

NBER WORKING PAPER SERIES

CULTURE AND THE FAMILY

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Working Paper 28918
<http://www.nber.org/papers/w28918>

NATIONAL BUREAU OF ECONOMIC RESEARCH

1050 Massachusetts Avenue
Cambridge, MA 02138
June 2021, Revised September 2022

We thank David Henning and Maria Sauval for excellent research assistance. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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JEL No. I0,J11,J12,J13,J14,J16,O11,O12

ABSTRACT

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Abstract

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1 Introduction

The family is the oldest human institution. It is also the institution with the greatest intersection and interaction between the private and social spheres. The family is central economically not only because it has historically been a locus of production and distribution, but also because it is the main transmitter of the social beliefs which in turn affect economic behavior. Thus, understanding a wide range of economic outcomes requires understanding how the family is organized, its cultural beliefs, and how these shape actions and choices.

Although mainstream economics has historically ignored both the role of the family and the role of culture in determining key economic outcomes, this has changed over time. The acknowledgment that it is important to incorporate the family into economic analysis in order to understand

*We are grateful for thoughtful comments from Sonia Bhalotra, Rosella Calvi, Ben Enke, Alice Evans, and an anonymous discussant. We thank David Henning, Mina Kim, Maria Sauval, and Yohan Wang for excellent research assistance.

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micro and macro phenomena, ranging from fertility rates to cyclical unemployment, preceded a parallel acknowledgment regarding the role of culture by several decades. The importance of social beliefs in explaining economic outcomes as diverse as the rise of women's labor force participation, human capital decisions, or the misallocation of inputs is a rapidly growing research area starting with the work of Antecol (2000), Fernández and Fogli (2009), and Giuliano (2007) among others.¹

This chapter describes emerging themes from a growing literature on the interactions between culture and the family, focusing on how the family's cultural beliefs affect decision making and outcomes, and how these change and interact over time. As we show in subsequent sections, understanding the relationship between culture and the family is critical for understanding economic outcomes. When we fail to take this relationship into account, our understanding of decision-making is incomplete, differences in the effects of economic shocks across places appear arbitrary or inexplicable, and policies have adverse unintended consequences.

Our discussion is organized around four key themes. First, a wide variety of family institutions exist around the world and have existed throughout history. Across geographic areas and ethnic groups, there is significant variation in how social unions, such as marriage, are practiced and in co-residence traditions between children and parents. Treating the nuclear family as a default neglects this important variation. The organization of the family unit has also changed substantially over time within geographic areas. The frequency of marriage, the ease and frequency of divorce, and even the sexes that can marry each other have changed radically. Changes in culture and family institutions go hand-in-hand. Despite the importance of variation in family institutions, its specific drivers are still not fully understood and remain a fertile area for research that integrates insights from anthropology, history, and sociology (Fernández, 2018). To provide some insights into this, we describe frameworks from the anthropology and economics literatures.

Second, we describe how the family is a key unit for the intergenerational transmission of social beliefs. This transmission leads outcomes to persist over time, even in cases where the environment that gave rise to particular traditions or attitudes is no longer the same. As a result, parental attitudes and beliefs affect a diverse array of children's outcomes. This can be seen in the divergence of outcomes between individuals in the same economic and institutional environment from different cultural origins (and hence with different beliefs), which may persist across multiple generations. In this chapter, we describe a selection of the empirical and theoretical literature on intergenerational persistence, focusing on several examples that are particularly relevant for family economics. We first discuss the persistent effects of culture on female labor force participation and fertility, decisions that have major consequences for both the status of women and the economy. Second, we discuss the cultural transmission of test score gender gaps, motivated by the fact that

¹See Fernández (2011) for a review of the early literature in this field.

gender gaps in human capital between siblings are also deeply related to family decision-making. Finally, we discuss the persistent effects of family structures and co-residence patterns.²

Third, social beliefs that govern family practices – such as marital payments, who inherits, and co-residence upon marriage – are key determinants of economic decision-making in both high and low-income countries. This is because these practices shape household members’ incentives. The fact that the family’s social beliefs play an important role in decision-making has long been understood by anthropologists (for example, see Goody (1975)) yet, until recently, the effects of variation in family and kinship-related cultural practices have been largely neglected in economics. We provide some examples from the growing economics literature that show how marriage traditions, co-residence patterns, inheritance practices, and son preference affect a variety of outcomes, including human capital investment, fertility patterns, and intimate partner violence.

Fourth, while the family transmits culture, leading practices and attitudes to persist, culture is *not* immutable. Indeed, culture can even change dramatically within relatively short periods, as has clearly been the case for the social acceptability of same-sex relationships (see Fernández et al. (2021)) or the speed of assimilation of immigrants as embodied by the names given to their children (see Abramitzky et al. (2016)). As the environment changes and individuals interact with the environment, their beliefs and incentives also change, changing the practices and attitudes that parents transmit to their children. Changes in the environment can be due (among others) to policy changes, the availability of new technologies or opportunities, or other shocks, such as changes in sex-ratios. They can also be due to changes in information or aspirations when exposed to new models of what makes for a “good” life. To illustrate the importance of cultural change for families, we discuss some interesting examples where culture changed in ways that directly affected the status of women (female labor force participation) within the family or the types of households that form (co-residence patterns and same-sex couples).

The remainder of this chapter is organized as follows. Section 2 describes the variation in family institutions both traditionally and in the modern era and discusses potential frameworks for explaining this variation. Section 3 discusses key examples of how beliefs and attitudes are transmitted intergenerationally through the family, affecting modern behavior, and Section 4 documents the direct effect of different family-related cultural traditions on economic outcomes. Section 5 discusses cultural change in family institutions and social beliefs. Finally, Section 6 summarizes key lessons and links them to areas for future research.

1.1 Defining the Key Terms: Family and Culture

Before proceeding, it is useful to establish our working definitions of both “family” and “culture.”

²The literature on persistence – where intergenerational transmission through the family is often an important mechanism – is large and features outcomes as diverse as trust, risk aversion (see Dohmen et al. (2012)), and rule-breaking (Lowe et al., 2017).

The Family. We look to anthropology for a sufficiently rich definition of the family to capture the variety of family forms and obligations that exist around the world and over time. From Brown et al. (2020), “A family can be defined as the smallest group of individuals who see themselves as connected to one another... Families tend to reside together and share economic opportunities and other rights and responsibilities.” Moreover, “the function of families is to fulfill basic human needs such as providing for children, defining parental roles, regulating sexuality, and passing property and knowledge between generations.”³ Our definition of family is sufficiently broad that it encompasses what is often referred to in the anthropology literature as kinship institutions or traditions. Lastly, it is worthwhile to state explicitly that while we sometimes refer to the family as an institution, we do not find the distinction between institutions and culture useful in this case. We think of the family as a set of culturally transmitted norms that influence a broad range of social relationships.⁴

Culture. The definition of culture is less settled. The Merriam Webster Dictionary defines culture as “the customary beliefs, social forms, and material traits of a racial, religious, or social group” and as “the integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations.” These are the definitions cited in Fernández (2008), but some prefer to think of culture more as “decision-making heuristics or ‘rules of thumb’ that have evolved given our need to make decisions in complex and uncertain environments” (see Nunn (2012)) or as “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (see Guiso et al. (2006)). These definitions place emphasis on different aspects of culture. For the purposes of this chapter, we prefer the broader dictionary definition as culture may not be restricted to heuristics and the speed with which cultural changes is endogenous.

2 Family Institutions

In this section, we document both traditional and modern variation in family institutions and discuss why this variation may occur.

2.1 Traditional Variation

While today’s Westerners are most familiar with nuclear families with monogamous parents, these family institutions are not representative of the rich global variation in traditional family organizations. These institutions govern the form taken by social unions such as marriage, how these

³Thus, the family is related to but not equivalent to the “household” (a group of people who share a residence). Individuals may consider themselves family members even if they do not co-reside, and an individual may co-reside with non-family members.

⁴This set of norms shape “patterns of marriage, residence, relatedness, and alliance formation,...organize interpersonal interactions and configure social networks in ways that profoundly influence social incentives and behavior” (Schulz et al., 2019, p.1).

unions are legitimized, the division of labor within relationships, who inherits, sexual freedom for women, who supports parents in old age, the structure of a family unit, and who is considered a family member, among many others. To illustrate just some of this variation, we draw on the *Ancestral Characteristics* database assembled by Giuliano and Nunn (2018) to show how different traditional family institutions vary geographically.⁵

The Ethnographic Atlas and Ancestral Characteristics Datasets. The *Ethnographic Atlas* (Murdock, 1967) is a database – assembled by anthropologists – of 1,265 ethnic groups’ pre-industrial cultural practices. Several papers have made use of this data to study questions in political economy, economic history, and the economics of culture.⁶ Giuliano and Nunn (2018) use these data to construct the *Ancestral Characteristics* database, which reports the ancestral cultural characteristics of *current* population groups within countries by combining the *Ethnographic Atlas* with maps of the current distribution of 7,500 language groups from the *Ethnologue* (Gordon Jr, 2009). To arrive at country-level measures of different traits, the authors mapped each language polygon from the *Ethnologue* (Gordon Jr, 2009) to a single ethnic group from the *Ethnographic Atlas*. They then calculated the weighted average of each cultural trait in a country by averaging over its current language polygons, weighting each language polygon by the 2007 Landscan population data.⁷

Thus, the *Ethnographic Atlas* and the *Ancestral Characteristics* datasets provide researchers with different (but closely related) tools for studying and documenting variation in family institutions. The *Ethnographic Atlas* provides an ethnicity-level source of data that can be matched to other data sources at the language or ethnicity-level and can be used to study how individuals from cultures with different traditions behave, even within the same geographic area. The *Ancestral Characteristics* database provides measures of the share of the current population in a country with a given ancestral trait, calculated using a particular aggregation method.

