culture set. Based on standard ethnographich accounts of Igbo society, particularly Meek (1937), Green (1947), Forde and Jones (1950) and Afigbo (1981), in Figure 7, we present the key attributes in the Igbo culture relevant for political institutions and the nature of hierarchy. As in many African societies, Igbo social life and politics are based around networks and strong social ties. Miers and Kopytoff (1977) coined the term "wealth in people" to describe this aspect of

African cultures. As a proverb of the Yoruba, a people living on the other side of the Niger river has it, "A gift of money is not equal in value to a [gift of a] person" (Owomoyela, 2005, p. 292). We include *wealth in people* as the first attribute of the Igbo culture set.

An equally critical attribute is *egalitarianism*. A basic anti-hierarchy attitude is common in many small-scale societies, especially those in Africa, as we discussed in Acemoglu and Robinson (2019). The Igbo had a particularly intense form of this attitude, encapsulated in their egalitarianism, much commented on by all anthropologists. As Henderson (1972) put it, there is a "King in every man". In fact, the Igbo regarded hierarchy and powerful individuals with great suspicion. James Africanus Horton, whose father was an Igbo, summed up this attitude, when he wrote in 1868 that

> They would not, as a rule, allow anyone to act the superior over them; nor sway their conscience by coercion, to the performance of any act, whether good or bad, when they have not the inclination to do so ... in fact everyone likes to be his own master (2011, p. 182)

But, of course, not everyone was equal. The Igbo did recognize forms of hierarchy. This was particularly so if it was the result of achievement. For instance "Big Men" and "Big Women", designations typically earned on the basis of economic success, could command respect and at times wield considerable power. There were also many forms of associations and titling societies, such as the *Ozo*, which enabled well-off members of Igbo society to purchase more prestigious titles. Such titles conferred hierarchy and became associated with different social roles and rights (a process famously depicted by Achebe, 1958). Thus, next to egalitarianism, we include the attribute of *hierarchy*.

The basic social unit of an Igbo village was an extended family, called a kindred, and kindreds were often embedded into larger organizations called clans. Even if clans did not typically meet or organize any activities, kindreds played a crucial role in Igbo social life, and we capture this with an additional attribute, *lineage*.

The Igbo also had many of the types of non-familial social structures which distinguish African society from many other parts of the world. For example, when boys and girsl reached puberty, they were initiated en masse into corporate groups called age sets. Although age sets were not as important and certainly not as militarized among the Igbo as they were in parts of southern Africa, especially among the Zulu, they had an important function for creating identities and social relations. Age sets stayed together for life, getting their members to work on collective tasks and

sometimes supporting each other. We therefore include *age sets* as a separate attribute.

The Igbo also had rich religious and supernatural beliefs. One thing that united them was a belief in a creator God, *Chukwu*. They also had numerous oracle shrines, the most important being at Aro and Nri. Each village held an earth God called *Ala* sacred, and people venetrated their ancestors, the most important symbol of which being a portable stick called an *ofo*. Each individual Igbo was believed to have a *chi,* which Meek (1937) describes as a "spiritual double" (p. 55) such that "A man's abilities, faults, and good or bad fortune are ascribed to his *chi*". We represent the importance of these religious beliefs with the attribute *traditional religion*.[11]

Finally, many of these attributes were interlaced with ritual practices like circumcision and initiation. Many activities had to be accompanied by the breaking of kola but and a libation of plam wine, and often involved the use of masks and masquerades (Ottenberg, 1975). Ritual practices played roles in political contexts as well, and this motivates our final attribute, *ritual*.

The Igbo Cultural Configurations

We now argue that the culture set just described was fluid enough to generate cultural configurations supporting a rich set of diverse political institutions as Talbot's (1926) map documented. For brevity, we focus on the two polar political institutions, full hereditary rule at the one end and what we are going to refer to as "council democracy" at the other (this terminology is motivated by the fact that councils played the critical role in the election of and supervision of executive officers.

From Figure 6 one place where we see hereditary rule was in Onitsha on the Niger River. In this area there was a king, called the Obi. The king had "as his counsellors and chief executive officers, six titled officials (*Ndichie Ume*) who were originally war leaders. These offices are reserved to the six senior lineages of *Ndichie* title-holders *Ndichie Okwa*, eighteen in number." (Forde and Jones, 1950, p. 37). The *Ndichie* was another of the titling societies we mentioned before. Forde and Jones (1950, p. 37) also report that "the decisions of the *Ndichie* were enforced by one of the different categories of the *Mmo* society - which represents the ancestral spirits."

Consistent with this account, Figure 7 presents one interpretation of how the aforementioned attributes could have been fused together to generate cultural configuration supporting and legitimizing hereditary rule. It appears that the people in Onitsha (perhaps led by chiefs and other elites) had put hierarchy at the center of their cultural configuration, wiring it together with lin-

[11] A central part of supernatural beliefs among some African societies is witchcraft, as we noted in our discussion of the Tiv in the previous section. Though there were witchcraft beliefs among the Igbo, these do not seem to be very important, and we have folded these in the traditional religion attribute.

eage, traditional religion, and ritual and perhaps also weakly to wealth in people. Lineage relations, traditional religion and rituals were all used to increase the legitimacy of hereditary rule. Crucially, egalitarianism, though always present in Igbo culture, was not part of this ensemble (and neither were the age sets). This combination of key Igbo attributes involved major reinterpretation of the meaning of some of the attributes, especially of traditional religion, divorcing it from its more common association with egalitarianism. Consistent with this, Meek (1937, p. 12) reports how one kindred got "the right of bestowing on all successive kings the royal *ofo* or sacred symbol of office", thus co-opting the traditional symbol of the ancestors into the hereditary hierarchy. With hierarchy at its center, the configuration in Figure 7 provided a powerful justification of hereditary rule with far fewer checks and less democratic participation than we find elsewhere.

A mere 15 miles away from Onitsha in the northeast, at Awka, the political system was very different. A detailed 1936 report on the Abagana-Aba Group of Villages, close to Awka, provides us with a reconstruction. The lowest administrative unit was the extended family and executive power was vested collectively in adult males who would hold meetings in the *Obu*, the house which was built to hold the *ofo* stick. The senior titled man would annouce decisions, but "he was, however, a figurehead and had by custom no more direct executive power in the family than his own intelligence and personality gave him" (Main, 1936, p. 10). Above the familes was a council called the Quarter Council, which had more specific executives called the Eziokolo: "They came from the age grade of mature married men ... Their selection and their activities were quite apart from any family ... or title that they might possess" (p. 11). A final assembly was the Village Council, comprised of an aggregation of the lower Quarter Councils with the Eziokolo again playing a coordinating role.

This council democracy was supported by a very different cultural configuration than the one shown in Figure 7. We give a possible interpretation and reconstruction in Figure 8 of how this cultural configuration may have come about from the same attributes. Clearly, now, rather than hierarchy, egalitarianism is at the center. It is connected to ritual, lineages and traditional religion, for example, as highlighted by the fact that the lowest type of council was at the level of the family and there was a whole set of rituals associated with the practice of council democracy (the family council would meet in the *Obu*). Wealth in people likely was much more important under this cultural configurations than hereditary rule, because titled men had some priviledges and titles had to be accumulated and support was useful for this (for example to work one's land). Age sets were relevant as well since they helped to determine who the Eziokolo would be.

This first detailed case clearly shows how a fairly uniform-looking culture could generate very

different configurations (and cultural interpretations), supporting sharply distinct political institutions within a narrow geography—and this despite the common tendency in the economics and political science literatures to identify "ethnic cultures" with deep-rooted commitments to specific cultural and political behaviors. Our framework suggests that these different cultural configurations may have been selected because of different political dynamics, for example, historical or random factors making chiefs, elites or some families a little stronger in some places than in others. Unfortunately, the historical record does not contain enough information to investigate this issue, though we will be able to trace the roots of different cultural configurations to political and other factors in the much better documented English and Chinese cases in the next two sections. Before turning to these cases, we first discuss how other expectations about the cultures of African ethnic groups may also be misplaced for exactly the same reason—their fluidity.

3.2 The Evolution of Pro-Sociality in Botswana

African peoples are sometimes portrayed as having enduring cultures that involve low levels of pro-sociality, no generalized trust or morality, or a version of Banfield's "amoral familism", a trait strongly favoring in-group members and distrusting those from different groups. This chimes with what the anthropologist Isaac Schapera observed in Botswana in the 1930s:

> A special kinship term is applied to each class of relative ... Associated with each kinship term is a special pattern of behavior, involving reciprocal rights and duties (Schapera, 1938, p. 17)

Schapera noted that even though such behaviors could extend broadly, "In practice it is usually only towards his close relatives" that such rights and duties apply. On the basis of this, one might be tempted to interpret the behavior of people in Botswana as being dominated by kinship-predetermined low levels of pro-sociality and lack of generalized trust.

However, the reality again appears more nuanced. By the time Schapera observed them, the dominant Tswana people had already come to develop a much richer menu of approaches to other groups and to problems of between-group trust. Most notably, political affiliations had become quite fluid, and Schapera noted: "Single persons or families may ... change their tribal affiliation" and that "membership of a tribe is defined not so much in terms of birth as of allegiance to the Chief" (p. 5). Schapera's own 1952 analysis of the 1946 census, the last in Botswana that recorded information on the "tribe" of a person, powerfully documents this. According to that data, in the reserve of the Ngwato, the Tswana polity of which post-colonial leader Seretse Khama was the

hereditary chief, Ngwato people made up only abour 20% of the population (1952, p. 65). The rest were "strangers" who had been integrated into the Ngwato state. They were considered to have given their "allegiance to the Chief", and as a result had become part of the in-group, thus being included in the circle of trust and cooperation.[12]

Perhaps even more strikingly, the Tswana had started developing attitudes diametrically opposed to the favoritism towards those in the in-group that one would expect to find in cultures with little pro-sociality and generalized trust. Schapera communicates a significant proverb: "We are not so much concerned with the person as with his fault" (1938, p. 51), which means that personal relationships do not come into consideration in the context of regulating social life—quite the opposite of one would expect on the basis of amoral familism. There was even an nascent form of rule of law, as indicated by another proverb: "The law is blind, it eats up its owner"; since the owner of the law is the chief, this means he too was subject to the law.

There is evidence, too, that politics may have played a major role in the changes in the cultural configurations of the Tswana culture. Khama III, the powerful chief of the Ngwato from 1875 to 1923, reshaped both political institutions and cultural configurations in the area. He converted to Christianity, stopped rainmaking and other supernatural practices and banned circumcision which went along with key initiation practices and reaffirmed tribal identities. He also abandonned the use of cattle to tie clients to himself and instead gave away all the cows, switching to a more institutionalized state as a way of assuring peoples' loyalty. Under the influence of Khama III's reforms, the traditional bases of cooperation and trust probably weakened further (Schapera, 1970, on these changes).

His grandson, Seretse Khama, the first Prime Minister of the independent state of Botswana, continued the process, with a more powerful drive towards state building, which was largely successful. Modern Botswana is not riven by ethnic conflict or endemic lack of cooperation, and has been a very successful and stable democracy, and its economy has grown rapidly. This was partly the result of Seretse Khama's innovations interlaced with the changes in cultural configurations that had already started by his grandfather, if not before. For example, Seretse Khama explicitly undermined any parochial basis of societal cooperation and trust, allowing schools only to teach Setswana and English, and the government inculcated the idea that everyone in Botswana was Tswana, thus removing any remaining in-group preference. But critically, this encompassing Tswana identity was a social construct, since the 1946 census showed a richer tapestry of cultural

[12]Wilson (1979) shows that this situation is representative of peoples of Southern Africa, giving examples from the Lobedu, Xhosa, and Mpondo.

backgrounds. While in recent data Botswana appears to have very low ethnolinguistic fragmentation (making Easterly and Levine, 1997, comment that "it is noteworthy that Botswana has one of the most ethnically homogeneous populations in Africa", p. 1218), the picture that emerges is very different when one uses the 1946 census. Leith (2005) notes that with the 1946 data, ethnic fragmentation in Botswana "is similar to Tanzania, Uganda and Zaire" (p. 30), the most ethnically heterogeneous places in Africa.

This example thus illustrates that even when we turn to one of the pillars of the cultural interpretations, pro-sociality and lack of generalized trust in African "ethnic cultures", we see much greater fluidity, both because the boundaries of who is in the in-group and who is viewed as a co-ethnic is very flexible, and also because political change can easily work with a group's culture set to generate new identities and new ways of undergirding societal cooperation. These ideas will come into clearer focus in the next two sections.

4 The Evolution of English Culture

The previous section illustrated the highly fluid nature of two African cultures, so much so that talking of these as well-defined "ethnic cultures" as the recent economics and political science literatures often do may not be useful. In this section, we will see that the 17th-century English culture, which had a fairly uniform reach within the territories that now make up England, was equally fluid. Therefore it allowed in the course of a few decades the emergence of two diametrically-opposed cultural configurations and associated political institutions: one centered on notions of divinely-ordained hierarchy, which we call the "Divine Right of Kings" and which was used not just to justify monarchic rule but to set up a more absolutist political system by Stuart monarchs; and another one, "popular sovereignty", which articulated a completely different way of organizing society, maintaining that legitimate power rested with the people and which motivated the parliamentarian side in the English Civil War and the Glorious Revolution and then provided the cultural foundations of a constitutional monarchy in England and nascent forms of democratic participation thereafter.

4.1 The English Culture Set

By the 17th century, there was a clearly identifiable and broadly shared set of (cultural) attributes among the English, which had evolved over time, combining elements from the pre-Norman Anglo-Saxon times with Norman feudal institutions and interpretations of the Christian doctrine. Though

this culture set is rich and has many elements that are not directly related to political institutions and philosophy, here we focus on the subset of attributes relevant to social hierarchy and political order, which are shown in Figure 9.

As elsewhere in early modern Europe, religion was central to English culture, and Englishmen and women believed that God had created a set of *natural laws*, which determined what was right and wrong and how society should be governed. As Laslett (2000, p. 71) explains: "[our] ancestors were literal believers, all of the time". The simplest version of such laws were the *Ten Commandments*, but usually they extended far beyond this. These beliefs impacted every aspect of English life in the 17th century, and most importantly for our focus, they shaped what the English people viewed as politically and socially legitimate. We refer to this attribute as *Christian teachings*. As we will see, though everybody looked to the Bible for these teachings, they afforded a rich set of interpretations depending on which passage from the Bible or which part of Jesus's life and pronouncements were emphasized, making them a good exemplar of an abstract attribute in our framework.

Another key attribute of the English culture set was the *nuclear family*. There is no consensus in the literature on when broader kin relations became relaxed and family obligations started centering around the nuclear family, and some, like Macfarlane (1978), powerfully argue that this had been in place at least since the 10th century. In the words of Laslett (2000, p. 19): "England was an association between the heads of such families". Though what nuclear family means is very clear, how it integrated with notions of hierarchy was actually variegated, making this a fairly abstract attribute too, in the sense of allowing connections to all other attributes.

Notions of legitimate governance in 17th-century England went back not just to the Bible but also to Anglo-Saxon times. These emphasized the participatory institutions and norms, which the historian Wickham calls "assembly politics", inherited from Germanic tribes, such as the *Witan* (see Maddicott, 2012, Wickham, 2016, Acemoglu and Robinson, 2019). Although English institutions were reshaped by the feudal order imposed by the Normans after 1066, ideas about the legitimacy of these types of participatory modes of governance survived almost everywhere, often in the common law, and were highly visible in local politics throughout the intervening 600 years (e.g., Hindle, 2000). The 15th-century scholar Sir John Fortescue argued that the common law of England had survived as was often said since 'time out of mind' or since 'time immemorial', and "The kingdom of England was first inhabited by Britons, then ruled by Romans, then again by Britons and then it was possessed by Saxons, but finally by Normans ... And throughout this period, the realm has been continuously regulated by the same customs as it is now" (Fortescue, 1997, p. 26). Although

these notions were at some level everywhere in 17th-century England, in the context of politics they were often invoked under the rubric of "The Ancient Constitution" (See Burgess, 1992, Part I). They are clearly visible in important documents such as the Magna Carta of 1215 and in the pushback that centralizing efforts by monarchs such as Henry II encountered (see Acemoglu and Robinson, 2019). We represent these ideas under the *Ancient customs* attribute in Figure 9.

