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CULTURE IN HISTORICAL POLITICAL ECONOMY

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ABSTRACT

Culture – the set of socially transmitted values and beliefs held by individuals – has important implications for a wide variety of economic outcomes. Both the causes and consequences of culture have been the subject of work in Historical Political Economy. I first outline several theories on the origins, evolution, and transmission of culture. I then discuss various strategies for measuring culture. Finally, I review recent research in HPE that explores the origins of variation in culture and the economic consequences of culture.

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1. Introduction

Societies differ greatly in their economic outcomes; they also vary in the types of values and beliefs people hold. A large literature has established that cultural beliefs – e.g. those beliefs that are socially learned and transmitted – have important implications for a wide variety of economic outcomes, such as preferences over policy, trust, economic development, institutional development, cooperation, and conflict.

There is substantial variation within and across countries in cultural values and beliefs (Desmet, Ortuño-Ortín and Wacziarg, 2017, Falk, Becker, Dohmen, Enke, Huffman and Sunde, 2018). Understanding culture and what drives variation in culture is important. Culture shapes key development outcomes such as growth and conflict. It also helps us understand why individuals hold different values and how this is linked to their economic behavior. Finally, an understanding of culture may help improve efficacy of policy making.

As interest in the role of culture for shaping economic outcomes has grown, so has work exploring the origins and consequences of various cultural traits. Much of this work falls in the realm of historical political economy (HPE) – understanding from a historical perspective what shapes culture and how it changes over time, as well linking historical cultural traits to present day outcomes.

HPE has much to contribute to our understanding of cultural dynamics. This is for two reasons. First, processes involving culture – including cultural change and persistence – necessarily unfold overtime. Thus, a historical perspective allows us to observe these processes across a variety of settings. Second, history also provides opportunities to gain traction on the difficult problem of the identification of causal effects of culture. Given that culture is determined by a wide variety of factors, including ecology, institutions, and historical events, a historical perspective generates natural experiments to help address causality.

The work on culture in HPE can be organized into two overarching questions. First, what explains variation in culture? Second, what are the economic consequences of differences in culture? Research in HPE has studied many cultural traits, such as religiosity, gender norms, trust, rule following, and norms of cooperation. The work on the origins of cultural traits has focused on how cultural traits have been shaped by factors such as the ecological environment, institutions, conflict, and colonial rule. Likewise, work on the effects of culture cover many

important economic consequences of culture, such as economic growth, investments in education, political preferences, and income. The work varies in its scope and its approach to identifying the causal effects of culture. The extent to which culture is an important subject of study in HPE is evidenced by the number of chapters in this handbook that explore various facets of culture, e.g.: historical persistence (Acharya, Blackwell and Sen, 2023), assimilation (Fouka, 2023), gender (Teele and Grosjean, 2023), identity (Suryanarayan and White, 2023), and religion (Becker and Pfaff, 2023).

This chapter is organized as follows. First, I introduce various definitions of culture that have been used in the related literature. Second, I discuss influential models that highlight the role of culture, how culture is transmitted, and the dynamics of cultural persistence and change. Finally, I discuss some of the rich empirical literature from HPE examining the origins of cultural variation and the effects of culture.

2. Definition of Culture

There are various ways of conceptualizing culture. Guiso, Sapienza and Zingales (2006) define culture "as those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation." A related definition from Huntington (2000, p. xv) describes culture "as the values, attitudes, beliefs, orientations, and underlying assumptions prevalent among people in a society". These conceptualizations emphasize the sticky and slow-moving nature of culture.

Greif (1994), in his work on Genoese and Maghribi traders, defines culture as determinate social equilibrea. He focuses on rational cultural beliefs that capture individuals' expectations with respect to actions that others will take in various situations. In distinguishing culture from strategies, he writes "past cultural beliefs provide focal points and coordinate expectations, thereby influencing equilibrium selection and society's enforcement institutions" (Greif, 1994, p.914). Thus, culture serves as a type of coordination device and has important implications for institutional development.

Acemoglu and Robinson (2021) 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 enabling or constraining behaviors." The authors contrast their definition with previous definitions, such as

the definition from Guiso et al. (2006), by emphasizing that culture can be fluid, is not necessarily coherent, and is adaptable. They cite work in sociology, which defines culture 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" (Swidler, 1986, p. 277). The authors highlight the definition of sociologist DiMaggio, p. 265 "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". These definitions emphasize the adaptable nature of culture.

Much of the work on culture in economics has been influenced by the definition of culture operationalized in evolutionary anthropology. Influential works by Boyd and Richerson (1985) and Richerson and Boyd (2005) define culture as "information capable of affecting individuals' behavior that they acquire from other members of their species through teaching, imitation, and other forms of social transmission". This definition emphasizes the social learning aspect of culture. In this conceptualization, culture is information that is learned from elders or peers. One way to think about this conceptualization of culture is that culture provides a heuristic, or a mental short cut, for choosing the optimal action in a particular situation. Previous generations share that information with subsequent generations, thus allowing individuals to engage in other productive tasks, rather than having to experiment to figure out the right choice (Nunn, 2022).

3. Theories of Culture, Cultural Transmission, and Cultural Change

3.1. Cultural Transmission

Evolutionary approaches to culture (e.g. Boyd and Richerson, 1985, Richerson and Boyd, 2005) are useful and tractable frameworks that help clarify how culture may be efficient and highlight the cumulative nature of human knowledge (Muthukrishna and Henrich, 2016, Nunn, 2021). The evolutionary approach emphasizes that culture contains knowledge that is transmitted to subsequent generations, and thus, differs from the definition from Guiso et al. (2006), which emphasizes values. Nunn (2021) discusses the relationship between human capital formation and culture; he argues that conceptually economists' perception of human capital formation is quite similar to the notion of culture as understood in evolutionary anthropology.

There have been various efforts to formalize how culture is formed and how it is transmitted.

Early theoretical contributions from Cavalli-Sforza and Feldman (1981) and Boyd and Richerson (1985) use models from evolutionary biology but applied to the transmission of cultural traits.

In a series of papers, Bisin and Verdier (Bisin and Verdier, 2000, 2001) build on these previous models by allowing for parental socialization, so that children's preferences depend on their parent's socialization actions. Their insight is that parents have preferences over the cultural traits acquired by their children. They model parental socialization choice with imperfect empathy: "a form of altruism biased towards the parents' own cultural traits: parent care about their children's choices, but they evaluate them using their own preferences" (Bisin and Verdier, 2011, p. 343). Bisin and Verdier (2001) predict that cultural heterogeneity exists when direct vertical socialization is a substitute for horizontal socialization. Moreover, when family and society level traits are substitutes and the parents' preferred trait is in the minority, parents will exert more effort in the socialization of their children.

3.2. *Identity*

While the previous literature discusses how parents shape the preferences of their children, a related literature focuses on identity formation. Akerlof and Kranton (2000) model how identity shapes economic outcomes. They define identity as "a person's sense of self". In their model, the payoffs associated with different actions are affected by various forms of identity (e.g. gender identity). Their model produces several insights. First, identity can help explain choices that appear detrimental if these choices help bolster sense of identity. Expression of identity may also generate externalities. Third, identity can be manipulated. And finally, choice of identity can be considered an "economic" choice. In Akerlof and Kranton (2011), the authors explore how identity and norms have important implications for economic choices, such as work, education, and gender roles.

3.3. *Culture and Institutions*

Important theoretical work considers the relationship between culture and institutions. Tabellini (2008) examines the transmission of a norm of cooperation. In the model, there is a psychological cost of not cooperating with another player, but that cost is decreasing when the other person is more culturally distant. There are two types of players. First, there are those whose preference for cooperation decreases slowly with cultural distance, and therefore they will cooperate with other

players who are culturally proximate and cultural distant. In other words, these types of players exhibit moral universalism, in which close and distant individuals are treated similarly. There are also types for whom this psychological cost of not cooperating decreases quickly, and therefore, they are less likely to cooperate with distant types. These types are considered parochial – e.g. they demonstrate limited morality.