We note that while the *Ethnographic Atlas* has been widely used across disciplines to study the effects of cultural and historical institutions on modern behaviors, it also suffers from some limitations, several of which are also discussed by Giuliano and Nunn (2018). First, the *Atlas*’s coverage of Europe is relatively limited. This is because, at the time of the *Atlas* was compiled, the study of Europeans’ pre-industrial cultural traits was seen as a task for historians rather than anthropologists. Consequently, the *Ethnographic Atlas* – an anthropological database – contains relatively few European groups. Second, while the *Atlas* aims to ascertain different societies’ pre-industrial

⁵For simplicity, we use the version of the *Ancestral Characteristics* database that only exploits ethnographic information from the *Ethnographic Atlas* (Murdock, 1967). Giuliano and Nunn (2018) have also produced more comprehensive versions of the database that integrate additional ethnographic sources.

⁶See Giuliano and Nunn (2018) for a review.

⁷The Landscan data is provided by the Oak Ridge National Laboratory and can be found at <https://landscan.ornl.gov>.

characteristics, the period of observation for different groups varies from the 1600s to later than 1950. Finally, most observations in the *Atlas* are based on the observations of one or several researchers, almost entirely males of European descent. This in turn could introduce both noisiness and biases to the data, including of course, what variables were considered relevant (see Bahrami-Rad et al. (2021) for further discussion). We refer readers interested in other data on traditional family institutions around the world to Lowes (2021), who provides a detailed discussion of different anthropological data sources.

Cross-Country Variation in Traditional Cultural Traits. Figure 1 displays cross-country variation in four non-mutually exclusive measures of family institutions using the *Ancestral Characteristics* data. Figure 1a shows the global variation in traditional patrilocality (sons continue to live with their parents after marriage and provide them with old age support), plotting the share of the population whose post-marriage residence tradition is reported as “wife to husband’s group.”⁸ Figure 1b shows the variation in bride price traditions (grooms make payments to the family of the bride at the time of marriage), plotting the share for whom the marriage payment tradition is “bride price or wealth, to bride’s family.”⁹ Figure 1c shows variation in traditional polygyny, the practice where a man has multiple wives simultaneously. Figure 1d reports variation in the nuclear family as the predominant, traditional family type. For polygyny, we use the share that practice “independent nuclear, polygyny,” “preferentially sororal, same dwelling,” “preferentially sororal, separate dwellings,” “non-sororal, separate dwellings,” or “non-sororal, same dwelling.”¹⁰ For nuclear family traditions, we use the share for whom the variable takes either the value “independent nuclear family, monogamous” or “independent nuclear family, polygyny.”¹¹

As the figures show, there is substantial variation in all four traditional practices across countries, both within and across continents. Traditional polygyny and bride price are particularly common in Sub-Saharan Africa, whereas patrilocality is a common ancestral trait in much of Asia, as well as parts of Europe and Sub-Saharan Africa. The nuclear family is a predominant ancestral family type in North America but not in much of Africa or Southern Asia.

While the *Ethnographic Atlas* is designed to measure historical rather than current practices, it has also been shown to be predictive of a variety of current practices around the world (Bahrami-Rad et al., 2021). To provide additional evidence that many of these traditional family institutions still persist today for a sizable portion of the global population, we consider the case of polygyny. Polygyny, unlike some other family institutions, is particularly observable in modern survey data. We draw on 35 Sub-Saharan African *Demographic and Health Surveys* collected from 23

⁸We define patrilocality using the *v11* variable in the *Ethnographic Atlas*.

⁹We measure bride price using question *v6*.

¹⁰To measure polygyny, we use question *v9*. Some groups are recorded as practicing “independent polyandrous families.” However, this is relatively rare and only observed at all in 6 countries.

¹¹We use question *v8*.

countries since 2010.¹² Consistent with the earlier findings of Tertilt (2005), polygyny remains widely practiced even in surveys from the last ten years. Across all married respondents, 24% of women are in polygynous marriages, and the share of marriages that are polygynous ranges from 6% (Burundi) to 49% (Guinea).¹³ Thus, while declines in the practice of polygyny have occurred in modern times (Fenske, 2015), it remains widely practiced in large parts of Sub-Saharan Africa, a region with a population of 1.1 billion inhabitants.

Although large-scale cross-country data is less readily available for other traditional family institutions, there is still evidence that they remain important for substantial parts of the global population. For example, Chiplunkar and Weaver (2019) find that the share of the population practicing dowry (marriage payments from the bride's family to the groom's side or to the couple) in India – a country of 1.4 billion people – has *increased* since the 1930s, with roughly 90% of modern marriages now featuring dowry payments. Ashraf et al. (2020) find that approximately 80% of a sample of *urban* women report practicing bride price in Zambia and that bride price payments are similarly widespread in data from Indonesia.

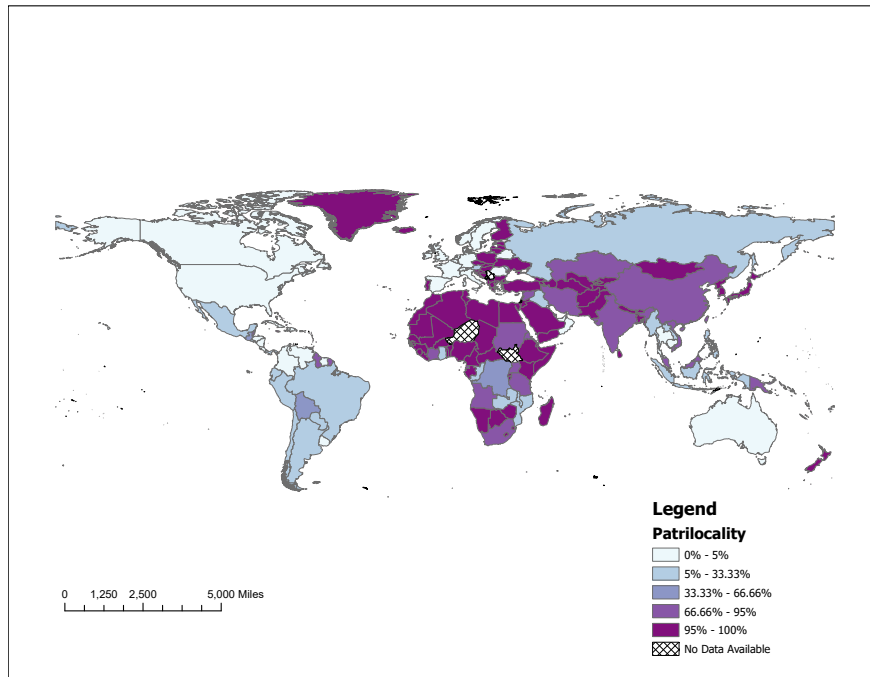
Thus, much of the rich variation in historical family institutions seen in these figures is still present today. In cases where these cultural traditions are still practiced, they are likely to directly affect household decision-making. Section 4 documents several important examples from the literature showing how global variation in family institutions affects decision-making. Additionally, traditional family structures may affect behavior in places where family structure has since changed, as these practices have persistent effects on attitudes, beliefs, and behavior, i.e., on culture. Section 3 illustrates this point by documenting examples of how historical family institutions affect modern culture even when the institutions themselves have not persisted, as is the case with historic family structures in Europe.

Why do Traditional Family Institutions Vary? Many of the forces that give rise to the variation in traditional family institutions – which in part drives geographic variation in family institutions today – are not entirely understood. Indeed, understanding these forces remains an interesting question for future research. Nonetheless, anthropology and economics do provide us with two related and complementary frameworks that may aid in understanding why different institutions arise and why they may change. The same core idea underlies both these frameworks – cultural institutions can help improve a society's response to a problem – though researchers sometimes differ on the exact way that culture does this (as a decision-making heuristic, by shaping beliefs/attitudes, as a way of setting the “rules of the game,” or as an equilibrium selection mechanism). We emphasize that this logic does *not* imply that the cultural institutions we observe are optimal or even efficient.