Most importantly for us, this attribute represented the notion that in England there were customs that were "above both prince and people" (Sommerville, 1999, p. 83). The nature of this attribute makes it clear that it also had a highly malleable meaning, though it would have been difficult to justify absolutist rule with this attribute. In particular, Somerville explained that, according to these ideas, "Parliament's decrees were inferior not only to those of God and nature, but also to the fundamental precepts of the common law" (1999, p. 95). Indeed, it was generally understood and accepted that the common law had not been enacted by a sovereign and it constrained the sovereign, for example not being able to "impose tallages and other burdens without consulting them" (Fortescue, 1997, p. 17) namely no taxation without representation. Sir Edward Coke, the greatest common lawyer of the era of James I summed it up in 1610:

> the King hath no prerogative but that which the law of the land allows him (quoted in Tanner, 1930, p. 188).

Another related attribute, which we call *folk customs*, recognized the right of the poor to be "able to live", and if they could not, they had the right to riot and seize food and "The ... natural justice of their cause was widely acknowledged even by the authorities" (Laslett, 2000, p. 149) (see also Thompson, 1971). By its nature, this attribute was also fairly abstract, with a malleable and often changing meaning.

Nevertheless, 17th-century England was indupitably also a hierarchical society. There was a clear distinction between aristocrats with their titles and different ranks, and non-aristocrats. Gregory King in his 1688 "Social Table" distinguished between those he claimed increased the "wealth of the kingdom" such as the 800 Barons, 600 Knights and 3,000 Esquires, and those who decreased the wealth, which included 364,000 Laboring People and Out Servants and 400,000 Cottagers and Paupers (Laslett, 2000, pp. 32-33). Aristocrats even had specific forms of address. An Earl had to be addressed as "My Lord", while a Baron was "Your Lordship". Hierarchy extended not just to the relationships between the nobles and the rest, but permeated every aspect of society, including the family. A yeoman, a relatively well off farmer, was "Goodman", while Laslett (2000, p. 38) records the required form of address for a "Craftsman, Tradesman or Artificer" as "None".

We capture these elements of English culture with the attribute *hierarchy*, which is also a highly abstract one, because whether wealth, title, age or other status was the basis of hierarchy was determined depending on context.

By 17th century, the idea that property was private was firmly accepted in England, though there was disagreement on whether all property rights was vested in the king, who could then grant it to his vassals or citizens (as Thomas Hobbes argued), or these rights were more generally held independently of the state. Locke (2003), a chief proponent of the second interpretation, argued that "government has no other end but the preservation of property" (p. 141) and maintained that the origin of private property is the fact that man takes "something that nature hath provided" and "hath mixed his labor with, and joined to it something that is his own, and thereby makes it his property" (pp. 111-112). This is captured by our *property rights* attribute, which is again quite abstract, allowing these two different types of legitimate property rights.

A final attribute is a basic element of every human society: notions of the *in-group (*and the out-group), thus intersecting with notions of hierarchy and privilege. This would turn out to be important, for example, in whether the in-group included all of the English people, also the Scots and the Welsh, and in issues of how Catholics would be treated after the Reformation.[13]

We also note that, in addition to being fairly abstract, these English attributes were quite free-standing. Christian teachings could easily be fused with ancient customs and folk customs; nuclear family was entirely consistent with all other attributes; and even hierarchy and property rights could be seamlessly combined with both top-down and bottom–up conceptions of order in society. For this reason, we think that in Figure 9 all of the possible edges are feasible, though we do not mark them in order to reduce clutter in the figure.

4.2 Cultural Configurations

The basic attributes in Figure 9 could be wired together in different ways to explain different aspects of society. For example, the nuclear family in this period is typically described as "patriarchal", which was an important part of the 17th-century English cultural configuration (Laslett, 2000, p. 76, Wrightson, 2015). Though this is not our focus, we note that this can be understood as a

[13]Of course, more broadly one could identify many other attributes. Identity was based not on kinship, but residential location, notably a village and possibly a parish. Drinking, especially as social bonding, was importantat least as early as in the 14th century as recounted in *The Canterbury Tales*, and probably much earlier. In the 17th century, England was still predominantly rural and agrarian with common institutions such as the open field system. This system involved a lot of cooperation when planting or harvesting took place and local society had elaborate rules of governance for this and for deciding who had access to other resources like the commons. We do not introduce these attributes and many others one could add to the list, since we do not think they are critical given our focus on political institutions.

product of the nuclear family, Christian teachings and hierarchy attributes being fused together (one of the Ten Commandments says: "honor thy father"), generating a clear hierarchy within the most basic unit of society, the nuclear family. Another example is the way in which the in-group attribute can be fused together with others to generate various forms of social status hierarchies. We do not dwell on these for brevity, and instead turn to how these attributes were combined for generating two cultural configurations supporting the two most important political movements and philosophies of the time.

The Divine Right of Kings

The political institutions proposed and propagated by the Stuart kings James I and his son Charles I (even if it was also pushed in some form by Tudor monarchs previously) was based on a particular view of the world, which we summarize by the term the *Divine Right of Kings*. According to this doctrine, the Bible's natural law determined the proper order of the world and God's subjects had to obey and work to advance it. Within this order, the king had been given power to rule by God, was above all human laws, and was accountable to God alone. One of the most eloquent defenders of this view was the political philosopher Sir Robert Filmer (1991, p. 35), who argued: "For as kingly power is by the law of God, so it hath no inferior law to limit it". The king was subject to God's laws and it was not the place of people to hold him to account, that was a matter for the afterlife. This philosophy naturally supported absolutist political institutions that concentrated all political power in the hands of the monarch. Indeed, decades before Filmer, the Frenchman Jean Bodin had developed a theory of absolutism based on the same notions, stating: "there is nothing greater on earth, after God, than sovereign princes, and since they have been established by Him as His lieutenants for commanding other men" (Bodin, 1992, p. 46).

In terms of Figure 9, we interpret the Divine Right of Kings as being produced from a combination of four attributes tightly linked together: Christian teachings, nuclear family, hierarchy and property rights. As noted above, the first three generate patriarchy, as Sir Robert Filmer clearly understood in his book with the telling title, *Patriarcha*. The first chapter is entitled "That the first kings were fathers of families", followed by others with titles such as: "It is unnatural for the people to govern or choose governors". Filmer argued that "men are born in subjection to their parents", and "The father of a family governs by no other law than by his own will, not by the wills of his sons or servants. There is no nation that allows children any action or remedy for being unjustly governed; yet for all this every father is bound by the law of nature" (Filmer, 1991, p. 35). From this it was a short step to associate the king with the father. Filmer's argument

started with Adam in the Garden of Eden; "I see not then how the children of Adam ... can be free from subjection to their parents. And this subjection of children is the only fountain of all regal authority, by the ordination of God himself" (p. 7).

James I, in developing his absolutist political project, proposed this patriarchal vision of his authority. As he told Parliament in 1610, "As for the father of a family they had of old under the Law of Nature fatherly power, which was the power of life and death, over their children or family" (1994, p. 182). Here James is following Filmer in erecting the Divine Right of Kings on the foundations going back to natural law from God. These ideas were then combined with a particular notion of property rights, which vested them firmly in the monarch, to form a coherent doctrine in support of absolutism.

It is also worth noting that this cultural configuration did not borrow many important ideas from either ancient or folk customs, even if these were clearly recognized parts of English culture at the time. We also do not connect it to in-group, because, although Stuarts saw Catholics as a critical part of the in-group in English society, this was not vital to the doctrine and the proto-absolutist institutions Tudor monarchs attempted before them had a very different conception of the in-group.

Popular Sovereignty

Highlighting the fluid nature of the English culture set at the time, the connection between patriarchy and the law of nature, undergirding the Divine Right of Kings, was hotly contested. John Locke spent the whole of his *First Treatise* debunking Filmer's arguments and begins the *Second Treatise* by stating boldly:

> It having been shown in the following discourse, I. That Adam had not, either by natural right of fatherhood, or by positive donation from God, any such authority over his children, or dominion over the world, as is pretended (Locke, 2003, p. 100).

Here, Locke is denying the type of "power of life and death, over their children or family" that James I had claimed. In the very next section of the *Second Treatise*, entitled "Of the State of Nature", Locke begins to expound on his ideas about the "law of nature" and ita relationship to political authority, and how it justifies not absolutism but a constitutional monarchy created by a social contract, accountable to the people and in the limit removable by revolution if the monarch acts badly.

A critical part of this argument was that even if monarchs controlled political power, this had to be interpreted as a result of the delegation of this power to them from a sovereign people. If a monarch abused these powers or failed to act in the interests of the nation, then people had the right to withdraw the power. Thomas Stephenson, a conspirator in the "Gunpowder Plot" to blow up James I in 1605, articulated this view as follow: a Prince who governed badly could be "deprived of his kingdom by the authority of the assembly of the people" (Sommerville, 1999, p. 70).

Englishmen who opposed absolutist government not only disputed the Divine Right of Kings but also articulated an alternative political philosophy rooted in exactly the same English culture set. They argued in favor of a contractual basis for power as manifested in the coronation oath where the king promised to rule wisely. They maintain that the king was indeed bound by man-made laws, not just by particular interpretations of natural ones.

This type of theory reached its apogee in the wake of the Civil War of 1642 to 1649 when all sorts of radical groups mobilized (see Hill, 1972, for an overview). Most famous were the Levellers who emerged out of the Parliamentarian armies and proposed to abolish the monarchy and the House of Lords. They proposed a republican government based on a broad distribution of voting rights. In 1647 they, along with other members of the army, debated Oliver Cromwell in Putney Church house in West London. On October 29 Cromwell was presented with the Leveller manifesto, "An Agreement of the People". Colonel Thomas Rainborough told Cromwell: "I do think that the poorest man in England is not at all bound ... to that government that he has not had a voice to put himself under"(Robertson, 2007, p. 69). This was followed by a show of hands in favor of extending voting rights to "all free Englishmen". Subsequent version of the agreement included the clause "all men of the age of one and twenty years and upwards (not being servants, or receiving alms, or having served the late King in Arms or voluntary contributions) shall have their voices" (Haller and Davies, 1944, p. 321).

We represent the cultural configuration undergirding this very different political philosophy and model of political institutions, which we call popular sovereignty in Figure 10, which has exactly the same attributes (and feasible connections) as in Figure 9, but a different set of edges are selected. Central to this configuration is the incorporation of ancient customs and folk customs as key ideas on how hierarchy is exercised, what makes it legitimate and what the rights and obligations of different individuals are in the social order of the country at the time. Once these attributes are in the picture, the meaning of hierarchy, Christian teachings and property rights are almost completely transformed.

Notably, the meaning of Christian teachings changes entirely when they are interpreted through

the lens of ancient customs, reflecting their abstract and free-standing nature. While the defenders of the Divine Right of Kings cited Proverbs 8:15, which states "By me kings reign, and princes decree justice", Psalms 82:6, which says "I have said, Ye are gods". Yet this did not mean that kings were literally gods, but just that they received their power from God (see Sommerville, 1999, pp. 35-36). But as Sommerville (1999, p. 60) puts it: "Since natural law did not mark our any particular person or persons to rule the commonwealth ... it followed that political power had first resided in the community as a whole." The anti-absolutist Matthew Kellison made this argument concisely in 1621

> seeing that Nature made all equall, and that there be no more reason why this power should be in one rather than another, it followeth that it is first in the communitie (quoted in Sommerville, 1999, p. 60)

A telling example of differing interpretations of the Bible is the exchange between Roger Maynwaring, a supporter to Stuart absolutism and John Pym, a man who went on to spearhead the Parliamentary side of the Civil War against Charles I. Maynwaring argued that Jesus's statement that one should "render to Caeser the things that are Caeser's" implied that the natural law allowed the king to raise taxes. Pym disagreed arguing that Jesus was referring to the ancient Jews who were a province of Rome at that time and "their case is different from us"(Sommerville, 1999, p. 66).

Another commonly cited passage was St. Paul's statements in Romans 13:1 that "Let every soul be subject unto the higher powers. For there is no power but of God: the powers that be are ordained of God". Absolutists interpreted this to support the Divine Right of Kings, while their opponents, using the lens of ancient customs, interpreted the phrase to imply not that God have granted power directly to the king, but rather he gave power to the sovereign people who then delegated it to the king on conditions defined by a contract (Sommerville, 1999, p. 10, f. 1).

What is notable in these opposing interpretations is that they were both based on the same, fairly broadly accepted uniform culture of 17th-century England. This is what Laslett (2000, p. xi) emphasizes in writing: "early modern England had both poles of the authoritarian/egalitarian vector established in its attitudes. Filmerian patriarchal despotism stands at one end and the egalitarianism of Hobbes, the Levellers and Locke stands at the other." Exactly as in our framework, any cultural configuration has to select attributes and interpret them. As Sommerville observes: "early modern English people were find of citing precedents", but "precedents had to be interpreted" (p. 103).

Finally, we note that popular sovereignty was not just a philosophy. It became a potent cultural configuration legitimizing and then propagating a specific types of political institutions in the aftermath of the Civil War and then again after the Glorious Revolution. As in our framework, distinct cultural configurations emerged as ways of supporting and advancing very different institutional arrangements.

4.3 Explaining the Dynamics

What explains the surge in interest in the popular sovereignty interpretation? As we have argued, this was not caused by a sudden change in English culture (or more appropriately in our framework, the English culture set) or any type of major cultural innovation. The elements that were fused together to create the popular sovereignty configuration were present all along and did not undergo any major metamorphosis. Rather, as Sommerville sums it up:

> Talk of resistance became more common after 1640 not because of the sudden discovery of resistance theory, but because resistance had become a practical possibility (1999, p. 75).

Resistance became a practical possibility, in turn, because, in terms of Figure 3, politics changed. This had a number of drivers. A long process of social change, shifting economic power away from the aristocracy and the supporters of the monarchy was underway since the late 16th century, and this had gathered pace with the Reformation and its reverberations in England especially with the break with the Catholic Church (Tawney, 1941; Stone, 2001).

Equally important was the bottom-up process of local organization and demands that picked up speed during the 16th century, often emboldening the middling sort of Englishmen and drawing support and inspiration from ancient and folk customs (Hindle, 2000; Acemoglu and Robinson, 2019). In some sense, many communities were already formulating their political ideas on the basis of ancient and folk customs, even before these were gelled into a coherent popular sovereignty configuration at the national level.

Arguably more transformative was the effect of the growth in overseas trade and ventures, which were for the most part led by new men with no ties to the monarchy who were often resentful of crown monopolies that excluded them from other lucrative trades (Acemoglu, Johnson and Robinson, 2005b; Brenner, 1993; Pincus, 2009; Jha, 2015). These merchants, adventurers and in some cases minor nobility started challenging the absolutist model of James I and Charles I in the first half of the 17th century, and their political struggle ultimately led to the English Civil

War. As our discussion of the Levellers above emphasized, many of the ideas that became the popular sovereignty configuration were articulated in this process, and thinkers such as Thomas Hobbes and John Locke were also inspired by these developments in formulating their ideas on the origins of legitimate power being rooted in social contract.

In terms of the conceptual structure summarized in Figure 3, we can interpret the major change as a shift in de facto political power (political power that is not allocated by formal institutions but comes from the ability to solve collective action problems and mobilize resources). This change in "politics" tapped into the same culture set but generated a demand for and an articulation of a different cultural configuration. In combination with the power of these new groups, which turned out to be quite formidable as witnessed by the outcomes of the two civil wars of the 17th century, these ideas generated a new cultural configuration supporting a very different set of political institutions.

4.4 A Comparative Context

Though our focus has been with the English culture and political institutions, we can also note that there was nothing exceptional about England in comparison with the rest of Western Europe. Similar dynamics, often drawing on similar elements from their culture sets, transpired on the continent as well. The situation in France is best documented. Looking at the socioeconomic level, France was also primarily rural, and based on small agrarian communities. As Beik (2009, p. 58) states "The normal pattern was a nuclear family consisting of parents and children". Society was patriarchal and "The authority of the father over wife and children was universally recognized. He was "king" of the household" (Beik, 2009, p. 61). French peasants were also highly religious.[14]

Local society was to a large extent self-governing like in England, and villages had "a council of inhabitants ... where simple peasants may actually have had some voice" and which "defended the community's interests against the seigneur, the local priest, the collector of the tithe, or neighboring communities" (Beik, 2009, p. 55, 57). Just like England, France did of course have a distinct status hierarchy, specifically three estates with the nobles at the top. Nevertheless, just as in England, "The French people were extremely sensitive to their rights, especially long-established customary rights" and "Popular protest was very common" (Beik, 2009, p. 238).