Tabellini also models the interplay between the scope of cooperation and institutions. He distinguishes between institutions that enforce behavior locally versus with more distant transactions. He finds that generalized morality is hurt if institutions only enforce cooperation locally. In that case, local enforcement may crowd out norms of cooperation because there is less incentive for parents to invest in values that sustain cooperation. In contrast, institutions that enforce more distant transactions may crowd-in generalized morality.

Bisin and Verdier (2017) also model the interplay between culture and institutions. They emphasize that there is important feedback between institutions and culture, and thus, they build a model where culture and institutions jointly evolve. They conceptualize culture as in their prior work (Bisin and Verdier, 2000, 2001) – as preference traits, norms, and attitudes which can be transmitted across generations by means of various socialization practices or interactions between peers. They define institutions as "Pareto weights assigned to different groups in a social choice problem" (Bisin and Verdier, 2017, p. 5). They highlight under what circumstances cultural and institutional dynamics reinforce one another, and the implications under different institutional and cultural regimes: e.g. extractive institutions, formation of civic capital, and protection of property rights.

Acemoglu and Robinson (2021) propose an alternative framework for the interplay between culture and institutions. In their conceptual framework, they define culture as a "culture set": a set of cultural attributes and the feasible connections between these attributes. The authors argue that the attributes form various cultural configurations. In contrast to the culture set, which is persistent, cultural configurations change in response to circumstances – for example, to changes in institutions. Their definition emphasizes that culture is adaptable and that it can be employed "strategically". They then examine how changes in institutions lead to changes in the cultural configurations; similarly, they explore how cultural configurations can support different institutional arrangements.

3.4. Cultural Persistence and Change

While previous models have focused on explaining heterogeneity in beliefs and how values are transmitted, work by Giuliano and Nunn (2021) is motivated by trying to understand under what conditions culture persists and changes. The authors highlight instances of remarkable cultural persistence (Fernandez and Fogli, 2009, Voigtländer and Voth, 2012, e.g), but also instances of rapid cultural change (Becker and Woessmann, 2009). The authors focus on how the stability of the environment affects cultural change. They build on work by Rogers (1988) and present a model in which the variability of the environment affects the value individuals place on tradition. In the model, there are "traditionalists", those who adopt the action of a randomly chosen person from the previous generation, and "non-traditionalists," those who experiment at a cost to determine the correct action for the environment. The model predicts that in equilibrium, there will be both traditionalist and non-traditionalists, since there is a cost to determining the correct action as a non-traditionalist. The key insight of the model is that when the environment is stable, the evolved tradition is more likely to contain valuable information for the currently generation. When the environment is less stable, it is relatively less beneficial to rely on the traditions of the previous generation.

The model presented in Giuliano and Nunn (2021) also has several other predictions that are useful for thinking about the effects of culture. For example, the model generates persistence in culture, particularly when the share of "traditionalists" – those who use culture to determine the right action relative to those who individual verify the correct action – in society is large. As the environment changes, there is scope for "mismatch", as the evolved cultural trait may not match the new environment. Mismatch has important implications for policy. In cases where mismatch exists, relatively "light-touch" interventions may actually be quite effective in changing behavior. Mismatch is more likely with greater environmental instability and with a greater cost of verifying the right action for the environment. The predictions of the model and their implications are discussed in detail in Nunn (2022).

4. Methods

There are multiple approaches to measuring culture. However, measuring culture can be difficult. This is because it can be difficult to disentangle the effects of culture from other factors that also

shape behavior, such as the institutional or ecological environment. Below I describe several common strategies for measuring culture. These strategies aim to isolate the effects of culture from other factors.

4.1. Survey Questions

A common approach to measuring culture is through survey questions. For example, survey questions may be used to ask people how much they trust various other individuals or what they view as the appropriate role of women. However, there are two shortcomings of survey measures. First, because survey measures are rarely incentivized, the answers respondents give may not reflect their actual views or preferences. To address this concern, Falk, Becker, Dohmen, Huffman and Sunde (forthcoming) collect survey and experimental data from 409 individuals measuring risk aversion, time discounting, trust, altruism, positive and negative reciprocity. They are then able to examine the correlation between the survey measures and the incentivized experimental measures. Reassuringly, they find a strong correlation between them. However, an additional concern with survey questions is that it can be difficult to disentangle the effects of culture from other factors.

4.2. Epidemiological Approach

One strategy for isolating the effects of culture from other factors that vary alongside culture is the epidemiological approach (Fernández, 2011). The epidemiological approach studies migrants from varying cultural backgrounds who are in a common institutional setting. The benefit of this strategy is that it allows researchers to disentangle the effects of culture from the effects of the original institutional and economic environment. However, a potential limitation of this strategy is that migrants are a selected sample, and they may not be representative of their home country's or region's culture. Additionally, the effect of home country culture may be weakened in a new environment. Fernández (2008) proposes focusing on second generation immigrants, since they themselves did not select into migration, to address the issue of selection. However, this may weaken any measurable effects of culture if the effects of culture diminish over time and across generations.

Many papers have employed the epidemiological approach in work in HPE. Alesina, Giuliano and Nunn (2013) examine how reliance on plough agriculture relative to hoe agriculture has

shaped gender norms using an analysis with second generation immigrants in the US and Europe. They find that women whose parents are from countries with greater historical reliance on the plough have lower rates of female labor force participation. They attribute this to plough agriculture being less amenable to women's participation in agriculture, and thus leading to a gendered division of labor. Giuliano and Nunn (2021) employ a similar strategy, looking at children of immigrants in the US to examine how environmental stability affects cultural persistence. Children of immigrants from countries with more unstable environments are less likely to rely on tradition, as proxied by speaking their traditional language at home and marrying someone from the same ancestry.

Other examples of papers in HPE that employ versions of the epidemiological approach include: Lowes, Nunn, Robinson and Weigel (2017), Lowes (2018), Lowes and Montero (2021a), Bergeron (2020). In these studies, participants are recruited from a major urban area, but vary in their exposure to some historical or cultural treatment. For example, Lowes and Montero (2021a) examine how exploitative rubber concessions granted to companies in the Congo Free State era affect present day outcomes in the Democratic Republic of the Congo (DRC). They work in a major urban area, but survey individuals whose ancestors come from in and outside of the former concessions. They find that individuals from outside the former concessions have worse development outcomes, but exhibit more prosocial behavior. When they examine the effects by first and second generation migrants, they find that development outcomes – such as wealth and education – actually converge for second generation migrants, but that the cultural outcomes – such as trust and sharing norms – tend to persist.

4.3. Lab Experiments

Another strategy to isolate the effect of culture is to use lab experiments. In lab experiments, the "rules-of-the-game" are fixed across settings. The payoffs associated with any particular action are set by the experiment. Thus, differences in game play can be attributed to differences in culture.

An early example of this type of work is from Henrich, Boyd, Bowles, Camerer, Gintis, McElreath and Fehr (2001), who conduct ultimatum game experiments with individuals from 15 small-scale societies across the globe. In the ultimatum game, a player 1 is given an endowment to split between themself and a player 2. The player 2 is told what the proposed allocation is,

and is given the opportunity to accept or reject this offer. If the player 2 accepts the offer, then each player receives the proposed allocation. If player 2 rejects the offer, both players get 0. The sub-game perfect Nash Equilibrium of this game is for the player 1 to offer just a little above 0, and for the player 2 to accept this offer. In practice, this is rarely observed: player 1s generally offer positive amounts, and player 2s reject low offers. In fact, in many university student samples or samples with individuals from Europe or the U.S., the most common allocation was to offer about half of the endowment and for offers that deviate from an even split to be rejected. However, the evidence suggesting little variation in game play was from mostly "W.E.I.R.D" societies – e.g. Western Educated Industrialized Rich Democratic (Henrich, 2020). The work by Henrich et al. (2001) and Henrich, Boyd, Bowles, Gintis, Fehr, Camerer, McElreath, Gurven, Hill, Barr, Ensminger, Tracer, Marlow, Patton, Alvard, Gil-White and Henrich (2005), which represent a broader sample of societies, demonstrate that there is indeed quite a lot of variation in game play across societies.