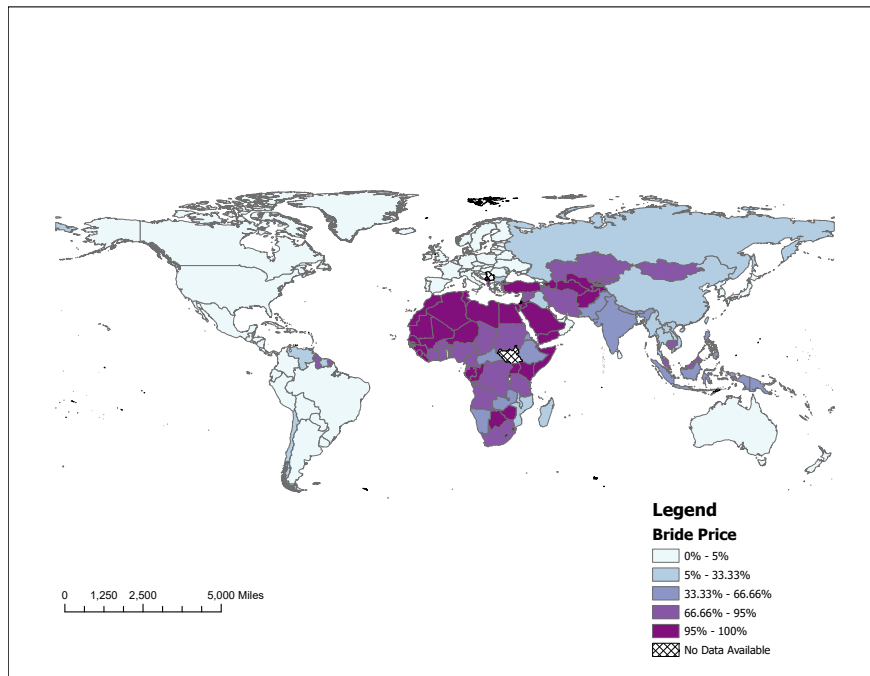
¹²Together, these surveys include roughly 500,000 respondents.

¹³In the same DHS data, 19% of married women are in marriages with 2 wives, and 4% are in marriages with three wives.

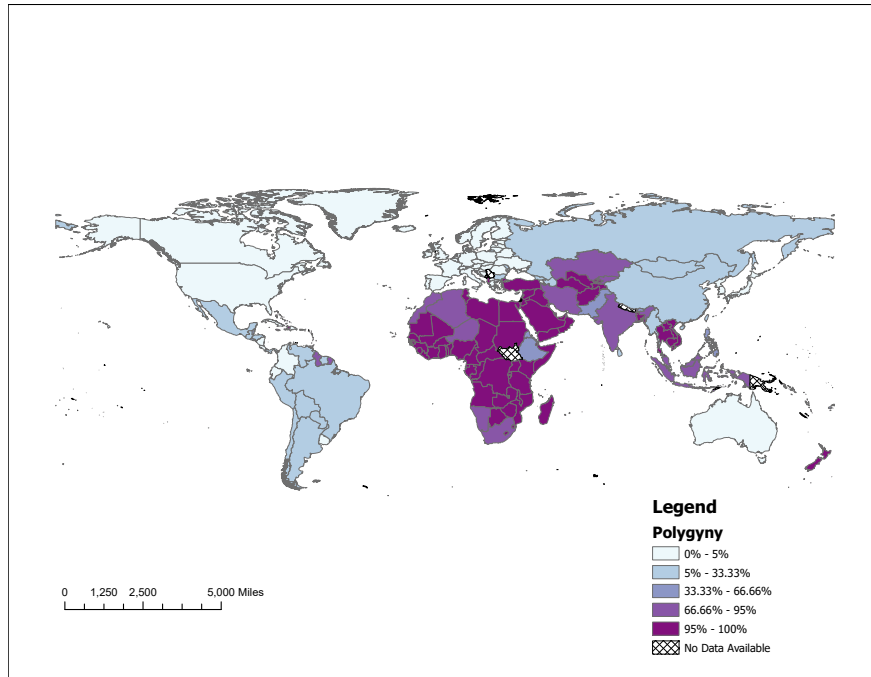
Figure 1: Cross-Country Variation in Cultural Practices



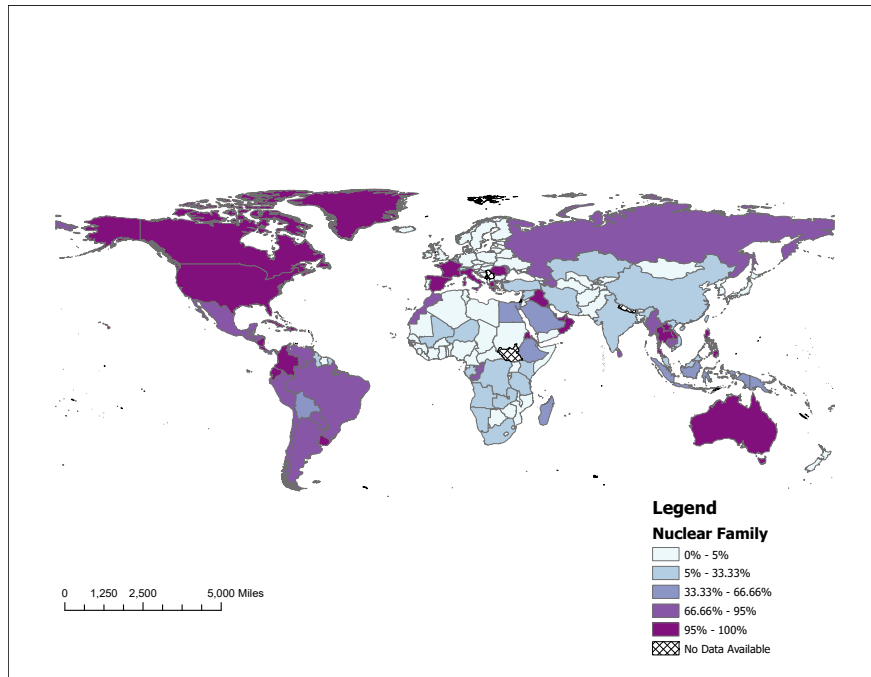
(a) Patrilocality



(b) Bride Price



(c) Polygyny



(d) Nuclear Families

Source: Ancestral Characteristics Database (Giuliano and Nunn, 2018). Countries where information is missing for more than 10% of the population are colored with cross-hatches.

Conflicting preferences or interests among different social groups may give rise to an inefficient solution and, even if a solution is efficient in a given environment, its long-term optimality is not ensured when that environment change. Similarly, an evolutionary framework merely suggests that an institution will be adopted over time if the pay-off to doing so outweighs the cost (Boyd and Richerson, 1988) but, once again, this does not guarantee efficiency, nor even short-run optimality (regardless of the set of social preferences), let alone long-run optimality.

Culture as an Evolutionary Response to Environmental Features. The field of cultural evolution in anthropology views the rise and evolution of cultural institutions as an evolutionary processes (Boyd and Richerson, 1988). In this case, culture often evolves as a decision-making heuristic. Thus, different family institutions may arise because they are a better response to particular environmental features. Environmental features include agro-climatic conditions and the technologies available to a society. For example, agro-climatic conditions shape the agricultural and subsistence practices employed by a society, and these practices affect the evolution of family institutions. Cultural change can then occur when environmental features change.

A growing body of work shows that environmental features can affect polygyny, bride price, and restrictions on female sexuality, which all affect the status of women. Becker (2021) shows that historical pastoralism leads to more restrictions on women’s sexuality, including female genital cutting, since pastoralism led males to be absent from their families for extended periods, exacerbating paternal uncertainty. In an influential book, originally published in 1970, Boserup (2007) suggests that pre-industrial agricultural technology that favors strength (e.g., the plough) led to male dominance in agriculture and a stronger division of gender roles. Alesina et al. (2013), which we discuss in greater detail in Section 3, provide evidence in favor of this hypothesis. In contrast, in areas that relied on labor-intensive, small-tools agriculture, women played a greater role in agriculture. Boserup (2007) suggests that this in turn leads polygyny and bride price to arise, as female labor was a valuable input into agricultural activity. Consistent with this hypothesis, Jacoby (1995) provides evidence that, conditional on wealth, men have more wives in parts of Côte d’Ivoire where women’s agricultural productivity is higher.

Another explanation for polygyny that is also consistent with cultural evolution, and which points to why men “buy” women and not vice versa, comes from the “threshold” model in biology. This model suggests that polygyny will naturally arise under two assumptions: (1) males (but not females) can increase their offspring by acquiring more mates, and (2) there is heterogeneity in the quality of males/their resources but not in the quality of females (Orians, 1969). For humans, quality variation in females could be considered relatively small in contexts where they do not own property (and hence there are no wealth differences among them) and human capital differences are unimportant.¹⁴ This model results in males with more resources practicing polygyny. Consistent

¹⁴This takes for granted that women do not own property rather than explain this as an outcome.

with this idea, economists have argued both empirically and theoretically that men with more resources will have more wives, and more unequal societies will be more polygynist (Becker, 1981; Grossbard, 1976, 1993). Gould et al. (2008) build on this model to provide further insights into when polygyny will be practiced and when it will decline. The authors develop a model showing that more economically developed societies will tend toward monogamy over time. They argue that this transition occurs when human capital becomes a more important driver of male income/resources. In more developed societies, human capital is a relatively more important driver of incomes, and high human capital men have higher incomes/resources. As a result, female human capital becomes more valuable on the marriage market (e.g., because it is complementary with male human capital in producing high quality children). This in turn drives up the effective price of high human capital wives, leading higher human capital men to match with one high human capital wife instead of multiple lower human capital wives. Thus, as a result of the changing economic environment, polygyny falls out of practice.