More importantly, parallel to our narrative about England, these basic attributes were combined in different ways into cultural configurations and political models, with very different implications

[14]Much of the economic organization of France was also similar to England's. Northern France was organized into large open fields (usually three) as in England, though in the South there were often two instead of three fields (which also happened in England). In France, too, there was common land.

for the evolution of political institutions. In fact, French thinkers were ahead of the English in proposing anti-autocratic theories of governance based on notions of a social contract. These were formulated by Hugeuenot thinkers such as François Hotman and Theodore Beza (see Franklin, 1969, for three key texts and Church, 1941, for an overview). Another, Philippe du Plessis Mornay, argued in his 1579 *Vindiciae contra tyrannos* ("Defences [of liberty] against tyrants"), that "power always depends upon popular consent, a consent that is conditional and can be revoked" (Kingdon, 1991, p. 213). Skinner (1979, p. 338) described the set of ideas that emerged in France in this period as "a fully political theory of revolution, founded on a recognisably modern, secularized thesis about the natural rights and original sovereignty of the people." The French also emphasized what Lloyd (1991) calls their "fundamental laws", arguing that "all such laws imposed limits upon royal power; and the dominant tradition of thought in sixteenth-century France accounted at least for those prime 'fundamental laws' on the basis of customary usage" (pp. 270-271) (see also Church, 1941, pp. 93-93). Indeed, Pocock (1987) begins his seminal book on the *Ancient Constitution* by discussing the French case.

French theorists of absolutism may have been ahead of their English counterparts as well. The most important, Jean Bodin was already mentioned above. The French had their own ideas about their own "ancient constitution" as well, as did other Western European nations, which is perhaps not surprising, since they had similar Germanic roots (Burgess, 1992, Chapter 1).

Most importantly, given our focus, the French were able to rewire their own attributes as swiftly at the end of the 18th century, to generate an even more radical model of politics and cultural configuration, culminating in the decree of the National Assembly on August 5, 1789, declaring:

> The National Assembly hereby completely abolishes the feudal system. It decrees that, among the existing rights and dues, both feudal and censuel, all those originating in or representing real or personal serfdom shall be abolished without indemnification.
>
> All citizens, without distinction of birth, are eligible to any office or dignity, whether ecclesiastical, civil, or military; and no profession shall imply any derogation.

In sum, the ability and proclivity to generate distinct cultural configurations, supporting very different political institutions, was not unique to the English, but very widespread, at least in early modern Europe. Next we will see that the Confucian culture, in stark contrast to what has sometimes been claimed, was equally, if not more, fluid.

5 Confucian Culture, Autocracy and Democracy

The term "Confucian" is often used to describe Chinese culture, since it is argued to have major elements that go back to the thought of Confucius, his followers and interpreters (e.g., Weber, 1951, Huntington, 1991, 1993, Yew, 2000, Kissinger, 2011). Many Western writers have also argued this culture is rigid and inimical to democratic participation. Kissinger, for example, describes the Confucian "canon" as "something akin to China's Bible and its Constitution combined" (2011, p. 14), while Huntington (1991) has no doubt about the consequences of this for political institutions: "no scholarly disagreement exists regarding the proposition that traditional Confucianism was either undemocratic or antidemocratic" (1991, p. 24).[15] At some level this seems plausible. Since at least the rise of the Qin dynasty in 221 B.C., China has been ruled by autocratic political systems: the imperial state until 1912; then shifting warlords and the Kuomintang until 1949; and since then the Communist Party. Apart from a brief window around 1912, and recently in some local elections, China never had any sort of representative or democratic institutions in this approximately 2250 year period. We will argue, in contradistinction to this perspective, that Confucian culture is made up of highly abstract attributes and generates a rich array of different cultural configurations, and will illustrate how these have emerged under different circumstances, most importantly in Taiwan and Hong Kong over the last five decades.

5.1 The Confucian Culture Set

Before we enumerate the attributes that are critical for Confucian cultural configurations, it is useful to recount some of the key principles of Confucius's philosophy. Confucius argued that everyone is morally perfectible and should engage in a process of self-improvement to find "The Way" (*Dao*), which can be basically understood as "becoming virtuous". Virtue, in Confucian thinking, is linked with ritual and starts in the family, making it intertwined with notions of respecting hierarchy, both within and outside of the family. Once virtue is established in the private sphere and the family, it spreads in society right the way up to the state, which, according to Confucius, has to be run by virtue, not rules or bottom-up participation.

Confucius's sayings were collected after his death by his students in a text called the *Analects*. These consist of highly aphoristic dialogues between Confucius (identified as the Master) and various students. This aphoristic manner of communication is one of the major reasons why the meaning

[15] Others have drawn similar conclusions from certain specific aspects of Chinese culture, such as its "collectivist" nature (Talhelm et al., 2014, or the fact that it is based on "face" (Ho, 1976), or the prevalence of a practice like *guanxi* (connections) (Gold, Guthrie and Wank, 2002).

and interpretation of Confucian precepts are not determinate and, in terms of our framework, will correspond to highly abstract attributes.

Many of these aphorisms set clear connections between rulers and virtue, often emphasizing the obligation of people to respect and obey virtuous rulers. This motivates the first attribute we include in Figure 11, which revolves around virtue, or the The Way. However, underscoring the highly abstract nature of this notion and the teachings surrounding it, we represent it with two separate and complementary attributes. The first is *The Way: right of rulers*. This is consistent with both the manner that Confucian political philosophy is most commonly interpreted and with some famous passages in the *Analects*, for example the one where Confucius observes:

> When the Way prevails in the world, commoners do not debate matters of government. (16.2 p.193)

Thus, it seems, good governance could not be achieved by means of political participation. Instead, as we have seen, Confucius emphasized virtue, which started in the family by honoring the hierarchy of parents and ancestors. Another famous aphorism summing this up (much quoted by President Xi) is "Ji Kangzi asked Confucius about governing ... Confucius responded, "In your governing ... The Virtue of a gentleman is like the wind, and the Virtue of a petty person is like the grass - when the wind moves over the grass, the grass is sure to bend." " (12.19 p.134)

However, there is more to The Way than this type of unwavering respect for rulers and hierarchy, as we have already hinted at. Consider this passage of the *Analects* stating:

> Zigong asked about governing. The Master said, 'Simply make sure there is sufficient food, sufficient armaments, and that you have the confidence of the common people. Zigong said, "If sacrificing one of these three things becomes unavoidable, which would you sacrifice first?" The Master replied. "I would sacrifice the armanents". Zigong said, "If sacrificing one of the two remaining things becomes unavoidable, which would you sacrifice next?" The Master replied. "I would sacrifice the food. Death has always been with us, but a state cannot stand once it has lost the confidence of the people. (12.7, p. 128)

Clearly, the statement "a state cannot stand once it has lost the confidence of the people" can be given an explicitly democratic interpretation. This different aphorism motivates our second attribute related to virtue in politics: *The Way: rights of society*, capturing the expectation or

even the right of people to be ruled by virtuous rulers. If the ruler is not virtuous, this can justify disobedience.

As important as virtue to Confucian thinking are social roles. A telling and well-known passage goes as follows:

> Zigong asked: "Is there one word that one can practise throughout one's life?" That Master said: "Is it not *shu*? What you yourself do not desire, do not do to others." (15.24 p. 183)

The word *shu* can be translated as 'understanding' (in Slingerland's translation, 2003, p. 183) or 'reciprocity' (Goldin, 2011, p. 15), making this the Confucian version of the Golden Rule. However, its usual meaning is a little different. As Goldin (2011, p. 16) explains it, it should be interpreted as "doing unto others as you would have others do unto you *if you had the same social role as them*". An early text, the *Book of Rites*, emphasizes differentiation in society and the distinct roles people had to occupy, and decrees: "Everyone should stay in his place" (Fei, 1992, p. 65). These included the "ten relationships": "Gods and ghosts, monarchs and subjects, fathers and sons, the noble and the base, the intimate and unconnected, the rewarded and the punished, husbands and wives, public affairs and private affairs, seniors and juniors, and superiors and inferiors - these are the principle types of human relationships." Even more explicitly, as Fei (1992, p. 66) emphasizes, "the basic character of traditional Chinese social structure rests precisely on such hierarchical differentiations as these." These statements clarify that social roles are tightly intertwined *hierarchy*, another one of our attributes.

But they were equally intertwined with family as well. For example, key rites for finding The Way revolved around the family and filial piety. Once this was established inside of a person, it would extend to the family and from there outwards to the whole society. A later Confucian text, the *Great Learning,* puts it like this:

> Their thoughts being sincere, their hearts were then rectified. Their hearts being rectified, their persons were cultivated. Their persons being cultivated, their families were regulated. Their families being regulated, their States were rightly governed. Their States being rightly governed, the whole kingdom was made tranquil and happy. (Legge, 1893, pp. 358-359)

Indeed, in a famous metaphor, Fei (1992) argued: "In Chinese society, the most important relationship - kinship - is similar to the concentric circles formed when a stone is thrown into a

lake ... Everyone stands at the center of the circles produced by his or her own social influence. Everyone's circles are inter-related" (pp. 62-63). These elements are represented by our next attribute: *lineages* (encompassing both family relations and kinship).[16]

Equally important in Confucian thinking is the role of ritual, already highlighted by some of the quotations above. Confucius emphasized that The Way could be achieved by attending to the rites, writing:

> Yan Yuan asked about Goodness: The Master said: "Restraining yourself returning to the rites constitutes Goodness." (12.1 p. 125)

In fact, Confucius built on ideas about how people learned tradition and lore from peers, arguing that "Being able to take what is near at hand as an analogy could perhaps be called the method of Goodness" (6.30, p. 63). Even a handshake was a tool of ritual (see Finagrette, 1972, p. 9). This motivates the next attribute: *ritual*.

Though Confucius himself did not link his teachings to an explicit religion, religious beliefs have played an important role in their interpretation and propagation, so in Figure 11 we also include *traditional religion* (where "traditional" emphasizes that this was not the state religion). Finally, as in the English case, we include *in-group identity*, which plays an important social and political role, even if it is less central for our focus here. Of course, there are other important aspects of Confucian thought as well, but we focus on these attributes, which we view a central for cultural configurations connecting to political institutions.

Since these attributes all come from and are connected to Confucian teachings, they are not fully free-standing. Nevertheless, their entanglement, to the extent that it was important, did not restrict the feasible connections that could be formed between these attributes, mostly because of their extremely abstract nature. As we have already emphasized, this is not only because many ideas are communicated via aphorisms, but also because everything in Confucian philosophy was context specific and relative to a particular human relationship. As Goldin (2011, p. 10) notes, "Confucius wished his statements to remain fluid."

Motivated by these considerations, we interpret the Confucian culture set to include all the

[16]Emphasizing the abstract nature and fluid meaning of these attributes, recall that Confucianism maintains that one must subordinate oneself to hierarchy, especially within the family. Yet, Confucius argues in another text, the *Canon of Filial Piety*, that this is conditional on correct behavior: "Thus whenever there is unrighteousness, a son cannot but expostulate with his father and a minister cannot but expostulate with his lord. Thus whenever there is unrighteousness, one expostulates about it. To follow one's father's decrees - how can that be filial piety?" (quoted in Goldin, 2011, p. 36). Hence, even filial piety has limits. Interestingly, this exact passage is quoted by those who now argue that Confucianism is indeed consistent with democratic practices (e.g., Bell, 2013, p. 12).

feasible connections between these seven attributes, thus making the menu of available (political-relevant) cultural configurations quite extensive.

5.2 Cultural Configurations

Unsurprisingly, given such abstract attributes and such a rich set of cultural configurations, Confucian culture has been very fluid throughout the ages. This can be seen in the adaptability of Confucian culture, and its durability in the face of major changes in the ethnic, ideological and political priorities of different dynasties.[17] It is most saliently illustrated, however, by the contrast between the various cultural configurations that supported a highly autocratic conception of politics during the Imperial times, often referred to as the "Mandate of Heaven", to capture the idea that the mandate of emperors came from heaven, and the cultural configuration that has provided the justification and support for democratic institutions in Taiwan and Hong Kong over the last 50 years, which we will refer as "Confucian Democracy". We next discuss these two cultural configurations.

The Mandate of Heaven

In addition to showing the key attributes of the Confucian culture set, Figure 11 depicts the linkages that make up the cultural configuration we called the Mandate of Heaven. The term goes back to the Zhou Dynasty, whose rulers had claimed the right to rule because of the mandate coming from the Heavens. This notion was then appropriated by the Lord of Qin, and thereafter all Chinese emperors claimed to have received the Mandate of Heaven. As this description suggests, this was all imposed from the top, with no ability for regular people to object to this interpretation.

It is easy to see how the Confucian culture can generate a cultural configuration supporting such an approach and the political institutions that go with it. In Figure 11, this can be represented as the five attributes, The Way: rights of rulers, ritual, hierarchy, lineages and traditional religion all being interconnected. The Way: rights of rulers plays a central role here as the fountainhead of the idea that legitimate power, authority and virtue all emanate from the ruler, who has the right to rule given to him by tradition or religion. Hierarchy supports this notion and also gains additional

[17] In particular, the degree of top-down control and the influence of the Legalist philosophy of Shang Yang, the intellectual architect of the Qin's despotic rule and founder of the Legalist school, ebbed and flowed during different dynasties. Although the emphasis on Confucian thought was diminished during some of these periods, it still remained a central part of Chinese people's culture and part of the governing philosophy of the elite. We interpret these changes in political institutions and the associated cultures as being undergirded by the fluidity of Confucian culture as well. For example, different elements of Confucian teaching were emphasized during the despotic Ming Dynasty than the more permissive and less repressive Tang and Song Dynasties (see the discussion and references in Acemoglu and Robinson, 2019).

context from the top-down conception of politics and power this first attribute encapsulates. To the extent that the mandate is literally interpreted as coming from heaven, religious ideas are important as well, and these are often rooted in traditional religion, captured by the link to this attribute, representing, for example, the justification coming from God (Tian) for the ruler's right to rule.

These nodes are then connected to both ritual and lineages, which both reflects the importance of these two attributes in Confucian thinking and also the fact that they redefine ritual and lineage in the context of the hierarchical nature of society they articulate. Note also that the two other attributes are not linked to the rest. The in-group identity could be linked, especially if defining nature of the in-group, for example as the Han Chinese, is important to the cultural configuration in question. Crucially, however, the fact that the Mandate of Heaven configuration has emerged and supported the dynasties of Mongols and Manchus highlights that many different types of in-groups are feasible.

The Way: rights of society is unlikely to be part of the strictest interpretation of the Mandate of Heaven, and is thus not included in this configuration. However, it was never too far from the minds of Chinese people, as witnessed by the fact that huge revolts, such as the Liu Bang's insurrection that ended the Qin Dynasty, the An Lushan Rebellion in the 7th century, and the Taiping and the Boxer Rebellions in the 19th century, often appealed to the unvirtuous behavior of rulers.

It is also interesting to remark that our representation of the Mandate of Heaven can be thought to represent the Chinese Communist Party's reign today, especially under President Xi, who often appeals to Confucian justifications for his authority. In this case, the mandate is not literally from the heavens, but an autocratic order is justified by the virtuous behavior and nature of the leaders, but in a classic top-down fashion, it is not the people or some outside body that decides whether the ruler is virtuous, but it is sufficient for this to be claimed by the ruler and other elites.

Confucian Democracy

Claims of the unwavering autocratic nature of Confucian thought notwithstanding, since the late 1980s Taiwan has developed a vibrant democracy and the past decade has witnessed a sustained movement demanding democracy in Chinese controlled Hong Kong. How has this happened?

Perhaps, Confucian culture changed or even was abandoned in Taiwan and Hong Kong, and that is why they were able to build democratic regimes. Huntington (1991) and Heinrich (2020) suggest that these polities first "Westernized", and thus became less Confucian, and this change of culture enabled the emergence of democracy. The evidence is clearly against this view, however.

First, if anything, there was less reason for Confucianism to decline on these two islands, since they avoided the anti-Confucian drive of the Mao's Cultural Revolution. Moreover, the Kuomintang who ruled Taiwan between 1945 and 2000 emphasized Confucianism as part of an attempt to distinguish itself from the communists on the mainland.