Lab-in-the-field methods have become increasingly popular in work in HPE, particularly in contexts with limited data availability. Common lab-in-the-field experiments include the dictator game, ultimatum game, public goods game, random allocation game, and measures of time and risk preferences. Examples of papers that employ lab-in-the-field methods to answer questions related to historical political economy include: Blouin (2022), Chaudhary, Rubin, Iyer and Shrivastava (2020), Heldring (2021), Karaja and Rubin (2017), Lowes (2018), Lowes et al. (2017), Ramos-Toro (2019), Rustagi (2020), Schulz, Bahrami-Rad, Beauchamp and Henrich (2019), Valencia Caicedo and Voth (2018), Walker (2020). For example, Blouin (2022) asks how historical exposure to labor coercion and indirect rule shape inter-ethnic relations in the context of Rwanda and Burundi. Using survey and experimental data, he finds that in areas where Hutu were exposed to more labor coercion from Tutsi during the colonial era, Hutu exhibit lower levels of inter-ethnic trust in a trust game today. For more information on lab-in-the-field methods in historical economics, refer to Lowes (2021a).

These lab-in-the-field methods can also be combined with the epidemiological approach. For example, Lowes et al. (2017) are interested in how institutions shape cultural outcomes. They study the case of the Kuba Kingdom in what is today the DRC. The Kuba Kingdom, which was formed by an innovating outsider, had highly developed state institutions, but its boundaries were constrained by rivers. It thus provides a natural experiment to ask how institutions affect culture.

The authors collect data from individuals who are located in one major city today, but some of whom have ancestors who were from the historical Kuba Kingdom, to examine how historical institutions shape norms of rule following. Similar strategies of implementing lab experiments with residents of one city but who have different cultural backgrounds or historical treatments are pursued in Lowes (2018), Lowes and Montero (2021a), Bergeron (2020).

4.4. Data Sources

There are many rich data sources that are used to study culture in a historical perspective. Much of this data comes from work in anthropology and is based off of ethnographies of groups historically. A commonly used data source is the Ethnographic Atlas (EA) (Murdock, 1967), which has data on pre-industrial cultural characteristics for 1,265 ethnic groups globally. A related data set, the Standard Cross Cultural Survey (SCCS) is a sample of 186 ethnic groups from the EA, but with a much richer set of variables (Murdock and White, 1969).

Giuliano and Nunn (2018) extend the EA data, by supplementing it with additional data sources for Europe and by merging it with the Ethnologue (Gordon, 2009), which provides geographic information on the current distribution of language groups at the grid cell level. Another rich source of ethnographic data is the Human Relations Area Files (HRAF), a collection of ethnographies that have been subject indexed (Ember, 2012).

Other interesting data sources include work indexing motifs in folklore (Michalopoulos and Xue, 2021). The authors define folklore as the "collection of traditional beliefs, customs, and stories of a community". Their data catalogs oral traditions of approximately 1,000 societies. The authors also demonstrate that the motifs present in folklore correlate with various cultural features, such as gender norms or trust. The Global Preferences Survey (GPS) is a survey with a sample of 80,000 respondents across 76 countries measuring a wide variety of preferences such as time and risk preferences, altruism, and trust (Falk et al., 2018). For a detailed overview of these and other data sources, as well as a description of recent research that has used these data sources, refer to Lowes (2021a).

5. What historical factors shape culture?

A large literature in HPE examines the factors that shape cultural outcomes. This work highlights the role of the environment and historical experiences such as the slave trades, colonialism, and

conflict in shaping cultural outcomes. Below I discuss examples of empirical work that focuses on the historical determinants of different cultural values or beliefs.

5.1. Economic Preferences

Economic preferences encompass a wide variety of outcomes, such as time preferences, risk preferences, willingness to compete, and work ethic. Literature within HPE has asked what historical and environmental factors may generate variation in these key economic preferences. Table 1 presents papers on the historical determinants of economic preferences.

Table 1: Historical Determinants of Culture: Economic Preferences

Authors	Cultural Trait	Historical Determinant	Unit of Observation	Geographic Scope	Cultural Data Source	Research Design
Alesina and Fuchs-Schündeln (2007)	Preference for redistribution	Communism	Household	East & West Germany	GSP	OLS, NE
Andersen, Bentzen, Dalgaard and Sharp (2017)	Work ethic	Catholic Order of Cistercians	County	England	EVS	OLS, IV
Booth, Fan, Meng and Zhang (2019)	Competitiveness	Communism	Women	Beijing, Taipei	Original lab	DD
Becker, Enke and Falk (2020)	Risk & time preferences	Ancient migration patterns	Individual, country	Global	GPS	OLS
Fouka and Schläpfer (2020)	Work ethic	Marginal return to labor of crop mix	Individual, district, country	Europe	ESS	OLS
Galor and Özak (2016)	Patience	Agricultural suitability	Individual, country	Global	Hofstede	OLS, NE, DD
Galor and Savitskiy (2018)	Loss aversion	Climatic volatility	Individual, ethnic group, country	Global	WVS	OLS
Giuliano and Tabellini (2020)	Preference for redistribution	European immigration	Individual	US	CCES	OLS, IV
Gneezy, Leonard and List (2009)	Competition	Matrilineal kinship	Individual	Tanzania, India	Original lab	OLS
Lowes (2021b)	Competition	Matrilineal kinship	Individual	DRC	Original lab	OLS

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. CCES is Cooperative Congressional Election Study. ESS is European Social Survey. EVS is European Values Survey. GSP is German Socioeconomic Panel. GPS is Global Preferences Survey. Hofstede is Hofstede et al. (2010). WVS is World Values Survey.

Time preferences, or the extent to which an individual values future consumption relative to present day consumption, vary widely across societies. The ability to delay gratification in the present for rewards in the future is correlated with a wide variety of economic benefits. Galor and Özak (2016) test the hypothesis that agro-climatic conditions affect the long-term orientation of a society. They find that populations exposed to higher crop yields historically are more likely to exhibit long-term orientation. Related work by Galor and Savitskiy (2018) suggests that another important economic preference – loss aversion – may also be shaped by agro-climatic

conditions. Loss aversion is the tendency for individuals to value losses and gains asymmetrically (Tversky and Kahneman, 1991, Kahneman, Knetsch and Thale, 1991). They find that in places where climatic shocks were spatially correlated and thus more aggregate in nature, people exhibit greater loss aversion. Becker et al. (2020) ask how ancestral distance – or the approximate amount of time since two populations shared a common ancestor – affects the difference in preferences between populations. They find that greater ancestral distance is associated with greater average differences in preferences, such as risk taking, prosociality, and patience. Thus, the more time since populations diverged, the less cultural similarity they share. These papers all suggest deep-rooted determinants of time and risk preferences.

Another key economic preference is willingness to compete, which has been associated with a wide variety of economic outcomes, such as educational attainment and labor market outcomes (Niederle and Vesterlund, 2007, Niederle, 2017). Generally, women are less likely to compete than men. However, there is evidence that cultural practices and institutions may shape willingness to compete. For example, Gneezy et al. (2009) ask how willingness to compete differs between a patrilineal society, in which lineage and inheritance is traced through men, and a matrilineal society, in which lineage and inheritance is traced through women. Contrary to results with W.E.I.R.D. samples, they do not find that women are less willing to compete than men in the matrilineal society. Booth et al. (2019) find that institutions can also shape willingness to compete by comparing individuals in Beijing relative to Taipei. Women exposed to the communist regime during their formative years are more likely to compete than women from Taipei and their male counterparts in Beijing. These papers suggest that preference for competition responds to the cultural and institutional environment.