Environmental features may also affect who is considered a family member. Following Fincher et al. (2008), Enke (2019) suggests that pathogen risk may lead to tighter kinship networks, where individuals are embedded in tight in-groups formed by strong extended family networks. Under this hypothesis, higher pathogen risk in an environment makes travelling and interacting with outsiders more costly, promoting localized interactions with the in-group.

Culture & Missing Markets. A second, complementary view is that different cultural institutions – including family institutions – can help resolve incomplete contracting or social insurance problems that traditionally could not be resolved by formal institutions (e.g., Greif (1993)).

Botticini and Siow (2003) hypothesize that dowries evolved as a way to leave early bequests to daughters in patrilocal societies in places as diverse as the Near East, Europe, East Asia, South Asia, and parts of the Americas. They argue that dowry is an efficient way of leaving bequests to daughters since sons, who remained working with parents as adults in these societies, would be disincentivized from making productive investments (e.g., on the family farm) if their output would later be taxed as part of a daughter's inheritance. Similarly, co-residence norms, where sons or daughters live with parents and care for them in their old age, may provide parents with a source of old age support in the absence of pension plans or other formal savings mechanisms (Ebenstein, 2014), while also potentially helping to resolve incomplete contracting problems in human capital investment between parents and the children who are expected to support elderly parents (Bau, 2021; Bau et al., 2020). Focusing on how family institutions can help provide insurance, Rosenzweig and Stark (1989) show that exogamy (where daughters leave the local area upon marriage) facilitates informal insurance networks between agrarian households in India who are exposed to very different shocks across space.

The literature described above suggests that these two frameworks can provide insights into

why different traditional family institutions arise. Similarly, these frameworks may also provide us with insights into why family institutions have changed, as these institutions could respond to either changes in the environment or the formal contracting space. Nonetheless, we emphasize that more work is needed to fully understand why different family institutions occur and why these institutions change. Such an agenda may in turn lead to the development of new theoretical frameworks.

2.2 Modern Variation

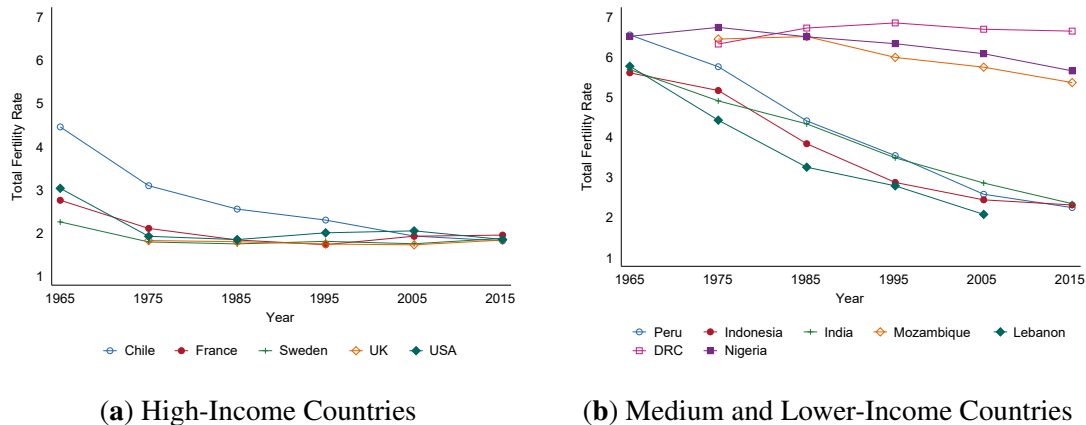
In addition to the traditional variation in the family institutions in the anthropological data discussed above, there has also been a dramatic evolution in the formation and stability of the modern nuclear family. In much of the developed world, the first demographic transition – characterized by declining fertility, mortality, and age of marriage – is long over and has been replaced by what many demographers have termed the second demographic transition. The latter is characterized by very low fertility (below-replacement level of 2.1), marital instability, postponement of marriage, and the adoption of alternative family structures (e.g., cohabitation). How this came about and the relative importance of changes in contraceptive technology, increased female labor force participation, the gender revolution, and globalization are still debated.¹⁵ Lesthaeghe (2010) attributes changes in family formation to an increased emphasis on individuality and self-actualization. In contrast, Goldscheider et al. (2015) and Esping-Andersen and Billari (2015) suggest that declining family stability may have been driven by a mismatch between women’s increasingly important role in labor market and gender attitudes at home. From this perspective, rising divorce is in part a transitional dynamic, and family stability (and fertility) may recover as gender attitudes evolve. Whereas the first half of the gender revolution – women’s dramatic increased participation in the labor market – required the renegotiation of gender roles and consequently gave rise to potential discord and unmet expectations, the second half of the gender revolution – the greater involvement of men in the private sphere – may restore stability and increase fertility. Goldscheider et al. (2015) notes that this recovery already appears to be occurring in Sweden, while Esping-Andersen and Billari (2015) note that family stability is now relatively high among the most educated in the United States.

Understanding why and how the family is changing, how cultural changes in the private sphere are affected by cultural changes in the public sphere, and how technological and institutional change interact with both spheres is one of the more understudied areas in both culture and family economics. While Section 5 discusses some contributions in this area, here we mostly limit ourselves to showing some of the basic trends that have occurred in a variety of countries over the last four to five decades.

¹⁵See Zaidi and Morgan (2017) for a review article.

Figure 2 shows the evolution of the total fertility rate (TFR) for several high-income countries (HIC) on the left and several medium and low-income countries (MLIC) on the right.¹⁶ Note the convergence of the high-income countries to a level below the replacement rate of 2.1 with some increases in recent times due to the implementation of fertility incentives (e.g., France) and immigration (e.g., USA). The MLIC, on the other hand, show two different patterns of behavior: a group is converging very rapidly to the low level shown for the HIC, whereas another group has stayed very high (TFRs between 6 and 7 that have just started to decrease).

Figure 2: Evolution of Total Fertility Rates



Note: The total fertility rate (TFR) shown for each year is the the average over the first and last year of the decade, e.g., the level for 1975 is the average TFR between 1970 and 1979. Data source: United Nations. The country classifications into high vs. medium and low-income are from the World Bank.

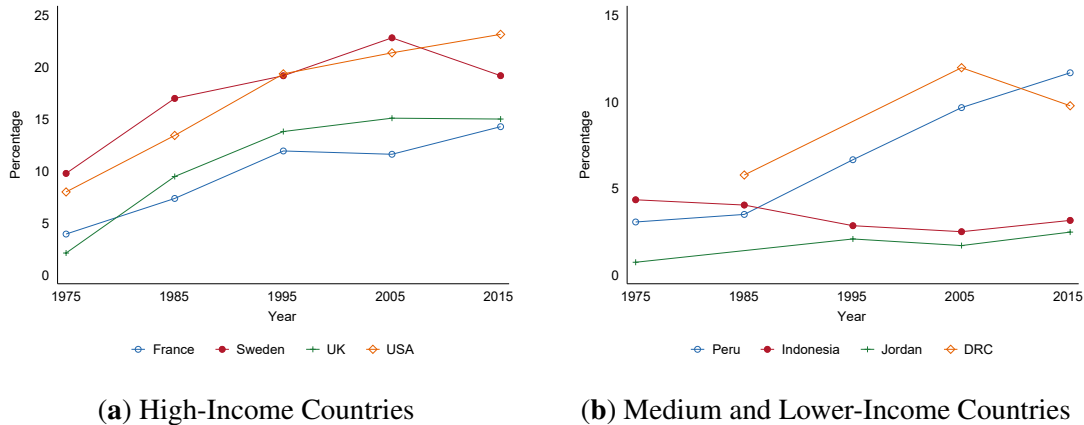
Figure 3 shows the evolution of the percentage of divorced/separated individuals between the ages of 40-49 for a few countries (inclusion based on the availability of lengthy time series).¹⁷ There a clear growing divorce trend among the four HIC, whereas the picture for the four MLIC is more mixed with some increasing and others staying fairly constant. It is beyond the scope of this chapter to examine the root causes of changes in family formation and stability. However, a partial explanation for the increase in divorce is undoubtedly due to the liberalizing of divorce laws in the mid seventies and eighties in many HIC, making it easier and less expensive to obtain a divorce. Other factors increasing divorce include the greater ability of women to support themselves and their children and the growing social acceptability of divorce.¹⁸ These factors tend to reinforce one

¹⁶The TFR is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

¹⁷The proportion of divorced individuals is expressed as a proportion of all married and divorced/separated individuals whereas never married is as a proportion of all individuals. When the category of consensual relationship is available in the data, we count it as married and if the consensual relationship is separated, it counts as divorced.

¹⁸In the US, for example, in 1954, Gallup found that only 53% of those surveyed said they “believe” in divorce. In 2001, when Gallup first asked about the morality of divorce, 59% thought it was moral. By 2015, this figure topped 70%. See <https://news.gallup.com/poll/213677/divorce-rate-dips-moral-acceptability-hits-new-high.aspx>.