Available survey evidence supports these ideas. Fetzer and Soper (2012) use data from the World Value Survey and the Asian Barometer to document the extent of Confucianism in Taiwan, China, South Korea and Singapore and its connection to democracy. They do this by using the answers to three questions. The first captures family values; "for the sake of the family, the individual should put his [or her] personal interests second". The second involves social hierarchy; "if there is a quarrel, we should ask an elder to resolve the dispute" and also "being a student one should not question the authority of [one's] teacher". Finally they look at social harmony; "when one has conflict with a neighbor, the best way to deal with it is to accommodate the other person". They find little difference between the way that people answer these questions in Taiwan and China, thus providing no support for the retreat or collapse of Confucian values in Taiwan.[18]

Instead, our interpretation of the fluidity of Confucian culture set suggests that Taiwan and Hong Kong would be able to generate a cultural configurations supporting democracy. This cultural configuration, which we call Confucian democracy, is provided in Figure 12, which contains the same seven attributes as in Figure 11, but fused together in a different pattern. In particular, ritual, hierarchy, lineages, and traditional religion are again part of this configuration, but now instead of The Way: rights of rulers, we have The Way: rights of society playing a central role. This one switch then changes the meaning and interpretation of the other attributes. Hierarchy is still important, but less as a precept around which societies organize, and more as a private matter, and especially in the family. The nature of rituals also changes.

Fetzer and Soper's (2012) conclusion, echoed by the related study of Shin (2011), is in line with our interpretation:

> the Confucian tradition is flexible ... it allows for more than one interpretation, and it can be used as a basis for democracy and human rights (p. 3)

Our interpretation of Confucian attributes rewired together in a different manner support-

[18]They also document an interesting pattern: in 1995 "adherence to Confucian values has no effect on a respondent's support for democracy ... the separation of the state from Confucianism in Taiwan has freed the tradition from its association with authoritarian values (p. 13)." By 2001, however, after the first democratic presidential elections, the correlation, between Confucian values and attitudes towards democracy began to turn positive and Confucianism was "gradually transforming itself into an ideology that either had no impact on such political attitudes or bolsters enthusiasm for certain aspects of democracy and human rights" (Fetzer and Soper, 2012, p. 43).

ing democratic institutions is consistent with an emerging literature, including Chan (2013), Bell (2016), Qing (2016) and Bai (2019), who provide models of "Confucian democracy". All of these scholars argue that Confucian principles are perfectly compatible with democratic practices and they use many citations from the broader Confucian historical and philosophical literature to make this case. Qing (2016), for example, proposes a model of a modern Confucian constitution with three bodies, one of which is democratically elected by the people (the "House of the People"). He traces the origins of this idea to *The Gongyang Commentary*, a commentary on Confucius's writings from the the Spring and Autumn period, between 771 to 476 B.C., overlapping with Confucius's life (551 to 479 B.C.). *The Gongyang Commentary* argues that to rule one must "share in the realms of heaven, earth and human beings" (quoted in Qing, 2016, p. 27). Qing interprets this to mean that "The legitimacy of the 'human' refers to the legitimacy of the will of the people because conformity to the will of the people directly determines whether or not people will obey political authorities" (p. 27). He adds (p. 32):

> monarchy is not the sole, unwavering choice of Confucianism ... Changes in historical circumstances may necessitate changes in the form of rule.

The book by Bai (2019) focuses on a different stream of interpretation of Confucian thought, stemming from his most famous disciple, Mencius, which again emphasizes that political legitimacy has to come from the people.

5.3 Understanding the Dynamics

We have argued that Taiwan may have become democratic not because of cultural change, but rather because there were always other types of political institutions that were consistent with Confucianism. Why do we not see these types of more democratic cultural configurations in Chinese history? The answer provided by Figure 3 is again politics: these more democratic configurations were not selected because political power rested with monarchs and groups that had authoritarian interests and agendas.

The origins of the first Chinese imperial dynasty, the Qin, lie with the highly authoritarian political project of the "legalists" (the loci classici are Han Feizi (2003) and Shang Yang (2019)). These ideas were then fused with Confucianism and were effectively used by successive dynasties. Even if there were rebellions, power never consistently shifted to groups that could or would want to strengthen bottom-up participation in politics. This started to change with the brief period of republican rule after 1912, but was cut short by the communist takeover of power. Mao Zedong's

conception of politics was not too different than the Mandate of Heaven configuration developed above, and certainly agreed with the main top-down precepts of legalism. [19]. In fact, the legalist project was applauded by the young Mao who as an 18 year old wrote an essay praising Shang Yang whose laws "were good laws" and Mao despaired at "the stupidity of the people of our country" (Spence, 2006, pp. 17-18). After Mao's death, there was a major transformation of Chinese institutions, but the monopoly of power of the Communist Party did not change, and one-party rule once again selected a configuration similar to the Mandate of Heaven. As de Bary (1998, p. 164) puts it

> it can hardly be doubted that Confucianism ... has become the claimed ideological justification for one-party rule, for openly rejecting peaceful evolution to democracy, and for suppressing demonstrations.

In contrast, once political power shifted away from narrow elites in Taiwan and Hong Kong, the different facet of Confucian philosophy emerged, enabling a rewiring of the basic attributes that could powerfully support more democratic values and institutions. Hence, in our framework, it is not surprising that the Communist Party in China revives the Confucian legacy to attempt to sustain its despotic rule, while the same legacy is synergistic with vibrant democracy in Taiwan. This is what Weber (1951, p. 249) understood seven decades ago, when he wrote: "the basic characteristics of the [Confucian] "mentality" ... were deeply co-determined by political and economic destinies".

The conclusion from this discussion is that Confucian culture is a repertoire of ideas, practices and concepts and does not boil down to a determinate cultural configuration supporting a specific set of political institutions. We can see the same forces at work in the ease with which mainline Chinese culture has adapted to a much more individualistic lifestyle and social structure over the last two decades (see Yan, 2009).

In the realm of political institutions, different aspects of the Confucian repertoire can be emphasized or interpreted to support an autocratic political system, and they have traditionally been during the imperial period. However, when the underlying distribution of political power shifts and political objectives change, consistent with our Figure 3, Confucian attributes can be rewired together to support a democratic system, as we have witnessed in Taiwan and to some degree in Hong Kong as well, until this democratic experiment was cut short by intervention from mainland China in 2019.

[19] Bell and Pei note "In China, the supposedly egalitarian ideals of communism became transmuted into hierarchical social forms without much controversy" (2020, p. 23)

6 An Entangled and Specific Culture: Islam

The last two sections focused on two cases we view as exemplars of highly fluid cultures, England and China. We now turn to a culture that has several entangled and specific attributes at its core, Islam. Of course, English and Chinese cultures were not completely uniform over time and across space. The same is doubly true of Islamic culture, which spans all continents and impacts more than a billion people in the world today. Nevertheless, we will argue that there are several key attributes in Islamic teachings and jurisprudence that are important for cultural configurations relevant for political institutions and traditions. We are not, however, suggesting that Islam is an extreme hardwired culture. Far from it, there are many historical examples of change and accommodation of other traditions within Islam, and in many ways, its key attributes are not as entangled and specific as those of the Indian caste system, which we discuss in the next section. All the same, it enables us to illustrate how more specific and entangled attributes work and in what ways they constrain economic and political behavior.

6.1 The Islamic Culture Set

In comparison with the English and Chinese cases, the Islamic culture set comprises more entangled and specific attributes. This goes back to the fundamental teaching of Islam that Islamic states are supposed to implement the Sharia, the law derived from the Quran and the Hadith. Though four main schools of legal thought, with different emphases, emerged early on, they were restricted to interpretation. Unlike in the English or Chinese case, Islam leaves no room for legistation, for the law has already been created by God (see Gitmez,Robinson and Shadmehr, 2021, for a discussion of this and its consequences for political institutions). Gibb (1955) states "Since God is Himself the sole Legislator, there can be no room in Islamic political theory for legislation or legislative powers" (p. 3). Zubaida (2003) concurrs, arguing "rulers cannot play a part in legislation" (p. 74). This principle that God created the law which could not be changed by men—what Cook (2004) refers to as the "divine monopoly of legislation" (p. 332)—makes most attributes rooted in the Quran and Hadith quite specific. Moreover, the fact that many attributes have religious origins makes them highly entangled (how can you separate one decree in the Quran from another?).

A prominent example is taxation. The Sharia specifies four types of taxation only: *zakat* which is the alms that every Muslim must give to the poor; *jizya* which is the poll tax on non-Muslims; and *kharaj* and *ushr* which were taxes on land. Scholars differ on how constraining these stipulations were on later Islamic states. Zubaida notes in this context that "In practice these elements of

the Sharia were widely disregarded" (p. 79). Nevertheless, Hallaq (2014) points out that the "benchmark of taxation was the Sharia stipulated rates"(p. 62), and these were often binding. Similarly, Khoury argues for the Ottoman case that the "sphere of action of the sultan was at all times confided within the parameters of a Sharia concept of justice" (1997, p. 179).

Other prominent examples of the specific nature of the Sharia can be seen in the domain of inheritance. The Quran says:

> Concerning your children, God commands you that a son should have the equivalent share of two daughters. If there are only daughters, more than two should share two-thirds of the inheritance, if one, she should have half. Parents inherit a sixth each if the deceased leaves children; if he leaves no children and his parents are his sole heirs, his mother has a third, unless he has brothers, in which case she has a sixth. (4.11, p. 51).

The detailed specifications continue for another half a page.

Yet being hardwired is obviously a matter of degree. As we noted, Islam turned out to be adaptable enough to expand rapidly, often fusing with some of the local customs of the Arabian Peninsula or the war-making Turkic tribes (Rogan, 2012). The issue of polygamy illustrates that the Quran's decrees are not open and shut either. The relevant passage in the Quran says: "If you fear that you will not deal fairly with orphan girls, you may marry whichever [other] women seems good to you, two, three or four. If you fear that you cannot be equitable [to them], then marry only one" (4.3, p. 50). Many Muslim countries, like Saudi Arabia, continue to interpret this as allowing men to have up to four wives. Yet elsewhere this passage has been interpreted differently. In Tunisia, polygamy has been illegal since the 1956 Law of Person Status. In 1964 it was explicitly stated that a contract of marriage with a second wife was a criminal act and invalid (Anderson, 1976, p. 110). In introducing the law, President Bourguiba explicity referred to the Quran, pointing out that the condition of equal treatment could not be fulfilled since only the prophet was capable of such a feat (Anderson, 1976, p. 68). Only later Bourguiba mentioned, as a second motivation, that certain institutions, like polygamy and slavery, no longer made sense in the modern world.

Another interesting example is the nature of Islamic political institutions. After the death of Mohammad there was a sequence for four "rightly guided Caliphs" who were amongst his followers after which the Umayyad Dynasty estabioshed itself in Damascus. After several more dynasties, the caliphate shifted to the Ottomans in 1516/17, as Sultan Selim I took control of most of the Arabian Peninsula. The title caliph, now bestowed on the Ottoman Sultan, did not change Ottoman

institutions significantly, however, which continued to be absolutist, but now could appeal even more strongly to Islamic authority. In the 19th century the Ottomans, having fallen behind economically and in inter-state competition, attempted to reform different aspects of their institutions. In the 1870s, a group of intellectuals, known as the Young Ottomans, started promoting republican institutions and urged the sultan to create a representative body. One of their leading intellectuals, Namik Kemal justified this on Islamic principles; he appealed to the speech by Abu Bakr, the first Caliph after Mohammed, upon his accession in 632, where he argued that Muslims should help him if he did right but correct him if he did wrong and that they had no duty to obey him if he disobeyed God and Mohammed (Cook, 2013, p. 292). For Kemal, it was a short step from this to the statement that an Islamic state was "a kind of Republic" (quoted in Mardin, 1962, p. 297). He stated: "If the people of a country gather and pledge allegiance to a man for the Sultanate and Caliphate, this man becomes Sultan or Caliph ... the imamate is the right of the community" (Mardin, 1962, p. 294). Kemal was supported even by some of the clergy to the extent that Chief Justice Seyfeddin "cited the Kuran and the hadiths to show that Islam was not incompatible with constitutional rule, in fact, it had even enjoined it" (Berkes, 1998, p. 228). Kemal could not convince everybody, and certainly not the sultan, but the Ottomans continued to introduce a number of far-ranging reforms, which had started with the Rose Garden Edict of 1839, and the 1876 Constitution moved the Ottoman institutions toward a type of constitutional monarchy. In any case, our main point here is that, even though the Islamic culture was not as fluid as the English and Chinese ones, it was very far from the extreme hardwired benchmark, and such arguments could be made on the basis of Islamic thought and jurisprudence and had legitimacy.

6.2 Consequences of Hardwired Cultures

In the context of our theory an obvious implication of a culture being more hardwired is that there will be less ability to generate different cultural configutations. This limited adaptability may pose problems when the environment changes. Our discussion of taxes in the Sharia provides an illustration. The Ottomans did have non-Sharia laws which they called the Qanun, and levied non-Sharia taxes. Nevertheless, the data support the views of Hallaq and Khoury. Inalcik (1997), for example, shows that the poll tax on non-Muslims represented 48% of the total tax revenues of the Ottoman state in the late 15th century (p. 55). One of the main reasons why the Ottomans were not able to build an effective fiscal state in the early modern era, while other European powers were increasing tax revenues and investing in military and state capacity was probably these cultural constraints on different types of taxation. Karaman and Pamuk (2010) show that

real tax revenues per capita were constant in the Ottoman Empire in stark contrast to what went on among European powers.

Another interesting example of the consequences of the relatively hardwired nature of the Sharia is with respect to usury, or charging of interest on loans. The Quran is clear on this: "But those who take usury will rise up on the Day of Resurrection like someone tormented by Satan's touch" (2.275, pp. 31-32), and "You who believe, do not consume usurious interest" (3.130, p. 44).

For over one thousand years the Catholic Church also regarded charging interest as usury and contrary to the Bible. The Book of Exodus says: "If you lend money to one of my people among you who is needy, do not treat it like a business deal; charge no interest" (22.25). But at the same time Dueteronomy Chapter 23 states, "You shall not charge interest to your countrymen: interest on money, food, or anything that may be loaned at interest. You may charge interest to a foreigner, but to your countryman you shall not charge interest, so that the Lord your God may bless you in all that you undertake in the land which you are about to enter to possess" (19-21). So charging interest to foreigners is alright and not a sin. Plus even the phrase from Exodus is about lending money to poor people. Thus the language of the Bible was sufficiently abstract that it allowed for the Catholic Church to reverse its long-standing policy about the sinfulness of usury. Not so in the case of Islam.

For a final example, let us return to the quote from the Quran above where we noted how it talks of the "people of the Book" who were of course Christians and Jews. They were the out-group and Muslims were the in-group and this was fixed by God. This ironclad in-group hierarchy had important implications. In early modern England, too, there were in-groups and out-groups, but these changed over time. Prior to the Reformation everyone was a Catholic and the out-groups were heretical sects and Jews. But after Henry VIII's break with Rome in 1530s, the Catholics were suddenly the out-group. In 1559, the Act of Uniformity had required all men and women to attend Protestant churches on Sunday or pay a 12 shilling fine. A 1563 act levied a fine of 100 marks and up to a year in prison on anyone attending a Catholic mass. A 1581 act raised the fine for failing to attend church to 20 pounds per month and equated the activities of Catholic priests with treason. Penalties for refusing to convert, typically signalled by a refusal to attend Protestant church on Sunday, became known as "recusancy". In addition to the monthly fine, a convicted recusant could be imprisoned (many were), and 2/3 of their lands and all their goods were potentially forfeit. James I strengthened the "recusancy laws" by barring Catholics from the professions and from holding public office. He also introduced an oath of allegiance which, if refused, could be met with life imprisonment and the forfeiture of all property. But the in-group out-group

distinction was more a matter of politics. Stuart kings became increasingly more sympathetic to Catholic doctrine, because they viewed it as more complementary to their absolutist project, and many parliamentarians became more militantly anti-Catholic. As political winds changed again, the systematic discrimination against Catholics ended with the Catholic Emancipation Act of 1829.

7 Costs and Benefits of Hardwired Cultures

In the previous section, we provided our first detailed discussion of a culture with major entangled and specific attributes. Relatively hardwired cultures, in general, are more likely to make culture—their cultural configurations—a binding constraint on economic and social arrangements, as we noted in Section 2. However, we already emphasized that hardwired cultures are not the equivalent of "bad cultures" in the standard culturalist accounts, such as Banfield's or Huntington's conceptualizations; they may have benefits as well as costs. In this section, we explore these issues. We first illustrate the costs of hardwired cultures using another example, the Indian caste system, which, by locking in very rigid hierarchy, hinders economic mobility and makes the effective functioning of democratic institutions more difficult. We then discuss the emergence of monotheism, and especially what are sometimes referred to as "Big Gods", which are moralizing deities and help coordination and rule-following among their subjects. We interpret these Big Gods as a transition from a more fluid, polytheistic, culture to a more hardwired one, which brought a range of benefits at least initially, because they allowed greater within-society cooperation and better economic and political coordination. Finally, we return to the Islamic culture to suggest that, in this context, we can see both the benefits and the costs of less fluid cultures. The restrictions and rules of Islam were important for the early flourishing of Islamic civilizations and their military expansion. Their costs came later, from the difficulty of adapting to a changing environment because of some of their entangled in specific attributes.