Attitudes toward work and leisure vary widely across societies. This may then translate into differences in economic output. Andersen et al. (2017) examine the origins of the so-called "Protestant Ethic" – or appreciation of hard work and thrift. They find that the cultural values generally associated with Protestantism may actually have had their origin in the Order of Cistercians, a Catholic order that spread across Europe in the eleventh century. Fouka and Schläpfer (2020) explore whether preference for work has been shaped by the historical role of labor in production. They test the hypothesis that in places with a greater marginal return to labor in agricultural production, individuals develop a preference for hard work. They construct an index of estimated marginal returns to labor; they find it is correlated with present day work

hours and attitudes toward work in Europe.

5.2. Social Preferences

The ability to cooperate is crucial for a wide variety of outcomes, including economic development. Prosocial preferences and behavior are key to facilitating this cooperation. However, prosocial preferences vary widely across and within countries (Desmet et al., 2017, Falk et al., 2018, Desmet and Wacziarg, 2018). Much of the work in HPE on culture focuses on what shapes various preferences for cooperation and prosocial behavior. Many papers related to the historical factors that shape social preferences are highlighted in Tables 2 and 3.

Social and Institutional Trust

Historical circumstances – particularly those characterized by violence and coercion – have been shown to be an important determinant of social trust (Bauer, Blattman, Chytilová, Henrich, Miguel and Mitts, 2016). Nunn and Wantchekon (2011) test the hypothesis that exposure to the slave trades diminished trust in sub-Saharan Africa. The slave trades resulted in millions of individuals being forcibly removed from the continent. They highlight how many people were enslaved through trickery by their neighbors, family, or friends. They find that greater exposure to the slave trades leads to lower levels of trust in a wide variety of other individuals, such as neighbors, relatives, and local government councils. Colonial experiences have also been shown to be important in shaping trust. For example, Blouin (2022) tests the legacy of indirect rule policies implemented by the Belgians in Rwanda and Burundi. He finds that the Belgian policy of labor coercion, in which Tutsi forced Hutu to produce coffee, is associated with lower Hutu trust of Tutsi presently. Additionally, Hutu are less likely to engage in insurance contracts with Tutsi.

In contrast to the work by Blouin (2022) and Nunn and Wantchekon (2011), Lowes and Montero (2021a) find that exposure to violent and extractive concession companies during the Congo Free State era led to worse development outcomes, but may have led to greater trust as groups had to cooperate to survive. Bauer et al. (2016) summarize much of the work on how exposure to conflict affects pro-sociality. Their results suggest that conflict may actually incentivize greater cooperation, particularly among in-group members. However, this may come at the expense of out-group cooperation.

Table 2: Historical Determinants of Culture: Social Preferences

Authors	Cultural Trait	Historical Determinant	Unit of Observation	Geographic Scope	Cultural Data Source	Research Design
			Panel A: Social and Institutional Trust			
Alsan and Wanamaker (2018)	Trust in medicine	Tuskegee experiment	Individual	US	GSS	DD
Blouin (2022)	Trust	Colonial-era forced labor	Individual	Rwanda, Burundi	Original survey & lab	OLS, NE
Becker, Boeckh, Hainz and Woessmann (2016)	Trust in state	Habsburg empire	Individual	Eastern Europe	LITS	RD
Buggle and Durante (2021)	Trust	Climatic variability	Region (sub-national)	Europe	ESS	OLS
Buggle (2016)	Trust	The Napoleonic Civil Code	Household	Germany	GSP	OLS, RD
D'Acunto, Prokopczuk and Weber (2019)	Trust in financial sector	Historical antisemitism	County	Germany	Original survey	OLS, IV
Grosjean (2011)	Trust	Shared imperial rule	Village	Europe	LITS	OLS
Karaja and Rubin (2017)	Trust	Habsburg vs. Ottoman state	Individual, village	Region of Romania	Original survey	NE, OLS
Lowes and Montero (2021b)	Trust in medicine	French colonial medical campaigns	Individual	Cameroon, CAR, Chad, Congo, Gabon	DHS	OLS, IV
Lowes and Montero (2021a)	Trust	Concession system	Individual, village	DRC	Original survey	OLS, RD
Nunn and Wantchekon (2011)	Trust	Slave trades	Individual	SSA	Afrobarometer	IV
Okoye (2021)	Trust	18th century Christian missions	Individual, ethnic group	Nigeria	Afrobarometer	OLS
Ramos-Toro (2019)	Parochialism, trust in medicine	Social exclusion in leper colony	Individual	Colombia	Original survey & lab	OLS
Prats and Valencia (2020)	Trust	Spanish civil war	Individual	Spain	CIS	OLS, RD, IV
			Panel B: Cooperation			
Chaudhary et al. (2020)	Cooperation	Colonial rule	Individual, village	Rajasthan, India	Original survey	NE, OLS
Dell, Lane and Querubin (2018)	Cooperation	Dai Viet Kingdom	Individual, village	Vietnam	HES	RD
Guiso, Sapienza and Zingales (2016)	Civic engagement, social capital	Medieval independent city states	Individual, village	Italy	NSI PRVO	OLS, IV
Rustagi (2020)	Cooperation	Medieval democracy	Individual, municipality	Switzerland	WVS, original lab	OLS, IV

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. RD is regression discontinuity. CIS is Centro de Investigaciones Sociológicas. DHS is Demographic and Health Surveys. ESS is European Social Survey. EVS is European Values Survey. GPS is Global Preferences Survey (Falk et al., 2018). GSP is German Socioeconomic Panel. GSS is the General Social Survey. HES is Hamlet Evaluation System. LITS is Life in Transition Survey. NSI PRVO is the National Statistical Institute Provincial Register of Voluntary Organizations. WVS is World Values Survey.

Environmental risk may also shape incentives for trust. Buggle and Durante (2021) examine how variability in climatic conditions may incentivize greater trust, as subsistence farmers rely on each other to mitigate risk. Using climate data from Europe and present-day survey data on trust, the authors find that greater climatic variability is associated with higher levels of trust, particularly in regions that relied primarily on agriculture.

Another driver of trust may be the quality of institutions. For example, high quality institutions that can effectively deliver public goods may increase trust in the state. Becker et al.

Table 3: Historical Determinants of Culture: Social Preferences (continued)

Authors	Cultural Trait	Historical Determinant	Unit of Observation	Geographic Scope	Cultural Data Source	Research Design
Panel C: Scope of Morality, Individualism, and Collectivism						
Ang (2019)	Individualism vs. collectivism	Labor intensive agriculture	Individual, ethnic group, country	Global	WVS	OLS
Bazzi, Fiszbein and Gebresilasse (2020)	Individualism vs. collectivism	Frontier experience	County	US	US Census	OLS, DD, IV
Bergeron (2020)	Universal morality	Colonial-era Christian missions	Individual	Province of DRC	Original survey & lab	OLS
Buggle (2020)	Individualism vs. collectivism	Irrigation	Individual, country	Global	Hofstede	OLS, IV
Enke (2019)	Moral systems	Kinship tightness	Individual, ethnic group, country	Global	WVS	OLS, IV
Le Rossignol and Lowes (2022)	Universal morality	Transhumant pastoralism	Individual, country	Global	IVS	OLS, IV
Moscona, Nunn and Robinson (2017)	Universal morality	Segmentary lineage organization	Individual, ethnic group	Africa	Afrobarometer	OLS
Schulz et al. (2019)	Consanguineous marriage rates	Catholic Church's medieval policies, individualism, prosociality	Individual, region, country	Europe, global	EA	OLS
Talhelm, Zhang, Oishi, Shimin, Duan, Lan and Kitayama (2014)	Individualism vs. collectivism	Rice vs. wheat agriculture	Individual	China	Original survey	OLS
Panel D: Obedience, Violence, and a Culture of Honor						
Cao, Enke, Falk, Giuliano and Nunn (2021)	Culture of honor, violence	Herding	Individual, ethnic group	Global	GPS	OLS
Couttenier, Grosjean and Sangnier (2017)	Homicides	Mineral discoveries	County	US	UCRP	NE, OLS
Grosjean (2014)	Culture of honor, violence	Scots-Irish immigration	County	US	GSS	OLS, IV
Heldring (2021)	Rule following and violence	State formation	Individual	Rwanda	WVS, Original lab & survey	NE, OLS, IV
Lowes et al. (2017)	Rule following	State formation	Individual	Province in DRC	Original lab & survey	NE, OLS