Figure 3: Evolution of Divorce Rates



Note: The divorce rate is calculated as the average over the proportion of divorced men (40-44), divorced women (40-44), divorced men (45-49), and divorced women (45-49). In each case, this proportion is expressed as a fraction of the married plus divorced/separated individuals of that gender who are within the relevant age range. Consensual unions are classified as married unless the partners are living apart. We average these proportions over all years in which the data is available and show the percentage centered around the middle of the decade, e.g., the level for 1975 is the average percentage over all data years between 1970-1979. Data source: United Nations except for the US which is from IPUMS. The country classifications into high vs. medium and low-income are from the World Bank.

another: a higher probability of divorce makes working and greater labor market experience more important for women, but it also may lead divorce to become easier for both partners.¹⁹ Increases in divorce also contribute to its greater social respectability, which then again further encourages divorce.

Cohabitation has also gained in popularity in most HIC, although there is a scarcity of time series data for most countries. Some part of this increase is due to the growing acceptability of cohabitation, as well as changing gender norms and how they affect the desirability of marriage. Women's greater labor force participation likewise means that they no longer need to rely on the economic support of their parents or a husband, allowing them to remain single. Important research questions here concern the relative stability of cohabitation versus marriage, the socio-economic and racial/ethnic divide in who marries and who cohabitates, and the intergenerational consequences of these outcomes.²⁰ In Section 5, we discuss the cultural changes that have driven some of these changes in family institutions over time.

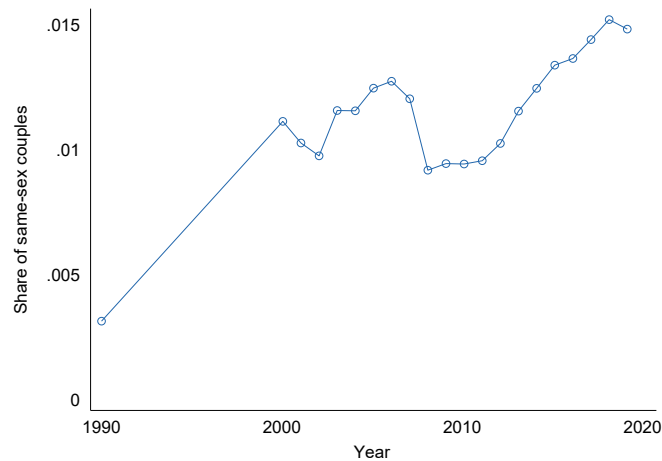
An even more recent phenomenon, at least in terms of its visibility, is the rise of the same-sex couple. It is interesting to note that the US Census did not even ask whether an individual lived

¹⁹See Fernández and Wong (2014) and Fernández and Wong (2017) for a quantitative analysis of how the change in divorce law in the US from mutual consent to unilateral affected women's labor force participation, assortative matching, and the probability and timing of marriage and divorce.

²⁰See Lundberg et al. (2016) for a review of possible explanations for these facts in the US context.

with an unmarried partner until 1990.²¹ Figure 4 graphs the evolution of this group over time in the US, measured as the proportion of same-sex couples in the population of all married and cohabiting couples.²² Undoubtedly, society’s changing attitudes towards same-sex relationships have led to a larger proportion of same-sex couples, as well as of individuals who are willing to identify their partner in this way on government questionnaires.

Figure 4: Same-Sex Couples



Note: The proportion of same-sex couples is calculated as a proportion of all couples. Data source: US Census: 1990, 2000; ACS: 2001-2019. In 2008, the Census Bureau imposed more sophisticated data-editing rules and redesigned the survey questionnaire leading to relatively large changes between the preceding years and those that follow.

3 The Family & the Transmission of Culture

Culture is socially learned. Cultural beliefs are transmitted by society writ large: by families, by the social group(s) to which an individual belongs (voluntarily or otherwise), and by observation of what others do and say in a variety of arenas. These beliefs are maintained not only by transmission and learning but also by the punishment of those who transgress cultural prescriptions. This is not to say that these beliefs are static or equally held by all. On the contrary, the dominant culture in a society is constantly contested, and the strength with which beliefs are held varies across individuals and over time. As we discuss in Section 5, the dominant social culture evolves endogenously as well.²³ Furthermore, as discussed in the excellent review of the literature on social pressure in

²¹Note that same-sex marriage was not legal in the US at that point. In the 1999 Census, if both the head of household and the unmarried partner are of the same sex, they can be classified as a same-sex couple. Over time both the question and the range of possible answers has changed, making exact comparisons more difficult.

²²The drop in 2007 resulted from changes in processing and formatting changes according to the Census fact sheet. See <https://www2.census.gov/topics/families/same-sex-couples/faq/sscplfactsheet-final.pdf>

²³What determines the original cultural beliefs? See Francois et al. (2018) for a very interesting study of how evolutionary group selection may select pro-social cultural features, as evidenced by greater trust among individuals

Bursztyn and Jensen (2017), individuals' behavior may differ according to which peers will see their actions. That is, there may be several "cultures" (although this is not a word the authors use), and the same individual may respond differently depending on the nature of the social group with which they interact.

In this handbook chapter we are interested in the interaction between the family and culture, both because of the importance of the family as the primary transmitter of cultural beliefs and because culturally transmitted beliefs fundamentally affect outcomes within the family. The role of the family in transmitting beliefs has been modeled in a variety of ways, mostly by incorporating economic incentives into evolutionary models that endogenize the degree of effort that a family expends on inculcating their children with their own beliefs/traits (see Bisin and Verdier (2001) for the main model in this vein). Parents may transmit practices or beliefs to maximize their own utility and/or their child's welfare. Imperfectly altruistic parents who care about their own beliefs may choose to inculcate their children with these even if they do not maximize their children's ex-ante welfare.²⁴ Moreover, whether parents choose to deviate from prevalent practices may depend both on the costs of transgressing and whether substitute practices are available for which the social sanctions of deviating from the prevalent practice are not too great (Gulesci et al., 2021).²⁵ It should be noted that parents may themselves face constraints in the set of values that they can choose to transmit as it is difficult to preach what one does not practice (e.g., a household with traditional gender roles in which the mother does the majority of the housework and childcare may have a hard time conveying a message of empowerment to daughters or one of gender equality to sons no matter how advantageous those beliefs may be).

Children, of course, are not merely passive absorbers of culture. They are influenced by their peers in school and in their social neighborhood, as well as by the popular media, in addition to their parents. As emphasized by Akerlof and Kranton (2000), identity (which itself is affected by culture) can to some extent be chosen by the individual and is likely to be multidimensional.²⁶ This can sometimes lead to intergenerational conflict within the family. For example, as shown in Dahl et al. (2021), a reform that granted automatic citizenship to immigrant children born in Germany as of January 1, 2000 decreased the welfare of Muslim girls born a few months after the reform relative to those born a few months before the reform. The former reported less satisfaction and

in sectors/firms with greater competition.

²⁴See Doepke et al. (2019) for a general framework where parents' and children's objective functions differ and parents can invest in either reshaping children's preferences or limiting their actions.

²⁵In the case of female genital circumcision (FGC), Gulesci et al. (2021) suggest that the introduction of a less damaging version of FGC could have served as a stepping stone for the decline of FGC in Somalia. Parents in the first generation could undertake the less damaging FGC practice without transgressing too much, and once this practice became dominant, parents of the subsequent generation could stop practicing FGC altogether without deviating too much from the new prevalent norm.

²⁶On the latter, see Carvalho and Pradelski (2021).

were less integrated into German society, effects not found for Muslim boys. The authors interpret these results as evidence of family conflict in which conservative parents reacted to their daughters' greater opportunities to assimilate by increasing their constraints.

Thus, the transmission of beliefs from parents to children, as well as the endogenous investments made by parents to prevent changes in attitudes or beliefs, can lead to cultural persistence. The role of cultural beliefs for determining important economic outcomes, such as human capital investment, female labor force participation, or fertility, is easiest to grasp – and to isolate empirically – when similar individuals faced with similar economic and institutional environments choose different actions based on these beliefs. Below we discuss several empirical contributions to this literature, which exploit this strategy. These papers demonstrate the persistent effects of culturally-transmitted values, as well as the central role played by the family in transmitting cultural beliefs.

Female Labor Force Participation & Fertility. Female labor force participation, particularly that of married women, varies significantly across countries. How much of this variation is due to differences in beliefs about gender roles and how much is due to variation in the economic and institutional environments? This is a difficult question to answer since, as argued in Fernández (2008), institutions, as well as economic factors such as gender wage differentials or the availability of day care, are fundamentally inseparable from cultural beliefs, co-determining one another. Nonetheless, by studying similar women who live in the same economic and institutional environment, it is possible to demonstrate the role played by families in transmitting cultural beliefs.

Fernández and Fogli (2009) study how culture affects the work and fertility behavior of married second-generation American women using what Fernández (2008) calls the “epidemiological approach.”²⁷ Identification of culture comes from the assumption that cultural beliefs are significantly more portable across space than the economic and institutional environment of the country of ancestry. Immigrants bring with them a set of beliefs that are likely to reflect those prevalent in their country of ancestry. Since these beliefs are transmitted to their descendants, culture from the country of ancestry would affect the behavior of future generations. Of course, a potential concern is that there are other important characteristics of immigrants that may also be easily portable, such as human capital or wealth, and that could lead to intergenerational persistence. Depending on the outcome of interest, a variety of controls can be used to make individuals more comparable as discussed below.