7.1 The Caste System

Though there is an intense debate over the evolution of the Indian caste system over time, and the role that colonialism may have played in its evolution and nature, it was present in Indian society as early as 2,500 years ago in the *Vishnu Smriti,* one of the most ancient Indian texts. There it says

> Brahmanas, Kshatriyas, Vaisyas and Sudras are the four castes. The first three of these are (called) twice-born. Their duties are. For a Brahmana, to teach (the Veda). For a

> Kshatriya, constant practice in arms. For a Vaisya, the tending of catlle. For a Sudra, to serve the twice born.

Here the book is describing the division of Indian society into four varnas. Embedded inside the varnas are jatis, which are usually referred to as 'castes'. There are around 3,000 jatis in India. Duties of the different varnas in the *Vishnu Smriti* include "reverence towards gods and Brahmanas". A final group, the untouchables, or Dalits, of whom there may be 200 million in India today, sit at the bottom of the hierarchy outside the caste system. In our framework, the attributes generated by the Indian caste system are highly specific and entangled. The caste system is, by definition, specific: almost every aspect of social life is regulated according to caste identity. For the same reason, these attributes are also entangled, as economic functions, social roles, status, family structure and living arrangements are all related to the same foundational caste roles.

The best way to understand the implications of the caste system is via the writing of the great Dalit intellectual and statesman B.R. Ambedkar, whose 1936 lecture, "the Annihilation of Caste", is a devastating condemnation of the system. He wrote:

> the caste system is not merely a division of labor. It is also a division of laborers. Civilized society undoubtedly needs division of labor. But in no civilized society is division of labor accompanied by this unnatural division of laborers into water-tight compartments. The caste system is a hierarchy in which the division of laborers are graded one above the other. In one of its aspects, it divides men into separate communities. In its second aspect, it places these communities in a graded order one above the other in social status. (Ambedkar, 2014, pp. 233-234).

Ambedkar elsewhere likened Indian society to a "a multi-storeyed tower with no staircase and no entrance. Everybody had to die in the story they were born in" (quoted in Roy, 2014, p. 104).

Organizing society like this obvious has many implications (see Acemoglu and Robinson, 2019). For our purposes here it stands as a salient example of a hardwired culture. The caste system is highly specific—everyone is born into the jati and varna of their parents, and this determined not just their station but their station in life. Already in the *Vishnu Smriti,* different varnas have distinct occupations. Within the varnas, jatis have traditional more specific occupations. The cultural attributes are not just specific, rather than abstract, they are also deeply entangled in the Hindu religion with the whole system being enforced by religious authority.

To see that this system really has bite, it is interesting to examine the data collected by the first person who systematically investigated it, the British colonial administrator E.A.H. Blunt. Blunt's

1931 book *The Caste System of Northern India* used data about occupations and jatis from colonial censuses to explore whether different jatis actually undertook the occupations with which they were traditionally associated. He merged the jatis into 12 categories, beginning with agriculture, laborers and village menials, pastoral occupations, learned professions, trade and industry, dealers in food and drink, with the final category being beggars. Each of these categories was made up of more specific lines of work and Blunt matched the jatis with these different occupations. His conclusions were striking: 90% of agricultural jatis remained in their agricultural occupations. Elsewhere, the patterns were more striking, with other jatis heavily specializing in their narrow traditional occupations. For example, 75% of sweepers swept, 75% of goldsmiths continued in that line of work (the jati was called Sonar), 60% of barbers and washermen continued to shave and wash, 50% of carpenters, weavers, oil-pressers and potters also occupaied their traditional professions (Blunt, 1931, p. 240).[20]

The economic consequences of hardwiring peoples' castes and occupations are clear and were powerfully identified by Ambedkar: "the division of labor brought about by the caste system is not a division based on choice. Individual sentiment, individual preference, has no place in it. It is based on the dogma of predestination" (2014, p. 235).[21] As a consequence this system was bound to be highly inefficient, and not just economically.

7.2 Big Gods

The Indian case system is perhaps the canonical example of a hardwired culture having costs. The most obvious are social and economic, but as we pointed out in Acemoglu and Robinson (2019), it also creates tremendous political costs, because it makes it difficult for society to cooperate and solve its collective action problem, especially in keeping politicians and elites accountable, which is critical for building inclusive institutions.

But, as we already noted in Section 2, hardwired cultures can also generate major economic benefits, because they coordinate expectations, facilitate coordination and may provide better incentives. One of the most interesting examples is that of "Moralizing Gods" or what are sometimes called "Big Gods". Historically, many human societies had a multitude of gods and supernatural figures that were morally quite ambiguous, like the Greek Gods. These gods did not typically intervene in peoples' lives, like the Igbo creator god *Chukwu*, and were happy to coexist with other gods.

[20]See Deshpande (2011) for more recent evidence on occupational patterns by jati.

[21]For more recent evidence on the effects and the economic costs of the caste system, see Hoff, Kshetramade and Fehr (2011), Gupta, Mookherjee, Munshi and Sanclemente (2019) and Oh (2020).

Then, in a shortspan of time, in several societies there emerged new more powerful gods that claimed monopoly of supernatural power, demanded allegiance, laid down moral rules and specified punishments for deviations. A typical example is the Christian religion, where the Ten Commandments lays out some quite specific canonical patterns of desired behavior and implies that if one deviates from them, one is sinning. This is a problem because sinners will be judged and may not be able to enter heaven. In the Book of Exodus, the Commandments is followed by a long list of other rules with more prosaic punishments, such as "And he that curseth his father, or his mother, shall surely be put to death."

In terms of our framework, Big God religions are much more hardwired than what existed before. Polytheistic societies had behaviors that were less standardized and attributes that were less entangled, since they did not all originate from the commands of a Big God. Consider again the history of Islam. The bedouin, who Mohammed grew up with in the Arabian penninsular, had rules and norms that sanctioned particular forms of behavior. They also had mechanisms for punishing norm breaking, for example, by social ostracism, or sometimes via legal institutions. However, "these prescriptions and prohibitions are not strongly liked to universal cosmic forces of the commandments of mighty super natural beings" (Henrich, 2020, p. 131). What Islam brought was a system of rules with much more powerful—and specific and entangled—mechanisms of enforcement. Henrich describes this as:

> Religions have fostered trade by increasing trust, legitimizing political authority, and expanded people's conceptions of their communities by shifting their focus from their own clans or tribes to larger imagined communities like "all Muslims" (2020, p. 128).

The natural conclusion to draw is that: "If people believe that their gods will punish them for things like stealing,g adultery, cheating, or murder, then they will be less likely to commit these actions even when they could get away with it" (Henrich, 2020, p. 133). Ensminger and Henrich (2014), Norenzayan (2015) and Lang (2019) provide cross-cultural experimental evidence consistent with these ideas, for example, showing a correlation between belief in Big Gods and willingness to follow various rules. Therefore, Big Gods, both via the incentives they provided and because of the common identities they created, you were quite successful in coordinating actions and helped solve various collective action problems, which is one of the reasons why there emergence was often associated with state-building efforts (see Acemoglu and Robinson, 2019, and Wright, 2009). Perhaps it is not surprising that Big God religions (Hinduism, Judaism, Christianity and Islam) greatly expanded and today cover more than half of the world's population.

7.3 Benefits and Costs of Islamic Hardwiring

Islam, as Henrich points out, is an example of a religion with a moralizing god and strong supernatural enforcement. It also developed elaborate norms and institutions so that law-breaking could be punished in this world too. For example, the punishment for charging interest was that you would "rise up on the Day of Resurrection like someone tormented by Satan's touch", but this was typically preceded by equally harsher punishments in the hands of the Islamic state or the community.

The historical evidence is fairly clear, however, that Islam had various benefits to the societies that adopted it—or at the very least to their rulers. First, the religion allowed Mohammed and the first four Caliphs to unite the peoples of Arabia and build a state where none had existed before. This had a dramatic effect on the ability of people to coordinate and cooperate on a scale previously unimaginable. The most obvious effect of this was the rapid military expansion of the new Caliphate. Within 30 years Arab armies had conquered not just the entire Arabian penninsular but also what is now Isreal, Palestine, Lebanon, Syria, Iraq, Iran, Egypt and Libya. They created a vast new state whose capital moved first to Damascus and then to Baghdad.

The new state provided stability and a fair amount of predictable dispute resolution, unparalleled in the region. Stability, security and effective dispute resolution led to a large growth of trade. This took place in the context of Islamic restrictions on taxation, which may have initially generated greater economic security and protect ability. As the great Islamic scholar Ibn Khaldun pointed out, the Islamic state "imposes only such taxes as stipulated by the religious law, such as charity taxes, the land tax, and the poll tax. They mean small assessments ... They have fixed limits which cannot be overstepped" (2004, p. 90). Khaldun argues that this system generated a favorable incentive environment. Second, the state provided also public goods such as irrigation, and these along with the opportunities and incentives presented by expanding markets, triggered considerable investment and innovation in agriculture (Watson, 1983, see also Rodinson, 2007). There was a great intellectual flowering and various scientific breakthroughs as well.

So hardiwred cultures can have large benefits. It is also clear that as the world changed, Islamic institutions were less able to adjust than their European and Asian counterparts. In our framework, Islam was a more hardwired culture, allowing a more limited set of cultural configurations and less room for change in response to evolving environmental factors. Consider the example of usury, which we discussed already as a specific and constraining element of Islamic jurisprudence and has been argued to have retarded financial development in the Islamic world (see, for example,

Rubin 2017). Other economic institutions, like the *waqf*, which corresponds to religious charitable foundations, may have at first played a useful role by providing some form of property rights against state expropriation. However, Timur Kuran (2011) has powerfully argued that it has also impeded investment and retarded the development of modern corporate forms. Specifically, well-off people started setting up *waqf*'s to provide public goods, and sometimes to provide resources to their offspring. This organizational form was useful, because inheritance of assets was not allowed, but the *waqf* provided a way of partially circumventing these restrictions, precisely because it was an institution entangled with Islamic teachings, for it had emerged from the interpretation of several hadiths. Yet this entanglement subsequently made it extremely difficult for Islamic societies to move from this institution into something better fitted to a modern economy, such as nascent forms of legal private property. As Kuran (p. 128) puts it: "An unintended consequence of the *waqf* system was the dampening of incentives to develop organizational forms suitable to large and durable commerical operations". He also points out how the specific Islamic inheritance laws, which we discussed earlier "tended to fragment the estates of successfull businessmen" (p. 77). Comparatively, he notes that Christian canon law had practices that were "relatively easy to modify, and attempts at reform were less likely to be resisted as sacriligious" (p. 81). In our conceptualization, this again made Christian law more fluid and Islamic law, undergirded by Islamic teachings, more hardwired.

The entangled and specific nature of Islamic culture may have also prevented cultural configurations that would allow political reform toward non-autocratic political institutions. As we argued in the previous section, legislation remained God's monopoly, reducing the role of legislative bodies. In addition Platteau (2017) has argued that Islamic culture has generated an "obscurantist" equilibrium, whereby any argument against current rulers has to be couched in Islamic language. In Platteau's words: "When despots use religion to legitimize themselves in a highly contested environment they may provoke a counter-move in the form of religious backlash in which the ruler and his opponents compete to demonstrate their superior fidelity to the faith." This type of equilibrium makes any political reform towards more representative institutions very difficult (see also Acemoglu and Robinson, 2019).

8 Cultural Change, Collapse and Cultural Entrepreneurship

Our emphasis so far has been on how a given culture set generates a multitude of cultural configurations, especially when it has some degree of fluidity. Reality is of course more complicated,

because culture sets are not cast in stone. In fact, the distinction we drew between a culture and its culture set is exactly based on this possibility of change in the set of attributes or the way they can be fused together. In practice, cultures of course evolve. We can talk of an "English culture" between the 9th and 19th centuries, but we have to recognize that the culture set has changed noticeably in many ways in the intervening 10 centuries.

8.1 Cultural Change

Why do cultures (culture sets) change? There are several important reasons, which can be illustrated with the English and Islamic cultures, we already discussed. First, both of these cases show the possibility of expansion in a culture set because of invasions. The English culture before the Norman invasion of 1066 was a close relative of the Frankish customs brought to the isles by Angles and Saxons (see the discussions in Wickham, 2016, and Acemoglu and Robinson, 2019). Though this Anglo-Saxon culture had its own hierarchy, its political traditions had many bottom-up elements, especially powerful assemblies, *Witans*, which we already mentioned in the context of the "ancient constitution" in Section 4. It did not contain any elements of the feudal order, with its more explicit differentiation of the population into a hierarchical order, which were brought by William the Conqueror and the Normans after 1066. While the Normans were not able to erase key elements of the bottom-up political culture of the Anglo-Saxons, they significantly expanded English political institutions and political culture. For example, language differentiating society into different orders, serfs, villains, yeomans, barons, earls and lords were introduced by the Normans and, by the 16th and 17th centuries, they were already firmly-established attributes intertwined with notions of hierarchy in the English culture set.

The effects of the expansion of newly-converted Turkic states, most notably the Seljuks and the Ottomans, on Islamic culture from 10th century onward are similarly sweeping. Once these states took over lands previously controlled by Islamic caliphates, including large parts of the Arabian Peninsula, they started imposing their own political organizations and various traditions. This process of political change also transformed the Islamic culture set, which expanded to include significant elements of top-down control of religion and state administrative structures, some of which these civilizations had in turn borrowed from Byzantium (Rogan, 2012; Kuru, 2019).

Invasions are not the only means by which culture sets change and expand. With the technological, economic and social changes brought about by industrialization in the 19th century, both English (or by this point British) and Ottoman societies experienced the emergence of new attributes, such as a new emphasis on the acceptability and desirability of human control over

nature using industrial technology, as well as a greater openness to the idea that individuals can be considered citizens not subjects, which was an important element in the changes in cultural configurations witnessed in the 19th century, including those that spawned demands for and in some instances actual reforms of the sort we mentioned in Section 6 (see Mardin, 1962, Faroqhi, 2006).

In the same way that culture sets allow some new cultural configurations and rule out others, cultures permit some dynamic changes in their culture sets but may not be able to tolerate others. Going back to our discussion in the previous chapter, it would be difficult for the culture associated with the Indian caste system to introduce attributes that reverse the hierarchy between castes. In such circumstances, when the environment undergoes momentous changes, the response of some cultures may be collapse rather than adapt to these changes, for example leading to mass conversions to another religion (as many Hindus appear to have done between the 12th and 15th centuries in Indonesia).

8.2 Cultural Collapse, Cultural Entrepreneurship and Rejuvenation: The Crow

Another facet of cultural collapse is the inability of a group to use their cultural tools to interpret the changes they are undergoing and thus chart a useful reaction or adaptation to evolving circumstances. The Crow, a war-making tribe of Native Americans who were locked in constant battles with their chief rival tribes, the Sioux, the Blackfeet and the Cheyenne, illustrate this point clearly. The Crow would follow their chief and it was an honor for warriors to die on the battlefield. This emphasis on battle and heroism was symbolized by the war ritual of placing "coup sticks" in enemy territory or battle lines. With this act, the warrior was reaffirming his commitment to die on the battlefield, for he would not allow the enemy to pass and take over the areas marked by the sticks (Lear, 2006).

Another important part of Crow tradition revolved around buffalo hunting, which also emphasized male physical strength and skills. These practices and beliefs were undergirded by a particular cultural configuration that supported self-sacrificial heroism and fighting prowess. With ritual and other collective means, male children were prepared for war-making, hunting and heroism from an early age. Other rituals, including family structure, were combined together with the importance of heroism in battle. Even family meals involved rituals emphasizing the importance of coming battles and the value of heroism therein. Lear (2006, p. 39) imagines a Crow woman cooking for her family reasoning as "I'm getting my husband and family ready for tomorrow's battle". In terms of our framework, this corresponds to a highly entangled set of attributes, each gaining meaning

from the collective emphasis on male heroism.