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. RD is regression discontinuity. CIS is Centro de Investigaciones Sociológicas. DHS is Demographic and Health Surveys. ESS is European Social Survey. EVS is European Values Survey. GPS is Global Preferences Survey. GSP is German Socioeconomic Panel. GSS is the General Social Survey. Hofstede is Hofstede et al. (2010). IVS is Integrated Values Survey. UCRP is Uniform Crime Reporting Program. WVS is World Values Survey.

(2016) examine the legacy of the Habsburg Empire, which was known for its well-functioning bureaucracy. They find that places that were historically part of the Habsburg Empire exhibit greater trust in the state and in the police, as well as less corruption. Karaja and Rubin (2017) combine lab-in-the-field data with a similar historical natural experiment, comparing individuals who live along a historical border between the Habsburg Empire and the Ottoman Empire in present-day Romania. They find experimental evidence of greater out-group trust among those with historical exposure to the Habsburg Empire.

Historical events may also drive trust in the medical sector, which may have important impli-

cations for health policies. For example, Black men at Tuskegee in the U.S. were the subjects of a study on the effects of syphilis. Doctors knew the men had syphilis, but withheld treatment so that they could study the course of the disease, which is lethal when untreated. Alsan and Wanamaker (2018) find that the revelation in 1972 of the medical experimentation that happened at Tuskegee is associated with lower levels of trust in medicine as well as worse health outcomes for Black men. Related work examines the legacy of French colonial medical campaigns aimed at preventing the spread of sleeping sickness during the colonial era. The medical campaigns were characterized by the use of medications of dubious efficacy and with serious side effects and the forced immunization of millions of individuals across former French Equatorial Africa (present day Chad, Gabon, Republic of Congo, CAR and Cameroon). Lowes and Montero (2021b) find that historical exposure to these campaigns is associated with lower childhood immunization rates and higher refusal rates of free and non-invasive blood tests for either HIV or anemia. These results highlight that historical medical malpractice can have long-run effects on the efficacy of health interventions.

A question that naturally arises is why these effects of medical mistrust persist. Ramos-Toro (2019) examines this question in the context of Colombia. He combines survey and experimental data to examine how having ancestors that were forcibly interned in a leper colony in Colombia affects trust in medicine. The forcible exclusion of lepers, and their placement into leper colonies was common practice historically. He finds that those whose ancestors were in the former leper colony are less likely to trust the HPV vaccine and to take up an anti-parasite medication. Using a survey experiment that primes individuals with information on the leper colony and the inefficacy of doctors' treatments, he finds that those with excluded ancestors are also more likely to believe doctors are uninformed. This exercise helps highlight how historical narratives may explain the persistence of mistrust in medicine well after the historical event.

Scope of Morality, Individualism, and Collectivism

While much of the work on trust has focused on generalized trust levels, the scope of trust is also important. To what extent do individuals exhibit greater trust of in-group members, such as family or friends, relative to out-group members, such as those from another religion or country? Understanding what determines the scope of trust is important; moral universalism has been

shown to affect a wide variety of outcomes, such as policy preferences, willingness to redistribute, and altruism (Cappelen, Enke and Tungodden, 2022).

Exposure to the church may have played an important role in increasing the scope of morality. For example, the Catholic church implemented laws barring cousin marriage, which undermined kin networks (Schulz et al., 2019, Schulz, 2022). This led to changes in psychology: individuals are more individualistic and independent and more trusting of and cooperative with strangers. Related work by Bergeron (2020) tests how exposure to Christian missions leads to greater moral universalism. Within the DRC, he finds that greater missionary exposure improves views of the out-group, with no effect on in-group preference, thus reducing in-group favoritism.

Other work asks how underlying social structures, such as kinship systems, affect the scope of trust. Moscona et al. (2017) find that individuals from segmentary lineage societies, which are organized around well-structured clans, are less trusting of outsiders. Enke (2019) explores how "looser" kinship structure may enable more universal moral values. He contrasts "tight kinship", in which individuals cooperate mainly with in-group members, with "loose" systems in which individuals interact with strangers and do not favor in-group members. He finds that kinship tightness is associated with: greater acceptability of violence towards the out-group, less likelihood of a moralizing god, greater importance of loyalty to the community, and lower levels of centralization.

Le Rossignol and Lowes (2022) build on this work to examine how historical forms of economic production affect the scope of trust. They test the hypothesis from anthropology that transhumant pastoralism, a form of economic production in which societies undergo seasonal migration and herd animals, leads to more parochial trust. Transhumant pastoralism is characterized by a need for in-group cohesion to survive the environmental and human threats these groups faced. They find that groups that relied historically on transhumant pastoralism are more trusting of in-group members and less trusting of out-group members. They find evidence that this greater parochialism may actually constrain firm growth.

A common cultural distinction is made between "collectivist" societies, which place the group above the individual and value conformity, relative to "individualist" societies, which value autonomy, freedom, and personal achievement (Hofstede, 1980, Gorodnichenko and Roland, 2011). Talhelm et al. (2014) ask how a history of farming rice relative to wheat affects level of interdependence. They hypothesize that farming rice makes cultures more interdependent, while

farming wheat makes them more independent. This is because rice production requires more cooperation relative to wheat production. They find evidence in favor of this hypothesis in China where there is historical variation in agricultural traditions. Buggle (2020) also explores how agricultural traditions affect collectivism. He finds that those societies who practiced irrigation historically have more collectivist norms today. This is because the construction and maintenance of irrigation requires coordination among individuals. He also finds that historical reliance on irrigation is associated with lower levels of innovation presently.

Bazzi et al. (2020) test the hypothesis that frontiers foster a culture of "rugged individualism". They find that the American frontier gave rise to a culture of individualism in the US; those places with a greater amount of time on the frontier are more individualistic and more likely to oppose redistribution and regulation. The authors suggest these effects are driven by the returns to individualism in a frontier setting.

Obedience, Violence, and a Culture of Honor

Another set of research explores the determinants of traits like obedience, proponsity for violence, and a culture of honor. Lowes et al. (2017) ask how institutions affect the propensity to follow the rules. They examine the effects of the Kuba Kingdom, which existed in the DRC and was characterized by its highly developed institutions. Consistent with Tabellini (2008), the authors find that exposure to high quality institutions crowds out norms of rule following. Kuba participants are less likely to follow the rules in an incentivized lab experiment.

In contrast, Heldring (2021) tests whether historical exposure to a centralized state in Rwanda may have led to increased participation in the Rwandan genocide and greater obedience to the state. He finds that more years under the historical state's control is associated with more violence during the genocide and well as greater rule following in an incentivized lab experiment. He interprets this as evidence that the historical state inculcated norms of obedience, which then can be leveraged by the state.