Fernández and Fogli (2009) use the 1970 US Census (which was the last one to ask individuals where their parents were born) to create a sample of second-generation married Americans within

²⁷Second-generation Americans refers to individuals who were born in the US but whose parents were born elsewhere. These women are less likely to be affected by language barriers or other transitional shocks due to immigration than first generation immigrants are. On the other hand, they are more likely have assimilated to American culture.

a relatively narrow age range: thirty to forty years old. They proxy for the cultural beliefs in the country of ancestry with the female labor force participation (FLFP) and total fertility rates (TFR) in 1950, as this is the earliest year that is available for all the countries in the sample.²⁸ Note that these variables capture, in addition to past economic and institutional conditions, the cultural beliefs commonly held about women's role and ideal family size. Given that the women in the 1970 US sample were born and raised in the US, only the cultural beliefs embodied in the variables should be potentially relevant to their work and fertility behavior.

The authors control for the standard metropolitan area in which the couples resides (and thus local labor market conditions), as well as a variety of individual characteristics of the woman and her spouse, including education and household income. Although these attributes are likely to be influenced by cultural views on women's role and desired number of children as well, they also could be correlated with initial differences across ancestry in terms of parental education, income, and wealth. The authors show that the cultural proxies of FLFP for work and TFR for fertility have positive and significant explanatory power for women's work hours and number of children, respectively. Importantly, using a different data set, they show that these effects persist when they account for parental education. Furthermore, using census data, they show that effects are not due to the average human capital in the potential ethnic network measured in a variety of ways. Lastly, using a Mincerian wage regression, the authors show that the FLFP cultural proxy has no explanatory power for variation in wage rates across these women, making it unlikely that variation in work hours is driven by unobserved human capital that varies systematically by country of ancestry. Interestingly, studying couples in which the parents of the wife and those of the husband were born in different countries (itself an endogenous outcome), they show that both influence the wife's labor force participation and the couple's fertility.

An earlier paper by Fernández et al. (2004) had hinted at the potentially important role that culture may play in perpetuating gender roles. The authors found that men brought up by working mothers were more likely to be married to women who also chose to work, suggesting that these men developed a different view of gender roles. The authors also exploited the difference in female labor force participation induced by idiosyncratic variation in the mobilization rate of men across US states during World War II to study intergenerational transmission. In states with higher mobilization rates, more women entered the labor market to replace them. The authors show that several decades later, women also worked more in those states. Examining differences in female labor supply across cohorts, the authors show that the cohort that would have been forming its impressions of gender roles (around the ages of 8-12) during World War II saw the largest increase in its labor supply, relative to slightly older cohorts. This increase is larger for those states with higher mobilization rates (i.e., those which most increased female labor supply during WWII).

²⁸They show that using more contemporaneous measures does not affect their results.

This points to the intergenerational transmission of gender roles for either daughters or sons (or both). Alternatively, it may have been employers who changed their beliefs about the suitability of women in the workplace as a result of this experience, leading to greater female labor supply in those states with greater mobilization, though this would not explain the marital patterns seen in the data. More direct evidence of the family's role in transmitting values comes from Farré and Vella (2013). Using a sample of mother–child pairs from the National Longitudinal Survey of Youth (NLSY) 1979, they show that gender attitudes are highly correlated between mothers and daughters. Furthermore, the mother's gender attitudes affect the daughter's labor supply and, as in Fernández et al. (2004), the labor supply of their sons' wives.

A more ancient cultural determinant of female labor force participation is studied in Alesina et al. (2013), which explores the influential hypothesis put forward by Boserup (2007) that differences in cultural attitudes towards gender roles originate in whether an ethnic group traditionally practiced plough versus hoe agriculture. The main difference between the two forms of agriculture is that men have an advantage in plough agriculture as it requires upper body strength and bursts of power to control the animal pulling the plough. Hoe agriculture on the other hand is labor intensive and uses hand-held tools. The hypothesis is that plough agriculture – where men worked in the fields and women specialized in work inside the home – gave rise to more rigid cultural norms about the appropriate gender division of labor.²⁹ The authors use pre-industrial ethnographic data from the *Ethnographic Atlas* that reports whether a society used the plough. They examine the long-term impact of plough versus hoe use by linking the information from the *Ethnographic Atlas* with the geographic distribution of languages from the *Ethnologue*. The final variable is the fraction of the (current) population living in a country whose ancestors traditionally practiced plough agriculture. Although there are large and important gaps in the data (e.g., Latin America), as well as very little differentiation in several regions (e.g., within Europe or within sub-Saharan Africa), the authors show that countries with greater plough use had lower female labor force participation as measured in the year 2000. Of course, as cautioned earlier, it is not possible to use this strategy alone to differentiate between the effect of culture and current institutions. To do so, the authors turn to the epidemiological approach and, following Fernández and Fogli (2009), show that the labor force participation of second generation women (i.e., whose parents were born elsewhere but who themselves were born in the country of residence) in the US or in Europe is lower if their parents came from a country that had more ancestral plough use.

Test Score Gender Gap in Math. A growing literature suggests that culture is also an important driver of persistent gender gaps in math scores and that family can play a role in perpetuating these gaps by transmitting culture across generations. In an influential descriptive paper, Guiso et al.

²⁹It would be interesting to know, however, whether men in hoe-oriented agriculture worked more within the home or did women in those societies also do all the home and child-oriented work?

(2008) establish that the World Economic Forum’s (WEF) Gender Gap Index is highly correlated with cross-country variation in gender gaps in the international PISA exams. Fryer and Levitt (2010) replicate this result using data from the international TIMSS exams, although they find that it is not robust to the inclusion of several Middle Eastern countries (such as Bahrain and Iran) with highly biased WEF gender gap measures and very small gender gaps in math. Focusing on gender gaps at the top of the distribution in math performance in the NAEP, Pope and Sydnor (2010) also find that gender gaps are highly variant across states within the United States.³⁰ Pointing to the potential importance of social beliefs, they find that state-level average answers to a General Social Survey question about whether “women are better suited to the home” explain 40% of the variation in these top-of-the-distribution gender gaps in math.

Building on this descriptive work, several papers apply the epidemiological approach from Fernández (2011) described above to determine if culture – rather than other features of a country – has persistent effects on the gender gap in math scores. Using the PISA test, Nollenberger et al. (2016) show that females within the same host country whose parents immigrated from countries with worse WEF gender gap scores perform differentially worse in math. Rodríguez-Planas and Nollenberger (2018) further show that females whose parents immigrated from countries with worse WEF gender gap scores have a lower self-reported preference for math, shedding some light on a potential mechanism underlying the math test score gap.

The evidence on the test score gender gap from the epidemiological approach is consistent with parents perpetuating gender gaps in math by transmitting cultural preferences or beliefs to children. A recent paper by Dossi et al. (2021) further highlights the specific role of the family in cultural transmission using data from public schools in Florida. The authors find that girls’ performance in math on the NLSY is correlated with son preference, which can be inferred when families’ fertility is larger when their firstborn is a girl rather than a boy.³¹ As in Farré and Vella (2013), they use the NLSY to show that biased gender role attitudes are correlated with girls’ lower performance in math but do not affect the performance of boys.

Persistence of Family Institutions & its Consequences. Family institutions are often persistent and, even if they have changed, their effect can be felt on modern economic outcomes. Below we discuss some examples of how ancestral family institutions affect outcomes such as conflict, religion, the demand for pension plans, and education although in some cases the family institution itself has changed.

As described above, Bahrami-Rad et al. (2021) provide evidence that variation in traditional family structure is predictive of modern family arrangements. Consistent with the findings of

³⁰Intriguingly, states with smaller gender gaps in math also have smaller gender gaps on verbal tests, on which girls typically outperform boys.

³¹Dahl and Moretti (2008) show that, in the US overall, there is son preference as evidenced by the greater fertility, on average, in families with a female firstborn child.

Bahrami-Rad et al. (2021), Bau (2021) shows that data on matrilocality (daughters co-reside with parents after marriage) and patrilocality from the *Ethnographic Atlas* are predictive of living arrangements within Indonesia and Ghana, using data from censuses and the Indonesia Family Life Survey. Building on these preliminary associations, in line with the epidemiological approach, Bau further shows that ethnicity-level traditions of matrilocality and patrilocality are similarly predictive of the practices of individuals who no longer live in their linguistic homelands, helping to isolate the intergenerationally transmitted effect of culture. Further pointing to the importance of the intergenerationally-transmitted, cultural component of family structure, Bau also shows that even within traditionally matrilocal groups in Indonesia, women who grew up in households that practiced matrilocality are much more likely to practice matrilocality themselves as adults.

Moscona et al. (2020) and Moscona et al. (2017) study the consequences of another persistent family structure, segmentary lineage. Moscona et al. (2020) define segmentary lineage as a family arrangement with unilineal descent – individuals trace their lineage through a single (male or female) line, often to a single mythological founder – and where segments form autonomous groups that are important for judicial, administrative, and/or political functions. The anthropological literature has argued that this family structure prolongs conflict by increasing the set of individuals who can be called upon to take up arms (e.g., Evans-Pritchard, 1940 and Lewis, 1999). Moscona et al. (2020) systematically test this hypothesis by combining data on armed conflict with ethnicity-level data on segmentary lineage from the *Ethnographic Survey of Africa* (Forde, 2017). They document a positive relationship between segmentary lineage and conflict across Africa and show that this relationship is robust to using a geographic regression discontinuity at the boundaries of ethnic homelands to instrument for segmentary lineage. Moreover, the effects on conflict they document are consistent with the mechanisms suggested by anthropologists: larger effects on large-scale conflicts, little effect on the onset of conflict but a prolonging effect on conflict duration, and a larger effect on retaliatory conflict. Moscona et al. (2017) further document that segmentary lineage has a negative differential effect on trust in non-relatives compared to trust in relatives in Afrobarometer data. Enke (2019) further examines the effect of the closely-related concept of tight family ties, where individuals mainly interact with others who they identify as extended family members, on belief in a moralizing God and economic development.