The expansion of the new American state's frontier changed all of these dynamics. Not only were the Crow, like other Native American tribes, were militarily subjugated, but their traditional rivalry with the Sioux, the Blackfeet and the Cheyenne, effectively ceased once the American army came to dominate the area and the buffalo disappeared because of overhunting. This led to a severe loss of meaning and purpose among the majority of the Crow population. As one medicine woman put it: "I am trying to live a life that I do not understand" (Lear, 2006, p. 56). Lear interprets this comment and the general reactions and malaise among the Crow nation as the new life people were pushed into being "uninhabitable" with the frame that they had been used to view the world. In Lear's words (2006, p. 58), "This was the pain of being forced to recognize that one's traditional way of life was already over". In terms of our language here, this is a clear example of cultural collapse. One salient sign of this collapse was the cessation of many of the meaningful (and enjoyable) rituals. For example, singing in communal celebrations was a very important part of Crow culture, entertainment and bonding. But in the last decades of the 19th century, singing completely stopped among the Crow. An even more tangible sign of cultural collapse was the huge spike in mortality. Nearly a third of the Crows recorded in the 1887 census died in the 1890s (Lear, 2006, p. 27).

The history of the Crow is not just one of collapse, however. It is also an example of cultural rejuvenation, due to a type of "cultural entrepreneurship". Cultural entrepreneurship is already a familiar term in the study of cultural dynamics, deployed by scholars such as Waltzer (1965), who used such lenses to study the effects of Luther and Calvin on religion and politics, and Mokyr (2016), who views Francis Bacon and Isaac Newton as cultural entrepreneurs transforming Europeans' approach to science and technology.

In our context, it has a new dimension. A cultural entrepreneur is a person or group that uses existing elements of the culture set in order to engineer not just a new cultural configuration, but to launch a radical reevaluation of some of the meanings and interpretations as well as the contents of the culture set. This is what happened with the Crow, largely thanks to their last great chief, the Plenty Coups, and the elders who advised him. Following Crow tradition, young Plenty Coups went to seek a dream-vision, and when he returned, the elders helped him to interpret his dreams. The interpretation that followed was that the Crow had to recognize that the traditional way of life was gone, "the buffalo will go away forever", and following this, the Crow "explicitly recognized in official council that there buffalo-hunting way of life was coming to an end, and they decided to lie with the white man against their traditional enemies." (Leader, 2006, p. 73). Lear interprets

Plenty Coups reasoning as:

> I am thus committed to the idea that while we Crow must abandon the goods associated with our way of life and thus we must abandon the conception of the good life that our tribe has worked out over centuries. We shall get the good back to my though at the moment we can have no more than a glimmer of what that might mean. (2006, p. 94).

Therefore, the Crow leadership managed to use some elements of their culture set and cultural configuration in order to fundamentally change their culture set. This was a momentous event, allowing the Crow to adapt to the changes that were being imposed on them, in what turned out to be much more successful manner than other tribes were able to do. In our framework, it is an example of cultural entrepreneurship creating a fundamental change in a culture set—but avoiding cultural collapse, since this culture set was still successfully placed within the broader Crow culture.

How did the Crow manage to engineer a rejuvenation of their culture in the wake of a near-complete cultural collapse? We cannot know for sure, and there is much to still explore in this area. Nevertheless, our framework suggests that, even though the Crow culture was highly entangled, it did have a number of abstract attributes related to the meaning of virtuous life and various animal symbols. Left to their own devices, these may not have been enough to generate very different cultural configurations, but they opened the way to a type of cultural entrepreneurship, led by Plenty Coups and the elders, who proposed a radical redirection of Crow customs and aspirations, and in this fashion remade the Crow culture set.

This section, by its nature, has been much sketchier than the rest of the paper. It has emphasized a number of important themes, centered on how cultures dynamically respond to major changes in their environments with disruptive changes in their culture sets. Though critical, this has not been our main focus, which was instead on how culture, with its given culture set, can generate a multitude of cultural configurations in response to political and various economic and social changes. We view the more long-term, transformative changes in cultures to be an important area as well, but one that requires much more systematic investigation in the future.

9 Relationship to the Literature

Our purpose in this paper has been to provide a new framework for thinking about culture and its relationship to institutions, social equilibria, economic growth and political development. Although,

given this focus, we do not have space for doing justice to the multifaceted and growing literature in economics and political science on culture, it is useful to place our work within this broader literature and contrast our approach to its more influential strands. In this section, we will attempt to do this and also provide a brief discussion of our connections and differences from the recent sociology literature.

Much of the approach in economics and related fields starts from Parsons's methodological foundations which, as we explained in the Introduction, view culture as (1) a coherent, deep or "latent" variable affecting almost all individual decisions; (2) slowly-changing or unchanging; (3) embedded and residing in national units, subnational cohesive regions or ethnic or religious groupings; and (4) transmitted via a process of family and community socialization. Our approach, on the other hand, explicitly departs from many of these precepts, by following the more recent literature in sociology, including the seminal works by Clifford Geertz, Ann Swidler, William Sewell, Anthony Giddens, Roy D'Andrade, Orlando Patterson, and Paul DiMaggio. Most importantly for us, as the quote from DiMaggio (1997) provided in the Introduction emphasizes, according to this approach, cultures "leave much opportunity for choice and variation" and can be used by people "strategically".

Our approach remains faithful to this maxim by recognizing that culture consists of attributes wired together and these attributes can be rewired, sometimes quite fluidly, as conditions change. This conceptual starting point of our approach provides a natural contrast to other works on culture in the economics, political science and related literatures, as we next discuss.

One very influential line starts with the evolutionary approach in biology but relaxes this in order to represent the faster and more variegated transmission of cultural values. This approach was pioneered by Cavalli-Sforza and Feldman (1981) and Boyd and Richerson (1988), and distinguishes the transmission of cultural characteristics from the biological sort by allowing for both vertical transmission (within families) and horizontal transmission (from communities via interaction and imitation). This approach has become popular in both anthropology (see, for example, Heinrich, 2020) and economics (see the review by Fernandez, 2011, and the applications of these ideas in the context of economic growth in Mokyr, 1990, 2005, and 2016). Recent empirical works within the tradition of this approach have focused, almost exclusively, on the vertical transmission of fairly broad, latent values, within ethnic, national or religious units. Although there are many papers in economics within this vein, let us illustrate the main thrust and methodological aspects of this approach with a deservedly influential paper by Fernandez and Fogli (2009).

Fernandez and Fogli establish that second-generation immigrant women in the United States

have fertility and labor force participation rates correlated with their mothers' generation's average rates in their country of origin. Like Talcott Parsons would have done, Fernandez and Fogli interpret this as a reflection of a coherent culture transmitted across generations, despite exposure to a common outside environment in the United States. Our framework suggests a complementary interpretation of Fernandez and Fogli's finding and other related ones in the literature. First, in our framework, it is unsurprising that cultural configurations produced from the same culture set, especially including relatively hardwired cultures in the case of immigrants from the Middle East and the Indian subcontinent, generate some amount of persistence. Yet the fluidity of culture also implies that we should see a lot of adaptation, which is what Giavazzi, Petkov and Schiantarelli (2019) and Jaschke, Sardoschau and Tabellini (2020) document: while there is a statistically strong correlation with ethnic origin, second-generation immigrant women from different backgrounds have fertility and labor force participation rates that converge rapidly toward those of natives. Second, as already discussed in Section 2, this type of cultural persistence should be interpreted as resulting from a combination of a cultural configuration remaining the same despite changes in other (forcing) variables and persistence resulting from the durability of other factors, for example, because various incentives and pressures remain the same for women in the neighborhoods and social environments in which they are located. This observation suggests new complementary directions for research in order to understand *when* national or ethnic cultures, and together with them behavior such as female labor force participation and fertility, adapt and when they persist largely unchanged.[22]

A related subliterature, anticipated by Guiso, Sapienza and Zingales's (2009) use of genetic similarity as an instrument for culture, links national, ethnic and religious cultures to genetic backgrounds. This work that has become influential, and naturally controversial, over the last decade and a half, includes Galor and Moav (2002), Ashraf and Galor (2013), Spalaore and Wacziarg

[22]This line of work was launched by Carroll, Rhee and Rhee (1994), who used the same methodology to look at saving differences across different immigrant groups in the US.

Other influential papers in this vein include: Dohmen,et al. (2011), which relates culture to individual risk attitudes, Luttmer and Singhal (2011), which looks at national culture and taste for redistribution, Giuliano (2007), who looks at the impact of national culture on the likelihood of children cohabiting with their parents, Guiso, Sapienza and Zingales (2009), which links differences in historical trust between European nations to their bilateral trade, Ahern, Daminelli and Fracassi (2015), which looks at the impact of the same variable on international mergers, Botazzi, Da Rin and Hellman (2016), which focuses on foreign direct investment, and Alesina, Giuliano and Nunn (2013) who study the effects of early plow use on persistent gender roles in the family. See Alesina and Giuliano (2015) for a review. Although the details of these studies vary, our general observations about persistence coexisting with change and persistence reflecting, to some extent, the durability of other, institutional, political and economic factors also apply and suggest additional directions of inquiry in these areas as well. For example, one could investigate to what extent the male-dominant family model that appears in places that have used the plow has changed in response to economic and political changes and whether persistence is driven primarily by subcultures with more hardwired elements. Similarly, one could explore these issues in the context of the relationship between certain cultural characteristics and risk attitudes.

(2013), Gorodnichenko and Roland (2017), as well as outside economics, Nicholas Wade's much-disputed (2014) book. It is distinguished from our work along the same lines in viewing culture as an unchanging, coherent set of values at the national, ethnic or religious level, and in some sense, it leaves less room for institutional, political and economic factors to influence cultural configurations.

Another influential line in economics is the one pioneered by the seminal work of Bisin and Verdier (2000, 2001, 2017), (see also Bisin, Rubin, Seror and Verdier, 2021) who introduced choice by parents in the framework of Boyd and Richerson. Their model has become a bedrock of many applications in economics, but does not capture our focus on "much opportunity for choice and variation" (using DiMaggio's terminology), since this choice only affects the values children inherit and then carry throughout their life. In contrast, our approach allows individual and collective attributes to be rewired as conditions change—not just as parents transmit values to their children. In this sense, our approach is more closely related to the emphasis in Acemoglu and Jackson (2015) on the fluidity of social norms in response to changes in information, leadership and historical accidents and to the important work by Doepke and Zilibotti (2008, 2020) on preferences and parenting that are cultural but still endogenous to various economic factors.

Perhaps the most influential recent line of work on culture in economics and political science was spearheaded by Putnam's seminal (1993) book on the contrasting political cultures and social capital in the north and south of Italy, and its further development in Putnam (2000), which revived and refined Banfield's equally seminal (1958) book on amoral familism in the south of Italy as a cause of economic and political underdevelopment. A distinguishing feature of these works is their emphasis on "generalized morality" (e.g., "good" versus "bad" or prosocial versus not) and its effects on social, economic and political behavior. Recent important contributions along these lines include Ichino and Maggi's (2000) work on misbehavior by workers from different backgrounds in the same firm in Italy, Tabellini's (2008) conceptual framework of moral values affecting prisoner's dilemma incentives in a social equilibrium, Algan and Cahuc's (2010) study of the relationship between inherited trust and economic growth, and Besley and Persson's (2019) and Besley's (2020) general framework linking culture and trust. to political and economic development. A very clear and useful discussion of the perspective implicit or explicit in these papers is Roland (2004), who argues that culture is "slow-changing" and thus has indelible effects on both economic outcomes and institutions. This perspective, and many of its conceptions on "good" and "bad", are shared by the political science literature following Huntington (1993), which emphasizes the effects of certain cultural values on democracy and economic growth. We differ from this branch of the literature in three respects. First, because of our emphasis on attributes rather than a coherent unchanging

culture distinguishes us from the Parsonian nature of this approach and puts us closer to the recent sociology literature. Second, in parallel with our comments in Section 2.8 the context of Fernandez and Fogli's work, our framework suggests that some of the persistence of cultural configurations may be not the cause but a consequence of various institutional and political factors, and when these factors create the right incentives, there may be rapid change (something Locke, 1995, found in the south of Italy). Finally and most importantly, as already pointed out, our framework differs these approaches as it refrains from classifying cultural configurations as simply "good" (moral, growth-enhancing, effort-inducing) and "bad" (amoral, growth-retarding, shirking). Indeed we have pointed out in Section 2 and elaborated further in Section 7 that hardwired cultures can generate distinct advantages for public good provision, economic growth or military expansion because of their greater coordination capabilities, even if they are less able to adapt to certain changes in environment.[23]

Another line in political science is somewhat more varied in its emphasis. This line includes Almond and Verba's (1963) work on civic culture and democracy and Martin Seymour Lipset's (1959) modernization theory, which stresses the effects of economic growth on culture (for example in Lipset's modernization theory, economic growth leads to cultural change, which then facilitates the emergence of democracy; see especially Lipset, 1963). Despite their recognition of the endogeneity of political and civic culture, these works do not model how culture changes or adapts, nor do they introduce any of the microfoundations linked to attributes, their linkages or cultural configurations, as we do.

Two other branches of the economics of culture literature are more closely related to our work. The first explicitly investigates the interplay of political institutions and culture. General discussions of this area are included in Greif (2007), Mokyr (2016) and Besley and Persson (2019). More specific models and some evidence are presented in Gorodnichenko and Roland (2020), Tabellini (2008, 2010), Besley and Persson (2019) and Bisin and Verdier (2017). Using micro-level variation between age groups/cohorts within country, Acemoglu et al. (2021) present evidence that spending one's impressionable years under a (high-quality) democracy has a major effect on reciprocity, trust and civic culture (see also Besley and Persson, 2019, and Brun, 2019). In this context, Kuran (1997) is perhaps most closely related to our work, since he proposes a specific theory for why preferences and discourse can be falsified under authoritarian regimes (see also Levi, 1988).

[23]The aspect of our framework highlighting the short-term benefits and long-term costs of hardwired cultures is distantly related to part of the cultural economics literature emphasizing the contrast between individualism and collectivism (building on Durkheim's classic ideas). Starting with Greif (1994), this branch of the literature recognizes that collectivism can have benefits or costs depending on the economic and political environment.

The second noteworthy branch of the literature is the one focusing on the relationship between religion, culture and institutions. Botticini and Eckstein (2012) explain certain key aspects of Judaism with the demand for education, motivated by the communal pressures for reading of the Torah, that emerged in the uncertain environment following the destruction of the Second Temple during the Roman Republic. Becker and Woessman (2019), Cantoni (2015) and Cantoni, Dittmar and Yuchtman (2018), among many others, study the interplay between Protestantism, the printing press and education, emphasizing how the Protestant doctrine for reading the Bible to connect personally to God increased the demand not just for Bibles (and thus the use of the printing press) but also education more generally, and via this channel, affected economic, social and political attitudes. Kuran (2012), Platteau (2017) and Rubin (2017) are even more closely related, since they emphasize the role of certain attributes of Islam that are, in our terminology, entangled in causing political dysfunction (the lack of non-religious property rights and inheritance in the first, and certain aspects of religion-state relations in the latter two).

Last but not least, a promising emerging literature focuses on the evolution of social norms, which many scholars view as a key component of culture. This literature, building on insights from Thomas Schelling (1978) and Axelrod (1984), models norms as evolved, but potentially mismatched, patterns of behavior. At the empirical level, this literature has flourished, especially with the use of lab and field experiments, for example as exemplified by Heinrich et al. (2004). At the theoretical level, it shares with our approach the focus on the endogeneity of norms/cultural configurations, with some works such as Belloc and Bowles (2013) emphasizing the persistence of inefficient norms (see the excellent review in Young, 2015, and the references therein). Nevertheless, much of this literature starts from models of evolutionary game theory, and thus the responsiveness of norms to changes in circumstances, institutions and politics is limited. In this respect, our work is closer to a smaller literature that models norms in more standard game-theoretic settings as expected patterns of behavior, as in Acemoglu and Jackson (2015, 2017), Benabou and Tirole (2003, 2011), Bursztyn, Egorov and Fiorin (2020) and Benabou, Ticchi and Vindigni (2021).

10 Conclusion

This paper has provided a new framework for understanding and studying the interrelationships between culture, institutions and various social outcomes. We sharply differ from the view that cultures are coherent and stable, which is central to many of the early sociology works, for example those building on Talcott Parsons's seminal contributions and the majority of current approaches

in economics and political science that build on them. Rather, we emphasize the malleability and fluidity of cultures, especially in their ability to generate cultural configurations that support different political traditions, ideas and institutions. In this, we are building on the more recent sociology literature, pioneered by scholars such as Geertz (1973), Bourdieu (1977), Giddens (1984), Rosaldo (1989), Swidler (1986, 2001), D'Andrade (1995), DiMaggio (1997), Sewell (2005), and Patterson (2014), who introduced key notions, such as the flexibility of meanings in cultures, the perspective that culture should be viewed as a repertoire or a toolkit, and the "strategic" use of cultural elements by individuals and groups in response to changing conditions.