Grosjean (2014) explores the effects of a culture of honor, which encourages male aggression and defense of honor (Nisbett and Cohen, 1996, 1993). This may serve an important function in a setting with limited state presence, as aggression and willingness to engage in violence may deter threats. She finds that part of the variation in homicide rates in the U.S. South can be explained by the historical presence of Scots-Irish, who migrated to the U.S. and held these culture of honor

beliefs. Cao et al. (2021) look globally at pastoralism and values associated with a culture of honor, such as violence, punishment, and revenge-taking. They find that reliance on pastoralism is associated with greater violence and with folklore motifs related to violence and punishment.

5.3. Diversity and Assimilation

Many papers in HPE have tried to understand the origins of diversity (see Table 4 for an overview). Why do some places have many ethnic or linguistic groups? Why are other places more homogenous? For example, Michalopoulos (2012) examines how geographic variability shapes ethno-linguistic diversity. He finds that countries with more diverse land attributes have higher levels of linguistic diversity. He suggests that different land attributes incentivize the creation of location-specific human capital, and thus greater diversity. Cervellati, Chiovelli and Esposito (2019) propose that diversity may also be driven by the epidemiological environment. They test the hypothesis that greater suitability for malaria may lead to greater incentives to isolate to prevent disease transmission, leading to higher levels of endogamy. They find that greater suitability for malaria is associated with more ethnic diversity.

Assimilation is related to ethnic diversity: how do migrants to a region integrate into the new cultural environment? Much of the work on assimilation has focused on the U.S., and tried to understand under what circumstances immigrants assimilate and how policies affect assimilation. Fouka (2020) examines the effects of attempts at forced assimilation. She studies the context of the U.S. after World War I, in which the German language was banned in some U.S. schools. She finds that the policy seems to have backfired; those affected by the language laws are more likely to marry a German partner and more likely to name their children German names. See Fouka (2023) for an overview of the literature on assimilation in HPE.

5.4. Family, Kinship, and Marriage

Across cultures, there is a lot of variation in family structure and customs around marriage. For example, societies vary in the extent to which individuals may have multiple partners and how kinship systems are organized.

Polygyny is the marriage practice where men can marry multiple women. This is relative to monogamy, where men have a single formal parter. Dalton and Leung (2014) examine how the slave trades may have affected marriage institutions. The trans-Atlantic slave trade exported a

Table 4: Historical Determinants of Culture: Diversity, Kinship, and Gender Norms

Authors	Cultural Trait	Historical Determinant	Unit of Observation	Geographic Scope	Cultural Data	Research Design
Panel A: Diversity, Fractionalization, and Polarization						
Bazzi, Gaduh, Rothenberg and Wong (2019)	Ethnic fractionalization and polarization	Population resettlement program	Individual	Indonesia	2010 Census	NE, OLS
Cervellati et al. (2019)	Ethnic endogamy	Malaria prevalence	Individual	Africa	DHS	OLS
Dickens (2022)	Linguistic diversity	Geographic variability	Ethnic boundary	Global	Ethnologue	OLS
Michalopoulos (2012)	Ethnolinguistic diversity	Geographic variability	Grid cell, country	Global	Ethnologue	OLS
Panel B: Assimilation and Discrimination						
Calderon, Fouka and Tabellini (2022)	Support for Civil Rights	The Second Great Migration	County	U.S.	Gregory and Hermida (2019)	IV
Fouka (2020)	Cultural assimilation	Language restrictions	Individual	U.S.	Census	DD
Fouka, Mazmunder and Tabellini (2022)	Cultural assimilation	The First Great Migration	Individual	U.S.	Census	IV
Voigtländer and Voth (2012)	Antisemitism	Medieval antisemitism	City	Germany	Hänisch (1988)	OLS
Panel C: Family, Kinship, and Marriage						
Akbari, Bahrami-Rad and Kimbrough (2019)	Consanguineous marriage rates	Catholic Church's medieval policies, corruption	Province, country	Italy, global	EA	OLS, IV
Ang and Fredriksson (2017)	Strength of family ties	Wheat agriculture	Individual, state, country	U.S., global	WVS	OLS
BenYishay, Grosjean and Vecci (2017)	Matrilineal inheritance	Presence of coral reefs	Island, ethnic group	The Soloman Islands, global	SCCS	OLS
Dalton and Leung (2014)	Polygyny	Slave trades	Ethnic group, country	Africa	DHS	OLS, IV
Fenske (2015)	Polygyny	Historical mission stations and education	Individual	Africa	DHS	OLS, IV
Lowes and Nunn (2022)	Matrilineal kinship	Slave trades	Ethnic group	Africa	EA	OLS, IV
Schulz (2022)	Consanguineous marriage rates	Catholic Church's medieval policies, political institutions	Individual, region, country	Europe, global	EA	DD, OLS
Schulz et al. (2019)	Consanguineous marriage rates	Catholic Church's medieval policies, individualism, prosociality	Individual, region, country	Europe, global	EA	OLS
Panel D: Gender Norms and Sexuality						
Alesina et al. (2013)	Gender norms	Plough agriculture	Individual, country	Global	WVS	OLS, IV
Baranov, De Haas and Grosjean (2021)	Masculinity norms	18th century sex ratios	Individual	Australia	HILD	OLS, IV
Becker (2019)	Restrictions on women's sexuality	Pastoralism	Individual, ethnic group	Africa, global	EA, DHS	OLS, IV
Brodeur and Haddad (2021)	Attitudes towards homosexuality	19th century gold rush	County	U.S.	GSS	OLS, DD
Campa and Serafinelli (2019)	Gender norms	Communism	Individual	Germany, Europe	GSP	IV, RD, DD
Fernández, Fogli and Olivetti (2004)	Gender norms	Female wartime employment during WWII	Individual	U.S.	GSS	OLS, DD
Grosjean and Khattar (2019)	Gender norms	18th century male-biased sex ratios	County	Australia	HILD	IV
Teso (2019)	Gender norms	Slave trades	Individual, ethnic group	SSA	DHS	OLS, IV
Xue (2016)	Gender norms	The cotton revolution	County	China	CGSS	IV

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. RD is regression discontinuity. CGSS is Chinese General Social Surveys. DHS is Demographic and Health Surveys. EA is Ethnographic Atlas. Ethnologue is Gordon (2009). GSP is German Socioeconomic Panel. GSS is the General Social Survey. HILD is Household Income and Labour Dynamic in Australia Survey. SCCS is Standard Cross Cultural Survey. WVS is World Values Survey.

higher percentage of men than women, creating sex-ratio imbalances in the affected areas where there were fewer men than women. This may have increased the incentive to adopt polygyny. The authors find that exposure to the trans-Atlantic slave trade is associated with greater polygyny historically and presently. Fenske (2015) examines how education affects polygyny rates. He differentiates between colonial education and modern education. He finds that areas of West

Africa that received greater exposure to colonial education have lower polygyny rates. However, he finds no effect of modern day expansion of schooling on polygyny.

A limited literature explores the origins of variation in kinship structure. Kinship structure describes how families are organized. Many Western societies practice cognatic descent, in which lineage and inheritance are traced through both mothers and fathers. However, unilineal decent, in which lineage is traced through either men or women, is quite common. BenYishay et al. (2017) examines how natural resource endowments – in particular reef density – affect the prevalence of matrilineal kinship relative to patrilineal kinship in the Soloman Islands. The authors test the hypothesis that reliance on fishing may be associated with matrilineal kinship. Reliance on fishing may encourage adoption of matrilineal kinship because if men specialize in fishing, a system in which women own and inherit land may increase agricultural productivity. They find that greater reef density is associated with more matrilineal kinship, even within ethnolinguistic groups. Lowes and Nunn (2022) explore another hypothesis to explain the prevalence of matrilineal kinship: exposure to the slave trades. The vast majority of matrilineal groups are located along the "matrilineal belt" in sub-Saharan Africa, which also experienced high levels of exposure to the slave trades. They find that greater exposure to the trans-Atlantic and Indian Ocean slave trades is significantly associated with matrilineal kinship.