Indeed, historical family arrangements can still have persistent effects on behavior today even if the family institutions themselves have disappeared. Todd (1983) classifies European families as traditionally having either egalitarian (all children inherit equally regardless of gender) or non-egalitarian inheritance norms and being either authoritarian (children are subject to parents' authority even after marriage) or liberal. The combination of these two traits gives rise to four family types: (1) *absolute nuclear family* (independent living arrangements and lack of strict inheritance rules), (2) *egalitarian nuclear family* (independent living arrangements and egalitarian

inheritance), (3) *stem family* (cohabitation and non-egalitarian inheritance), and (4) *communitarian family* (cohabitation and equal inheritance). Using country-level information on family type and building on a specification from Galasso and Profeta (2018), Alesina and Giuliano (2014) show that these historical classifications relate to responses in the World Values Survey, with individuals from countries with communitarian and authoritarian families reporting higher measures of duty toward their parents. Intriguingly, Galasso and Profeta (2018) argue that these historical family types also affect which pension institutions countries adopt. In egalitarian societies, a larger share of children are responsible for supporting parents. From a political economy perspective, this may lead to the adoption of more generous pension plans, since more individuals have an interest in the state providing old age support. Evidence from cross-country regressions is consistent with this argument. Furthermore, using the epidemiological approach, Galasso and Profeta (2018) show that individuals from cultures with egalitarian inheritance are more likely to support generous pension systems.

Related to the above, Bertocchi and Bozzano (2015) use data from Italy, where there is within-country variation in traditional family types, to investigate the effect of these family types on gender gaps in education. In historical data from 1861-1901, they find that the female-male enrollment ratio is higher in areas where nuclear families (relative to complex families) and egalitarian inheritance (rather than primogeniture) are the traditional norms. By the contemporary period, the nuclear family tradition is no longer predictive of female enrollment, but the association with egalitarian inheritance is more persistent.

4 How Does Culture Affect Family Decision-Making?

Whereas one strand of the literature focuses on cultural transmission – and the role of the family in reinforcing persistence – another strand takes cultural practices as given and examines how they affect decision-making within families. We describe several important examples from this literature below. We further note that the effects of culture often cannot be considered in isolation from the institutional and economic environment.

An important theme recurs in several papers described in this section. They show that failing to take culture (and family institutions) into account when analyzing or designing policies can lead to misleading conclusions and unintended consequences. As documented in Section 2, many of the cultural traditions we discuss are widespread and affect substantial fractions of the global population.

Marriage Payments. Payments at the time of marriage are common throughout the world and can typically be classified as *dowry* or *bride price* (Anderson, 2007). Bride price payments are widespread in Sub-Saharan Africa, while dowry is still widely practiced in South Asia, and particularly in India. Dowries are payments from the family of the bride to the family of the groom

at the time of marriage, whereas bride prices are payments from the groom to the parents of the bride. Historically, dowry payments served as a bequest to the bride (Goody and Tambiah, 1973; Botticini and Siow, 2003), but in modern India dowry appears to function at least partially as a groom price, with the groom and his parents claiming a substantial portion of the dowry (Bloch and Rao, 2002; Anderson and Bidner, 2015). Thus, in modern contexts, both dowry and bride price are often modeled as marriage market clearing transfers (Becker, 1981). For both dowry and bride price, payments can be large and consequently play an important role in family decision-making. For example, Rao (1993) document dowry payments on the order of six times average annual earnings in South Asia.

Ashraf et al. (2020) study the effect of bride price payments on parents' human capital investments in daughters. The authors hypothesize that bride price allows imperfectly altruistic parents to capture the marriage market returns to education, incentivizing them to educate their daughters. Indeed, they show that greater female education is associated with higher bride price payments. Moreover, when the authors compare ethnic groups that traditionally practiced bride price to those who did not, they find that daughters from the bride price ethnic groups were more likely to be enrolled in school in both Indonesia and Zambia. Importantly, when they study the effect of large-scale school construction programs in both countries, they find that education increases more among women from ethnic groups with bride price traditions relative to women from groups without these traditions. They conclude that bride price traditions incentivize parents to invest in daughters' education.

Gaspart and Platteau (2010) focus on a different (but widespread) aspect of bride price payments – the fact that a woman must return the bride price payment to the groom in the event of a divorce. Thus, large bride prices may force women to stay in marriages that they would otherwise leave by reducing a woman's outside option from separating. The authors endogenize bride prices in a sequential game and show that their model produces the counterintuitive prediction that divorce will be *negatively* related to bride price payments. This is because altruistic parents will endogenously ask for smaller bride prices when the probability of divorce is higher. This prediction is borne out in data the authors collected from rural Senegal.

Corno et al. (2020) compare how droughts interact with bride price and dowry in Sub-Saharan Africa and India, focusing on patrilocal contexts, where daughters move away after marriage but sons remain with their parents.³² To smooth consumption, for constant levels of marriage transfers, parents of girls would prefer earlier marriage in response to a drought in areas with bride price and later marriage in areas with dowry. Given that droughts affect incomes on both sides of the marriage market, however, understanding their effect requires an equilibrium model. The authors present such a model with two periods for marriage (childhood and adulthood) and endogenous

³²They use the interchangeable term “virilocal.”

marriage transfers. In the model, though droughts reduce marriage transfers, patrilocality renders the parents of sons in the first period less sensitive to the changes in the value of these transfers. This is because patrilocality means that parents will benefit from their sons' labor in the second period, reducing the marginal value of future marriage transfers. As a result, droughts are predicted to increase early marriage in areas with bride price, and reduce it in areas with dowry. The authors show that this is indeed the case in the data. Droughts *increase* the likelihood of child marriage in Sub-Saharan Africa where bride price is common and *decrease* the likelihood of child marriage in India, where dowry is prevalent. Early marriage in turn leads to increased early fertility, particularly in Sub-Saharan Africa.

While the literature on the effects of bride price is still relatively small, an older economics literature has focused on dowry. Bloch and Rao (2002) model the occurrence of intimate partner violence in India in the presence of dowry. In their model, domestic violence allows men to signal that they are dissatisfied with the marriage, which allows them to extract further transfers from the bride's family. The bride's family is willing to make more transfers in order to avoid separation for their daughter, which is assumed to yield her a very low payoff. Thus, high divorce stigma is important for understanding the effects of dowry in India. Higher dowry payments reduce the incidence of domestic violence by decreasing the value of extracting additional transfers from the perspective of the husband, given concavity in his utility function, and increasing the cost of additional transfers from the perspective of the wife's family (via concavity again). The authors use data they collected from the potter subcaste in three villages in India to test this hypothesis and find that the level of dowry payment is negatively related to intimate partner violence.

Closely related to Bloch and Rao (2002), Calvi et al. (2021) document the negative consequences of strengthening India's anti-dowry law, including a decline in female decision-making power, an increase in domestic violence, and an increase in separations. Furthermore, the authors show that the negative effects of strengthening the law are mitigated in areas where the stigma surrounding separations is low. In a related paper, Calvi and Keskar (2021) test whether higher dowries lead more resources to be allocated to women. They combine a structural model of intrahousehold allocation with two instruments: (1) the leave-one-out average of dowry payments by state and year of marriage in the Rural Economic and Demographic Survey, which measures prevalent dowry norms at the time of marriage, and (2) gold prices in the year of marriage. The latter instrument affects the value of dowry as it is traditionally paid in gold. Across these different specifications, the authors find that a higher dowry leads women to have a higher share of resources in the household and to be less likely to be living in poverty within the household.

Hypothesizing that increases in the price of gold exacerbate underlying son preference by making dowries more expensive, Bhalotra et al. (2020a) study the effect of exogenous changes in dowry on female neonatal deaths. Like Calvi and Keskar (2021), the authors exploit the fact that much

of dowry is paid in gold, and fluctuations in the price of gold have strong effects on dowry values. Studying second-born children, the authors find that prior to 1985, when sex selection technologies were not widely available, positive shocks to the price of gold increased neonatal mortality for girls but not boys and also led girls to be shorter. After 1985, positive shocks to the price of gold led to more male-skewed sex ratios, consistent with parents practicing sex-selective abortion.³³ The authors show that the results are driven by those parents whose first child was a girl, showing that a second girl is viewed as undesirable by some parents. Furthermore, distinguishing between parents who are Hindu versus Muslim or Christian (who have a weaker tradition of dowry), the results are driven by the Hindu parents.