Although our approach is heavily inspired by this more recent literature, it has a number of distinctive features. First, we operationalized some of these ideas in the analysis of the interplay between culture and institutions. This is also the specific context in which we proposed some of our key concepts, such as cultural configurations, produced from the attributes and feasible connections of a culture set.

Second and relatedly, we developed a more systematic account of how culture, institutions and political factors interact, and how this interaction and its implications for social outcomes depend on how fluid or hardwired culture is. Most notably, our framework suggests that more hardwired cultures, which permit a more limited range of cultural configurations, are more likely to approximate the view, common among several contemporary political scientists and economists, that culture is a hard constraint on political and economic arrangements. Instead, our framework suggests that there is both greater adaptability in a richer interaction between cultures and other aspects of a society, especially for relatively fluid cultures.

Third and most importantly, we have offered a new set of microfoundations for thinking about what type of repertoire a culture provides. Our approach starts with properties of attributes (whether they are abstract or specific) and collections of attributes (how entangled or free-standing they are), and shows how these determine and constrain the set of cultural configurations. We then use these microfoundations to enrich our understanding of what cultural fluidity means and how it works and to model the dynamic interplay between culture and institutions.

Finally, we took a stab at using this conceptual framework for interpreting the nature and history of some of the major cultures, ranging from African examples to England, China, Islam and the Indian caste system.

There is no doubt that this paper is a very first step. If the conceptual framework we propose is useful (something to be decided by other scholars in reference to other theoretical ideas, history and empirical evidence), then it will need much elaboration and new ways of being operationalized

in empirical and historical work. Let us end this paper with a brief mention of a couple of these directions.

The first area that requires considerable work is in developing and improving the conceptual framework. Our first attempt has been no more than a sketch. There are certainly more ways of thinking about the nature of attributes than just their degree of abstraction and entanglement, and what determines the set of feasible connections in a culture set requires both conceptual and empirical elaboration. The interplay of culture and institutions was similarly sketchy, and there are already many ideas in the modern economics and political science literatures that can be combined and incorporated into our framework. A related direction would be to build more formal models of how attributes come together and how cultural configurations change. We took a first stab at this in the Appendix, but abstracted from all strategic/game-theoretic elements, whereby agents (individuals or groups) take purposeful actions in combining attributes to generate (or to block) new cultural configurations. Incorporating both strategic and more dynamic elements into this conceptualization would be a major step forward.

The second area that would be important to explore is the way in which attributes and cultural configurations shape individuals' mode of thinking. Consider the Confucian case discussed in Section 5: the Mandate of Heaven configuration is not a tangible political institution propagating autocracy. Rather, it inculcates in people a particular way of thinking that makes autocracy more likely or even pervasive within society. How does it do that? Once such a mode of thinking is in place, how difficult is it for a new cultural configuration to arise? Does mode of thinking persist even after elements of an alternative cultural configuration are in place? These questions would necessitate new combinations of ideas from social psychology, sociology, political science and economics (see DiMaggio, 1997).

A third area would be the application of this framework to within-group diversity of cultural interpretations and their effects on economic and social choices. For example, to what extent can we think of people who live in a low-income US inner-city neighborhood as having a fairly uniform culture set and then choosing different configurations from that set due to idiosyncratic factors and availabilities? Can we consider, based on our framework, that "cultures of poverty" are often endogenous? If so, when do they become more hardwired constraints on economic and social choices?

A fourth area for future exploration relates to our discussion in Section 8. We only touched on issues related to large-scale cultural change, collapse and entrepreneurship. Whether concepts related to the specificity and entanglement of attributes are central to these issues remains to be

explored.

The final area is perhaps the most important. If this framework is to have any durable impact, it needs to be operationalized in an empirical direction: How can we systematically distinguish and enumerate attributes in a culture set? How do we measure whether an attribute is abstract or specific, or free-standing or entangled? Is there a systematic way of determining when cultural configurations change and when they become binding constraints on social arrangements? Developing actionable answers to these questions, and many others we do not have the space to enumerate, would be critical for this framework to be usefully applied both in reinterpreting historical cultures, their effects and their evolution, and in designing empirical strategies for the study of modern-day cultures and their social implications.

Appendix

In this Appendix, we briefly present a more mathematical representation of how attributes are wired together and how we can think of a cultural configuration as consisting of (feasible) rewirings of available attitudes.

Mathematically, we can express the main ideas of our conceptual framework using the language of networks or graph theory. Suppose that there is a set A of *attributes*. This set A is associated with a set of edges, $E \subset 2^{|A|}$, meaning the set of all possible connections between any two attributes $a, a' \in A$. A *culture* C is then defined by its *culture set*, itself consisting of the set of attributes A and the set of feasible connections, represented as the feasible subset $E_f \subset E$.[24] The set of edges E gives the set of all of networks (graphs) G that can be formed from the attributes in A. The feasible subset of connections E_f defines a subset of networks that are feasible, $G_f \subset G$. A *cultural configuration* is an element $g \in G_f$ (see Figure 1). This terminology clarifies the distinction between a culture (together with its culture set) and a cultural configuration.

It is also straightforward with this notation to define the relationship between two cultures in terms of fluidity. A culture C is *more fluid* than culture C' if $G_f^{C'} \subset G_f^C$. Figure 4 in the text illustrates this idea.[25] An extreme hardwired culture has a culture set that allows only a single cultural configuration (this could be because its culture set is a singleton or it has many attributes but they are all tightly entangled, so they cannot be separated).

To understand the relationship between cultural configurations and political institutions, let $\pi : G \to P$ be a mapping that specifies the resulting political power (elements of the set P) as a function of the culture set of a society. For example, elements of the set P could correspond to democracy, denoted by p_D, versus monarchy, p_M versus theocracy, p_T etc. We can think of a culture C as being more fluid and allowing a richer set of political institutions if $\{p_D, p_M, p_T\} \in \pi(G_f^C)$. In other words, a culture allows very different political equilibria if it is fluid enough that its culture set has sufficiently many attributes and allows for sufficiently many connections. Such a fluid culture can generate justifications for different types of political regimes. In contrast, a more hardwired culture C' may offer only a few feasible cultural configurations, and thus we may have in this

[24] As noted in the text, we are using culture and culture set interchangeably most of the time, though one distinction is that a culture may undergo evolution over time by adding or subtracting attributes and admissible connections to its culture set. More specifically, we can define a culture C by a collection of feasible culture sets, $\{(A_1^C, E_{f,1}^C), \ldots, (A_n^C, E_{f,n}^C)\}$, but we do not need this additional formalism for our discussion here.

[25] This definition provides a partial order. In particular, even the extreme hardwired culture may not be less fluid than another culture, because their culture sets may be non-overlapping. Although this partial ranking is still useful for us, one may wish to strengthen it and have a ranking in terms of the cardinality of the set of feasible edges. Which partial order we adopt is immaterial for our discussion here.

example $\pi(G_f^{C'}) = \{p_T\}$.

We can also use this notation to clarify how abstract vs. specific attributes and entangled vs. free-standing collections of attributes may matter. First consider entanglement. Entangled attributes travel together and thus reduce the set of feasible connections. Mathematically, this implies that if a culture C is more entangled than another one C', then $E_f^C \subset E_f^{C'}$, which will then lead to $G_f^C \subset G_f^{C'}$, i.e., greater fluidity for the latter culture. Now, in addition, if the mapping π, which gives the corresponding (political) institutions is bijective, then $\pi(G_f^C) \subset \pi(G_f^{C'})$ (where $\pi(G')$ is defined as the set of all political institutions supported by the cultural configurations in the set G').

Next, turning to abstract vs. specific attributes, in the text we emphasized that abstract attributes allow more connections. Therefore, we can also say that if a culture C has more abstract attributes than another culture C', then we again have $E_f^C \subset E_f^{C'}$ and thus $G_f^C \subset G_f^{C'}$, and also $\pi(G_f^C) \subset \pi(G_f^{C'})$, when π is bijective. However, as we already noted in the text, there is an additional sense in which abstract attributes may matter. In line with our broader idea that with abstract attributes, the meaning of each attribute depends on the exact wiring between attributes, one can also represent the effects of abstract attributes by encoding this directly in the mapping $\pi : G \to P$, where G is the superset of all attributes across cultures considered in a given context, and the image set of this map is larger when we consider more abstract attributes. More formally, we can think of this as if two cultures C and C' are identical, except that one attribute is more abstract and the latter, then we would directly have $\pi(G_f^C) \subset \pi(G_f^{C'})$. This would then capture the idea that an abstract attribute allows a broader set of meanings when combined with other attributes.

We can similarly consider the implications for economic arrangements. In this case, it is useful to introduce an underlying state of nature denoted by $\sigma \in \Sigma$. Denote economic arrangements by x, so that we have a mapping $\xi : G \times \mathcal{C} \to X$ specifying which economic arrangements are feasible given the entire set of feasible cultural configurations, but also making the set of feasible arrangements depend on the culture itself (where $\mathcal{C}$ is the set of feasible cultures). Economic success, for example, GDP or economic growth, can be conveniently summarized by a function $Y(x, C, \sigma)$. Suppose, for simplicity, that Y is high if $x = x^*(\sigma)$ when the underlying state is σ, and is low otherwise (this would apply if economic success does not directly depend on C, but our general framework allows such dependence). Suppose (of course counterfactually) that the political mechanism is such that the output maximizing feasible economic arrangement will be chosen. Then the question becomes whether $x^*(\sigma) \in \xi(G_f^C)$ for the relevant state σ. An interesting situation is when this is the case

to start with, but then the state of nature changes from σ to σ', such that $x^*(\sigma') \notin \xi(G_f^C)$.

This would capture a scenario in which a culture cannot generate new cultural configurations adapted to the changing conditions (and may consequently fall behind economically). This scenario is also useful for clarifying our distinction between fluid-hardwired cultures vs. "good"-"bad" cultures. In particular, a hardwired culture may be successful initially, precisely because it allows better coordination, and thus using our general notation, $Y(x, C, \sigma)$ depends on C directly, and the coordination afforded by a relatively hardwired culture is valuable. This success would be redoubled if it is also the case that $x^*(\sigma) \in \xi(G_f^C)$, but it does not depend on this coincidence. However, as the state changes from σ to σ', the hardwired culture C will have fewer options to respond to changes in environment, and may fall behind. See our discussion in Section 7.

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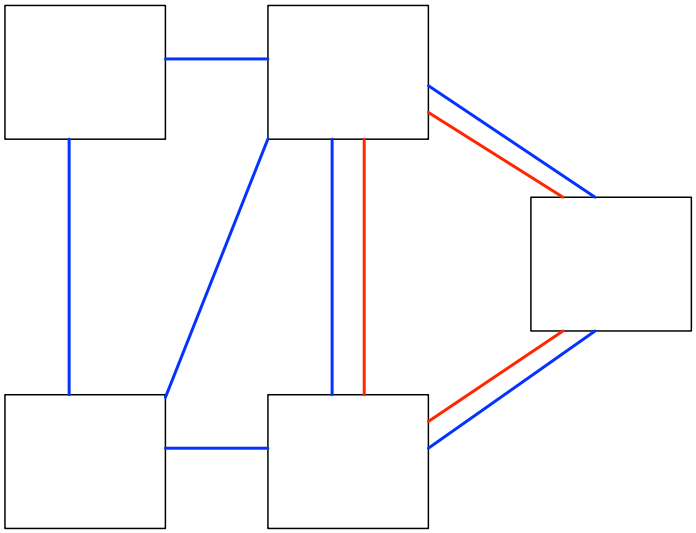


Figure 1: Attributes, connections and cultural configurations. In this graph, there are five attributes, and to cultural configurations, one consisting of all attributes wired together (in blue) and another represented by the red connections.

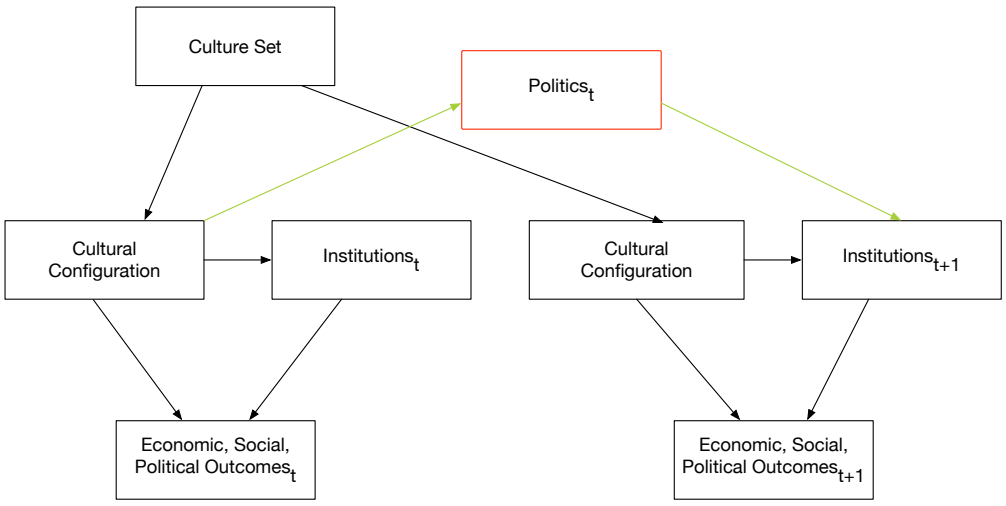


Figure 2: Culture-institution interactions for an extreme hardwired culture. Institutions and politics have no effect on cultural configurations.

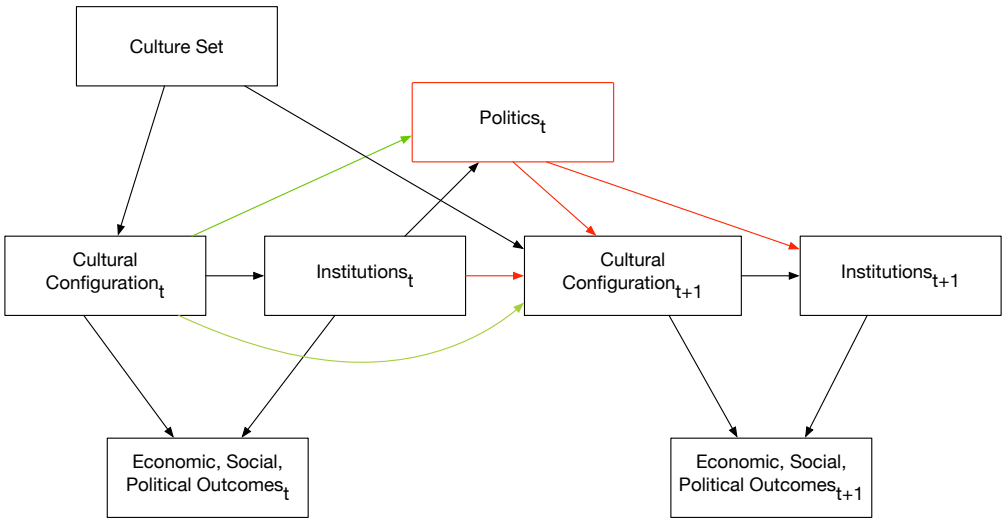


Figure 3: Culture-institutions interactions for a more fluid culture. Now institutions affect the evolution of cultural configurations and politics affect both institutions and cultural configurations (these new possibilities are shown by the red arrows).

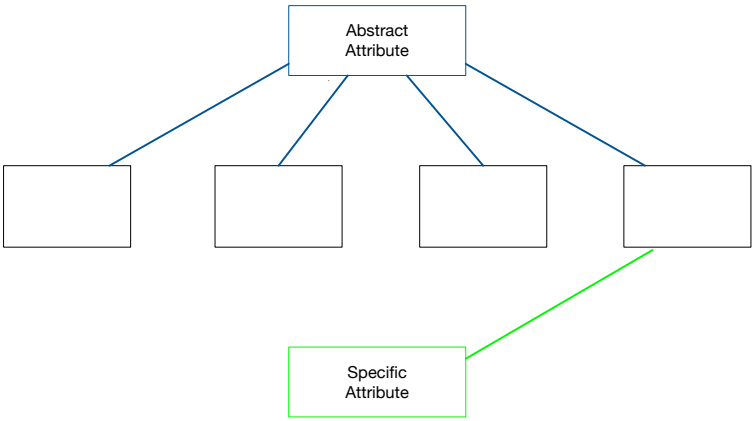


Figure 4: The abstract attribute, shown in blue, allows links with all four attributes in the middle, while the specific attribute, shown in green, can only be linked with one of those four attributes.