5.5. Gender Norms

A rich subfield of HPE studies the historical origins of gender norms: norms that dictate the role of women within a society. A key outcome of interest is the extent to which women participate in the labor market. Fernández et al. (2004) explore how exposure to a working mother affects a man's wife's labor force participation. Using World War II as a shock to women's labor force participation, they find that men with working mother's are more likely to have a wife that works. Their work suggests the important effect of a different family model for these men.

Alesina et al. (2013) test the hypothesis that historical reliance on the plough – which favors men's participation in agriculture – affected gendered division of labor and hence gender norms. Historical reliance on plough agriculture relative to hoe agriculture is associated with less women's labor force participation today. Using data on immigrants, they find evidence of transmission of these norms: women whose parents are from a country with greater historical reliance on the plough are less likely to participate in the labor force. Xue (2016) asks how

women's historical labor contributions may shape their perceived value by using variation in exposure to the cotton revolution, which increased the value of women's participation in cotton production. She finds that exposure to the cotton revolution is associated with less male-biased gender ratios today.

Historical factors also affect efforts to control women's sexuality. Becker (2019) examines how pastoralism, a traditional form of economic production in which groups rely on herding animals, shapes incentives to control women's sexuality. Pastoralist groups may face greater incentive to control women's sexuality, since men are gone from home for periods of time, and thus may face lower paternal certainty. She finds that greater traditional reliance on pastoralism is associated with norms restricting women's movement and sexuality.

Other work examines how changes to the sex-ratio – e.g. the ratio of men to women – affect gender norms. Grosjean and Khattar (2019) leverage variation in the historical sex-ratio in Australia generated by the transportation of convicts to the colony. Historically male-biased sex-ratios are associated with more conservative gender norms: women are more likely to be married and less likely to work outside the home. Related work by Baranov et al. (2021) finds that historically male-biased sex-ratios are associated with more violence and more male-stereotypical occupation segregation. Teso (2019) examines the effects of changes in sex-ratios induced by the slave trades in sub-Saharan Africa. In the the trans-Atlantic slave trade, men were removed as slaves at a much higher rate than women; thus, women had to take on roles and responsibilities previously held by men. In contrast, the Indian Ocean slave trade did not favor male as slaves. He finds that the trans-Atlantic slave trade is associated with more labor force participation by women presently; but he finds no analogous effect for the Indian Ocean trade.

5.6. Religiosity

Religion and strength of belief in God are important components of individuals' identities. A natural question is what helps explain variation in the extent of and types of religious beliefs. Table 5 provides an overview of papers related to the historical origins of variation in religiosity. Work in HPE has focused on how environmental shocks and political shocks, such as war, affect religiosity (Ager and Ciccone, 2018, Bentzen, 2019, Henrich, Bauer, Cassar, Chytilová and Purzycki, 2019). Bentzen (2019) tests the hypothesis that some societies are more religious than others as a form of coping with difficult life events. She uses data on natural disasters paired

with survey data on religiosity. She finds that individuals are more religious if recently exposed to an earthquake.

Table 5: Historical Determinants of Culture: Religiosity

Authors	Cultural Trait	Historical Determinant	Unit of Observation	Geographic Scope	Cultural Data	Research Design
Ager and Ciccone (2018)	Religiosity	Rainfall risk	County	U.S.	1890 Census	OLS
Bentzen (2019)	Religiosity	Earthquakes	Individual	Global	WVS	NE, DD
Henrich et al. (2019)	Religiosity	War	Individual	Uganda Sierra Leone, Tajikistan	Original survey data	NE, OLS
Barro and McCleary (2003)	Religiosity	State regulation of religion	Country	Global	WVS	OLS, IV
Nunn (2010)	Adherence to Christianity	Colonial mission stations	Individual, ethnic group, village	Africa	2005 Afrobarometer	OLS
Cantoni (2012)	Protestantism	Distance to Wittenberg	City, territory	The Holy Roman Empire	Bairoch (1988)	OLS
Rubin (2014)	Protestantism	Early access to printing press	City	Europe	Bairoch (1988)	OLS, IV
Michalopoulos, Naghavi and Prarolo (2018)	Adherence to Islam	Trade routes, land suitability	Ethnic group, country	Global	WRD	OLS
Gershman (2020)	Belief in witchcraft	Trans-Atlantic slave trade	Individual, ethnic group, region	Africa, Latin America	PEW RPLS	OLS, IV

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. PEW RPL is Pew Forum on Religion and Public Life Surveys. WRD is World Religion Database. WVS is World Values Survey.

While much of the work on religion focuses on organized religions, such as Christianity, Islam, and Judaism, many individuals across the world adhere to more traditional religions, characterized by belief in witchcraft, the supernatural, and the importance of the role of ancestors. Belief in witchcraft is widespread and has been associated with lower levels of trust (Gershman, 2016). Gershman (2020) explores the origins of belief in witchcraft, defined as the belief in the ability of certain people to use supernatural means to cause harm. He finds that ethnic groups in sub-Saharan Africa with greater exposure to the trans-Atlantic slave trade are more likely to believe witchcraft. Similarly, areas in Latin America that historically received more slave labor during the slave trades are also more likely to believe in witchcraft.

6. What are the consequences of culture?

A large literature has documented that culture affects a wide variety of outcomes (Fernández, 2008, Guiso et al., 2006, Henrich, 2015, Nunn, 2021). Below I highlight some examples of empirical work on the effects of historically determined cultural values or practices on present day outcomes. An overview of papers related to the effects of culture is presented in Table 6.

6.1. Economic Preferences

The ability to delay gratification may have important economic implications. Sunde, Dohmen, Enke, Falk, Huffman and Meyerheim (2021) ask how patience is associated with comparative development. Using data from the GPS, they find that patience is correlated with per capita income, as well as the accumulation of human and physical capital. Patience may also be culturally transmitted. Figlio, Giuliano, Özek and Sapienza (2019) find related evidence from Florida that students from cultures with more long-term orientation and values perform better on tests and have better school performance.

6.2. Social Preferences

Individualist cultures emphasize personal accomplishments, individual freedom, and status. In contrast, collectivist societies encourage conformity, which may make collective action easier. Gorodnichenko and Roland (2011) and Gorodnichenko and Roland (2017) find evidence of higher levels of innovation and growth in individualist cultures.

Early work has established that trust is beneficial for economic growth (Tabellini, 2010, Algan and Cahuc, 2010). One important aspect of trust is the scope of trust, or how much you trust in-group members relative to out-group members. Enke, Rodríguez-Padilla and Zimmermann (2021) find that moral universalism – e.g. the tendency to trust in-group and out-group members equally – is associated with different policy preferences and altruism.

6.3. Family, Kinship, and Marriage

Kinship structure and marriage are fundamental institutions for most societies. They also have important implications for a wide variety of outcomes, such as the scope of trust, dynamics within the family, investment in children, and gender norms. (Alesina and Giuliano, 2011).

A key dimension on which kinship structures can vary is whether group membership and inheritance is traced through women, as in matrilineal systems, or through men, as in patrilineal systems. Lowes (2018) tests how matrilineal relative to patrilineal kinship systems affect outcomes within the family, including domestic violence, cooperation, and investment in children. Anthropologists had hypothesized that matrilineal systems relatively empower women, but may reduce cooperation in the household. Using experimental and survey data, she finds that women in

matrilineal groups experiences less domestic violence and greater autonomy in decision making. Their children are also healthier and better educated. However, in a lab experiment with their spouses, matrilineal individuals cooperate less.

Another dimension on which kinship structures vary is the extent to which there are structures organizing the extended family. Moscona, Nunn and Robinson (2020) examine how segmentary lineage systems, in which extended family groups are organized in clans and have specific obligations to defend each other, affect incidence of conflict in sub-Saharan Africa. Using a geographic regression discontinuity design, they find that segmentary lineage groups experience greater conflict intensity. In Moscona et al. (2017) they also find that segmentary lineage decreases trust in outsiders.

Bau (2021) tests how variation in traditional kinship practices interacts with government policies. She examines residence after marriage, comparing matrilocal systems in which daughters reside with their parents after marriage, with patrilocal systems, in which sons reside with their parents after marriage. A key insight of the paper is that parents have an incentive to invest in the children who provide old-age support. However, she finds that the introduction of pension systems crowd out the residence practice, since parents no longer need to rely on their children for old-age support. Additionally, it also reduces educational investment.

In some societies, marriage is marked with an exchange of goods and money between the bride's family and the groom's family. For example, in bride price societies, the groom's family typically transfers money and items to the bride's family. These payments can amount to fairly substantial sums; in some cases, the bride price can be valued at over a year's income (Lowes and Nunn, 2019). Ashraf, Bau, Nunn and Voena (2020) find that bride price practices may affect incentive to invest in a girl's education. Using variation in education expansion and in the custom of bride price payments, the authors find that schooling expansions benefit girls in bride price societies but do not benefit girls in non-bride price societies in Indonesia and Zambia. The authors interpret this as evidence that in bride price societies, parents get additional benefits from investing in their daughters' educations. Corno, Hildebrandt and Voena (2020) find that age of marriage responds to aggregate economic conditions. In societies that practice bride price, a negative shock increases the chance of child marriage. In contrast, in India where dowry is practiced, negative economic shocks lead to delay in marriage.

6.4. Religiosity

Henrich (2020) suggests that one of the benefits of religion may be to create collective identity. This will also have important implications for the scope of cooperation. Important work explores the effects of exposure to various religious denominations. Schulz et al. (2019) examine how the Catholic church's policy that prevented cousin marriages changed family orientation and kin networks. Becker and Woessmann (2009) provide evidence that Protestantism led to greater economic prosperity because it encouraged the accumulation of human capital. Relatedly, Becker and Woessmann (2008) find that Protestantism decreased the gender gap in basic education. They highlight the Protestant emphasis on accumulation on the ability of girls being able to read the bible.

Le Rossignol, Lowes and Nunn (2022) focus on traditional supernatural belief systems, such as belief in witchcraft and the role of ancestors, in the Democratic Republic of the Congo. They find that contrary to the effects of moralizing God religions, traditional supernatural beliefs do not seem to promote pro-social behavior. Being paired with an individual with a stronger traditional supernatural belief leads to less pro-social behavior in a series of lab experiments.

7. Conclusion

This chapter has provided an overview of the work on culture in HPE. I provide various definitions of culture that have been used in the literature, as well as an overview of theoretical work on the role of and transmission of culture. I then provide an overview of empirical literature exploring the origins of variation in culture and the economic consequences of culture.

The literature in HPE has contributed to our understanding of culture in several ways. First, it has highlighted how culture has deep roots. Variation in culture can be linked to a wide variety of historical factors, such as historical events, institutions, and the ecological environment. Second, culture tends to persist. Individuals retain their cultural values, even when they move to new locations and institutional environments, and they tend to transmit those values to subsequent generations. Finally, historically determined cultural values and practices have been shown to affect a wide variety of key economic outcomes.

Given how deeply rooted cultural beliefs and traits can be and how much they vary across societies, an exciting avenue for future research is to understand how culture affects and interacts

Table 6: Consequences of Culture

Authors	Outcome	Cultural Determinant	Unit of Observation	Geographic Scope	Cultural Data	Research Design
			Panel A: Economic Preferences			
Figlio et al. (2019)	Educational performance	Time preferences	Individual	Florida	Hofstede	OLS
Sunde et al. (2021)	Capital accumulation, economic growth	Time preferences	Individual, country	Global	GPS	OLS
			Panel B: Social and Institutional Trust			
Aghion, Algan, Cahuc and Shleifer (2010)	Preference for government regulation	Trust	Individual, country	Global	WVS	OLS
Algan and Cahuc (2010)	Economic growth	Trust	Individual, country	Global	GSS	NE, IV
Butler, Giuliano and Guiso (2016)	Income	Trust	Individual	Europe	ESS	OLS
			Panel C: Scope of Morality, Individualism, and Collectivism			
Enke (2020)	Voting in U.S. presidential elections	Universal vs. limited morality	County	U.S.	MFQ	OLS
Enke et al. (2021)	Charitable giving, social capital	Universal vs. limited morality	Individual	U.S.	Original survey	OLS
Gorodnichenko and Roland (2011)	Economic growth	Individualism vs. collectivism	Country	Global	Hofstede	OLS, IV
Gorodnichenko and Roland (2017)	Economic growth	Individualism vs. collectivism	Country	Global	Hofstede	OLS, IV
Gorodnichenko and Roland (2021)	Autocracy vs. democracy	Individualism vs. collectivism	Country	Global	Hofstede	OLS, IV
			Panel D: Family, Kinship, and Marriage			
Alesina, Algan, Cahuc and Giuliano (2015)	Labor market regulation	Strength of family ties	Individual	Global	WVS	OLS
Alesina and Giuliano (2010)	Economic activity	Strength of family ties	Individual	Global	WVS	OLS
Alesina and Giuliano (2011)	Civic engagement, social capital	Strength of family ties	Individual	Global	WVS	OLS
Ashraf et al. (2020)	Children's education	Bride price	Individual	Indonesia, Zambia	EA	OLS, DD
Bau (2021)	Child investment	Matrilocal vs. patrilocality	Individuals	Indonesia, Ghana	EA	DD
Corno et al. (2020)	Child marriage	Marriage transfers	Individual	SSA, India	EA	
Ermisch and Gambetta (2010)	Trust in strangers	Strength of family ties	Individual	UK	BHPS	OLS, IV
Lowes (2018)	Cooperation, child investment	Matrilineal vs. patrilineal	Individual, ethnic group	DRC	EA	OLS, RD
Moscona et al. (2020)	Conflict	Segmentary lineage	Ethnic group, grid cell	Africa	ESA	OLS, RD
			Panel E: Religiosity			
Becker and Woessmann (2008)	Education gender gap	Protestantism	County	Prussia	1816 Prussian Census	OLS, IV
Becker and Woessmann (2009)	Education, economic growth	Protestantism	County	Prussia	1871 Prussian Census	OLS, IV
Cantoni (2014)	Economic growth	Protestantism	City	German-speaking Holy Roman Empire	Bairoch (1988)	OLS, IV
Cantoni, Dittmar and Yuchtman (2018)	Education, occupational choice, public construction	Secularization	Individual, territory	German-speaking Holy Roman Empire	Bairoch (1988)	DD
Le Rossignol et al. (2022)	Prosocial preferences	Traditional supernatural beliefs	Individual	Province of DRC	Original survey & lab	OLS

Notes: DD is difference-in-differences. IV is instrumental variable. NE is natural experiment. OLS is Ordinary Least Squares. RD is regression discontinuity. BHPS is British Household Panel Survey. EA is Ethnographic Atlas. ESA is Ethnographic Survey of Africa. ESS is European Social Survey. GPS is Global Preferences Survey. GSS is the General Social Survey. Hofstede is Hofstede et al. (2010). MFQ is Moral Foundations Questionnaire. WVS is World Values Survey.

with economic policies. This is an important next step for improving the efficacy of economic policy. A related promising avenue for future research is to explore how and when culture changes. Research in HPE will be important for furthering both of these research agendas.

Biography

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