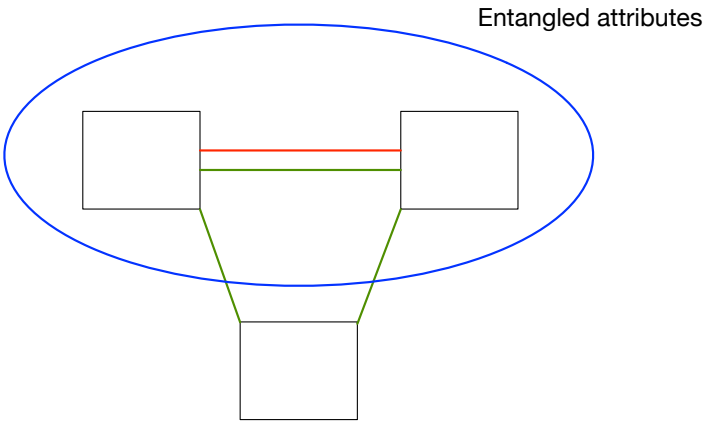
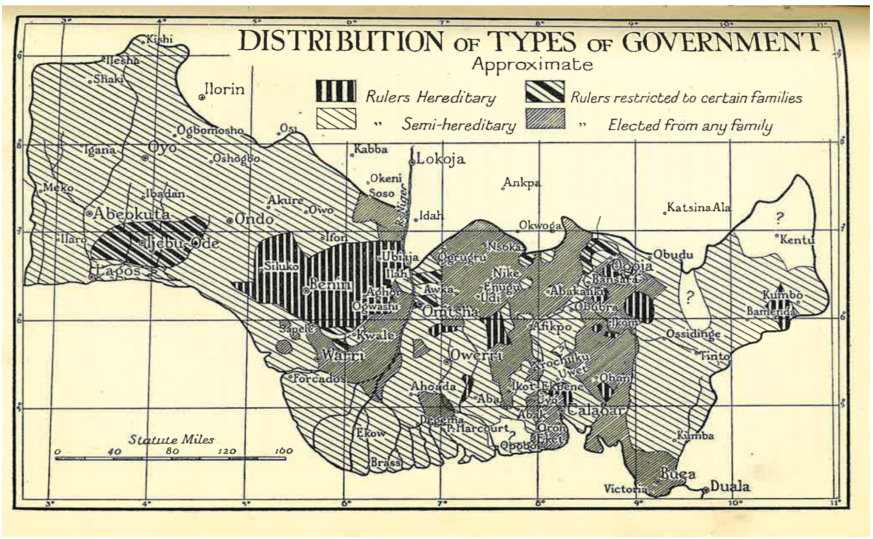


Figure 5: The top two attributes are entangled together and cannot be separated. Hence, these three attributes can only generate three distinct configurations, one shown in red, one in green, and one corresponding to the bottom contributed by itself. Without entanglement, there would have been seven feasible cultural configurations (three given by each attribute by itself, three corresponding to the three pairs, and one given by all three attributes wired together).



Talbot, Percy A. (1926) *Peoples of Southern Nigeri*a, Volume 3, London: Oxford University Press. P. 567.

Figure 6: Talbot's (1926) map of different political institutions in Igboland. Rulers hereditary correspond to areas where there was hereditary rule, while rulers elected from any family designates areas where rulers were elected without any restrictions and thus corresponds to our "council democracy"

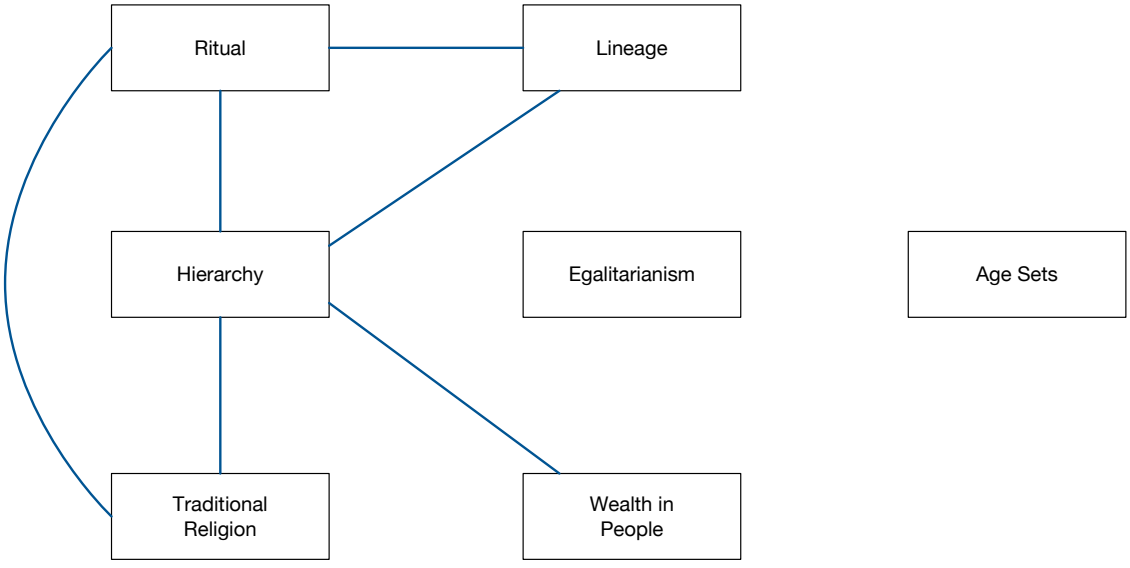


Figure 7: This figure lists some of the key attributes in the Igbo culture set and shows how they may generate a cultural configuration legitimizing **hereditary rule**.

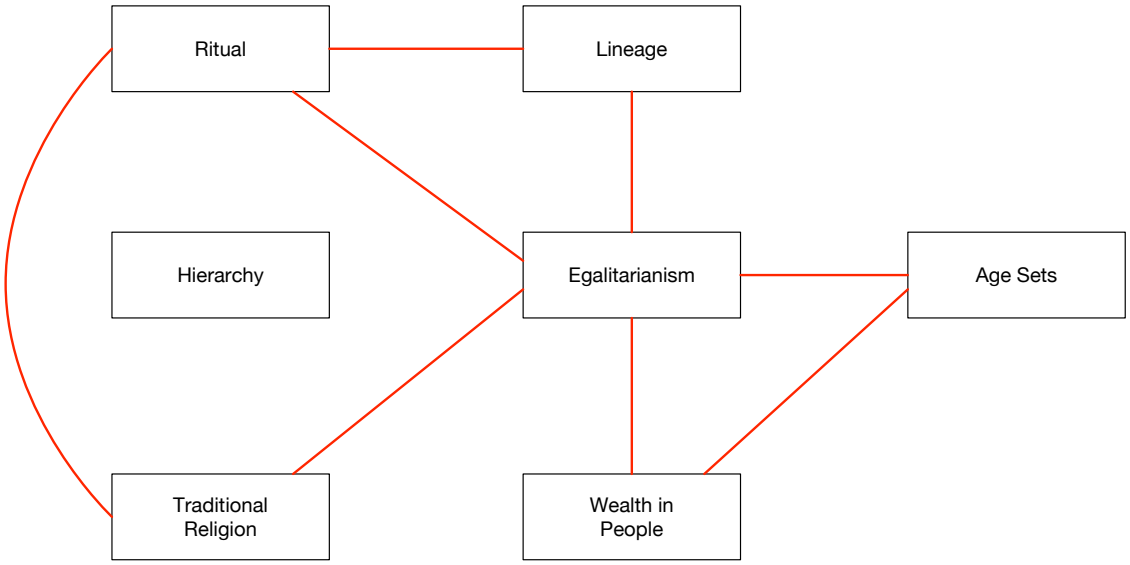


Figure 8: This figure shows how the same key attributes in the Igbo culture set may generate a cultural configuration legitimizing a type of democratic governance, we refer to as "**council democracy**".

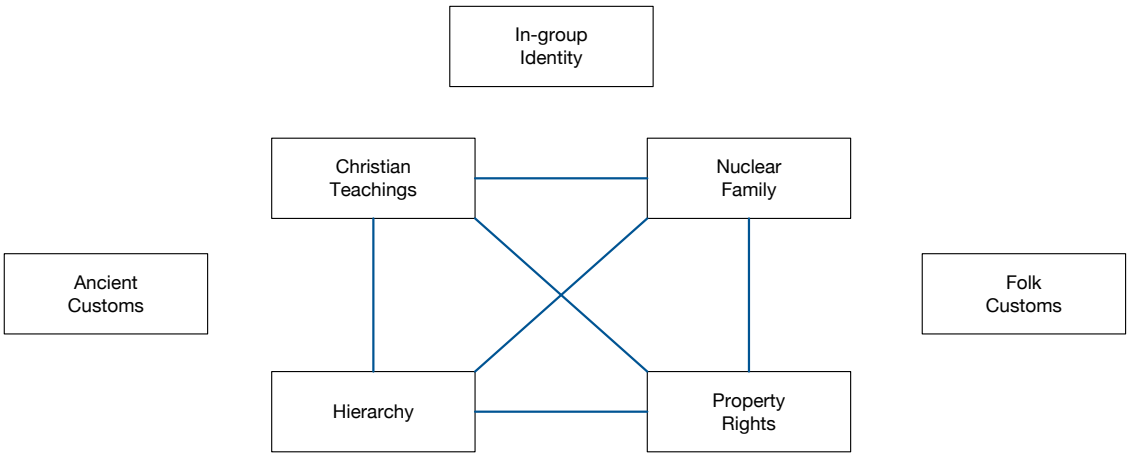


Figure 9: This figure lists some of the key attributes in the English culture set and shows how they may generate a cultural configuration, we call the **divine right of kings**, which legitimizes absolutist rule.

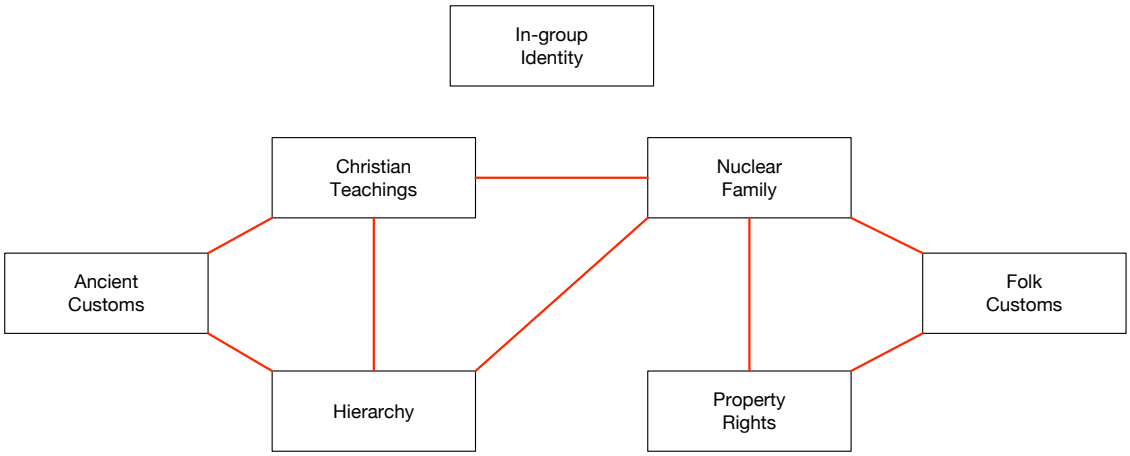


Figure 10: This figure shows how the same key attributes in the English culture set may generate a cultural configuration legitimizing **popular sovereignty** and democratic institutions.

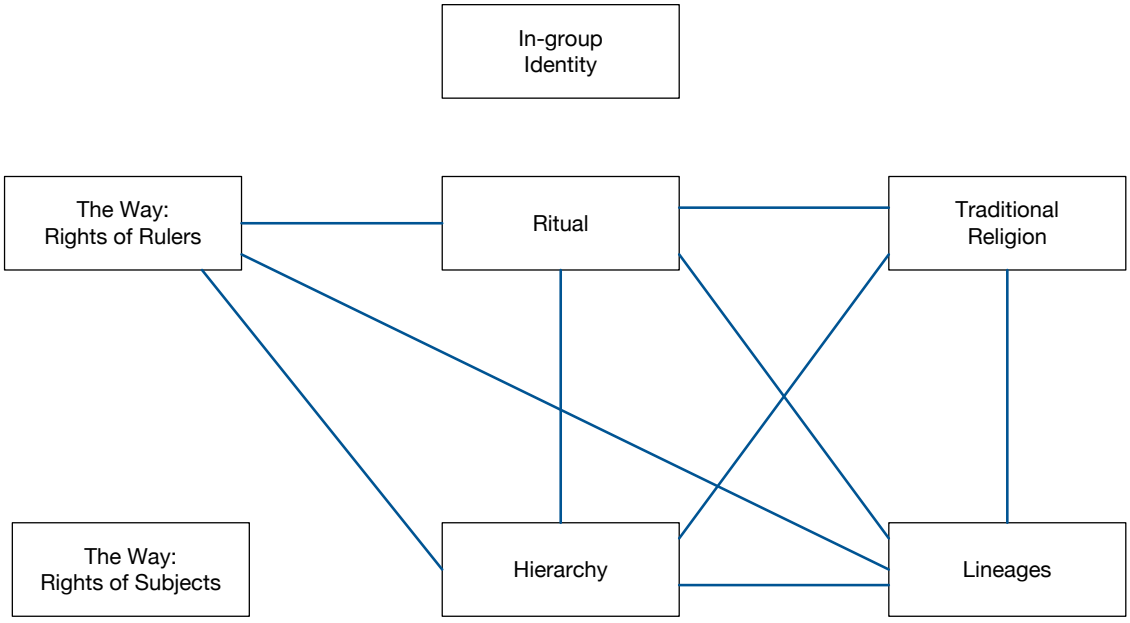


Figure 11: This figure lists some of the key attributes in the Chinese culture set and shows how they may generate a cultural configuration, the "**Mandate of Heaven**", legitimizing absolutist imperial rule

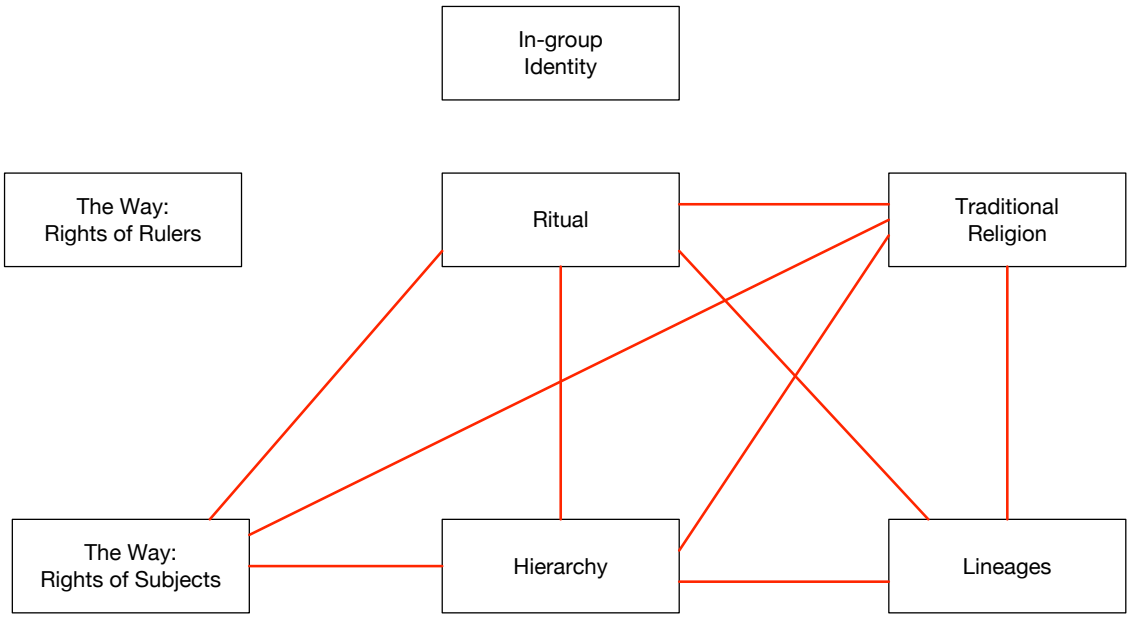


Figure 12: This figure shows how the same key attributes in the Chinese culture set may generate a cultural configuration, which we call "**Confucian democracy**", supporting democratic participation.