Son Preference. A variety of cultural practices and attitudes, in addition to dowry, can contribute to observed male-biased behavior in both high and low-income countries. These practices include patrilocality, patrilineality (inheritance and lineage are passed through sons), concerns about female purity, and the importance of sons for performing religious rites at parents' funerals (Jayachandran, 2015; Ebenstein and Leung, 2010; Bhalotra et al., 2019a). Moreover, cultural traditions may lead birth order, in addition to gender, to be an important determinant of parental investment if firstborn sons are more likely to inherit or care for parents in their old age. In its most extreme form, son preference can lead to sex-selective abortion, female infanticide and abandonment, or the relative neglect of daughters, all of which may contribute to skewed male-to-female sex ratios throughout South Asia, West Asia, and China (Sen, 1990; Yi et al., 1993; Das Gupta, 2005; Bhalotra and Cochrane, 2010; Lin et al., 2014). Furthermore, the effects of son preference on sex ratios are amplified by the availability of new technologies. Chen et al. (2013) estimate that ultrasound technology, which enables sex-selective abortion, explains 40-50% of the increase in the male-female imbalance at birth in China during the 1980s.

Bhalotra et al. (2019a) provide evidence that (male) inheritance is a driver of son preference in India. The authors study the effects of a land reform in West Bengal that both increased land productivity and assured inheritance rights. They argue that, since sons farm and inherit their parents' land (and presumably will support parents in their old age), strengthening land rights increases the value of sons. They test this hypothesis using multiple pieces of variation, including variation in the timing and location of land reforms, as well as variation in both child gender and gender of first birth. They find that the reform increased male child survival rates in families without a firstborn son relative to other families.

Bhalotra et al. (2020b) show that son preference combined with patrilocality can lead reforms that favor women to have perverse effects. In India, family-owned land was inherited by a family's

³³Since the price of gold is a random walk, the rational expectation is the static expectation, and the distribution of the variable exhibits a variance proportional to time. Given that parents begin to save for a girl's dowry at an early age, the variance of the price will be large over an average period of 20 years prior to marriage. If parents are risk averse, this too will negatively affect their behavior.

sons until laws introduced at the state level granted women equal inheritance rights. These reforms started in 1976 in the state of Kerala and over time went on to include more states, culminating in 2005 with the federal government reforming the constitution and thereby effectively reforming all states. The authors study the sex ratio using variation in the timing of reform across states and comparing the probability that the second child is a girl relative to a boy as a function of the sex of the first child. They distinguish between before and after the introduction of ultrasound technology, as the effect on the sex ratio should be particularly large once this new technology allows the sex to be determined early in pregnancy. The idea is that parents are more likely to have an abortion of a female fetus in a second pregnancy if their firstborn is a girl rather than a boy. The reform of property rights makes having a girl even more onerous than before as it further dilutes the share of land that would go to boys after the parents' deaths which may increase incentive problem if sons help support their parents. The authors find that the inheritance reforms led families with a firstborn daughter to be around 4 percentage points less likely to have a girl as a second child, but it did not reduce the probability of a son residing with his parents.

Jayachandran (2017) notes that many of the drivers of son preference described above may lead parents to want at least one or two sons but not necessarily greater numbers of boys past that. As a result, when parents can practice sex selection, declining fertility rates can lead to more male-biased sex ratios, even when parents' preference for sons at any given fertility rate is not changing. Using survey data from India, Jayachandran (2017) shows that parents' self-reported desired sex-ratios (conditional on fertility level) for their children are indeed more male-biased at lower fertility levels. Based on the data, declines in fertility rates in India paired with sex selection can explain 30-40% of the recent increase in gender bias in India's sex ratios.

Ebenstein (2010) observes a similar phenomenon in China under the one child policy, where sex selective abortion and female infanticide led to 9.3 million missing girls aged 0-18 in the 2000 census. Just as declining fertility exacerbates skewed sex-ratios in India, Ebenstein (2010) finds that the one child policy – which penalizes high fertility – exacerbates them in China. Ebenstein (2010) shows that province-year-ethnicity level variation in fines on excess fertility is positively related to sex ratios after the implementation of the one child policy but not before. Almond et al. (2019) further show that when incomes in China increased due to land reforms, son preference combined with the one child policy led to even more skewed sex-ratios. The authors suggest that this is because using a ultrasound to sex-select is a costly normal good; thus, higher incomes led parents to sex-select more.

Qian (2008) explores how a different set of post-Mao reforms affected sex ratios in China. She compares the effects of reforms that increased orchard production (which favors male labor) and tea production (which favors female labor) in different areas. Using a difference-in-differences strategy, as well as an instrumental variable based on agricultural suitability for tea, she finds

that increased tea production reduces male-female sex ratios, while increased orchard production increases them. Since the period she studies mainly pre-dates the availability of sex-selective abortion, she infers this is due to changes in early female mortality. Intriguingly, increased tea production also increases education for both daughters and sons, while increased orchard production decreases education for daughters and leaves sons' education unchanged. Qian (2008) concludes that this is evidence that tea production doesn't simply increase parents' incentives to have daughters but also, by increasing females' income, increases women's bargaining power within the household.

Sex selection also occurs in high-income countries. Almond et al. (2013) show that sex selection persists among Asian immigrants to Canada. Specifically, the authors show that Asian immigrants who previously had 1 or 2 daughters are more likely to have a son, and this effect appears for second as well as first generation immigrants. Similarly, Abrevaya (2009) finds evidence of sex selection among Asian immigrants to the United States. In particular, she shows that 3rd and 4th births are much more likely to be boys among Indian and Chinese immigrants *after* the technology for sex selective abortion became widely available, but other groups do not display the same pattern.

Parents' desire to reach their ideal number of sons in India can also affect mothers and daughters indirectly by reducing birth spacing. Jayachandran and Kuziemko (2011) show that, since breastfeeding has contraceptive properties, mothers will stop breastfeeding daughters more quickly if they have yet to reach their ideal number of sons. Consistent with this finding, Milazzo (2018) finds that having a first born daughter leads to higher fertility and shorter birth spacing, ultimately resulting in a higher risk of anemia and lower chance of survival for mothers.

Son preference does not just affect sex selection and fertility behavior. It can also affect human capital investment and family structure. Several of the papers on the test score gap we discussed in Section 3 cite son preference as a potential driver of the gap. Jayachandran and Pande (2017) also use son preference to help explain the striking differences in stunting between India and Sub-Saharan Africa. India outperforms Sub-Saharan Africa on most health and development indicators, but at a given level of income, Indians are much shorter than Sub-Saharan Africans. Consistent with the authors' argument that a strong preference for oldest sons in Hindu culture also explains a large portion of the average height/stunting gap between Indian and African children, the height/stunting gradients over birth order are substantially steeper in India than in the nearby Muslim countries of Pakistan and Bangladesh, than in Sub-Saharan Africa, and than in traditionally matrilineal areas of India. Strikingly, pre-natal investments are higher for second-born female children with no older brother *before* gender is observed, but post-natal investments *after* gender is observed are lower. Anukriti et al. (2021) further illustrate how son preference affects human capital investment in daughters in India, and how this interacts with the introduction of ultrasound technologies. The authors find that these technologies actually differentially increase

the survival of and investment in girls born in households with firstborn daughters, since girls who *are born* to these households after the introduction of the technology are more likely to be wanted.

Turning to the effects of son preference on family structure, Dahl and Moretti (2008) use US data to estimate the effect of having a firstborn daughter on whether the mother is married, whether she is divorced, and, if divorced, whether she or the father have custody. Firstborn daughters increase the probability of the mother never marrying and, if married, of divorcing. They reduce the probability of the father having custody. Additionally, in cases where sex was known due to an ultrasound, the authors find that the mother of a firstborn daughter is less likely to be married (suggesting that the probability of a “shot gun marriage” fell). As a result of these effects, firstborn daughters (and their siblings) are more likely to grow up in households without a father and grow up in settings with fewer financial resources. Dahl and Moretti (2008) cite several pieces of evidence suggesting that this effect is due to gender bias. Mothers in the United States have higher fertility after a firstborn daughter, indicating that parents have more children in an attempt to have a son. This pattern is inconsistent with the alternative explanation for the results that daughters are more expensive to raise. In addition, Gallup polling indicates that men – but not women – report a strong preference for having sons rather than daughters on average.

Polygyny. As documented in Section 2, polygyny is still common in much of Sub-Saharan Africa. Tertilt (2005) shows that polygynist societies have higher fertility rates and lower national formal savings rates than monogamous societies. She argues that these stylized facts are consistent with polygyny leading to a shortage of women and hence positive bride prices. This incentivizes men to have multiple wives to increase the number of children they can father, with the goal of having more daughters and receiving their bride prices, rather than investing in capital. In this context, bride prices encourage fertility even though they make marriage more costly for sons because parents receive the bride price for their daughters but do not help their sons pay the bride price. Rossi (2019) provides another explanation for high fertility rates in polygynist societies. She finds evidence that co-wives compete with one another for their share of the husband’s resources by having more children.

Matrilineality. Matrilineality, in which children traditionally trace their lineage through their mothers and men often inherit from their maternal uncles, also affects household decision-making. Traditional matrilineality is common among societies from Africa’s South-Central “matrilineal belt,” though matrilineality also occurs outside of Africa. La Ferrara and Milazzo (2017) hypothesize that since matrilineal parents traditionally cannot leave property to their sons, they substitute by investing more in sons’ human capital. They study the differential effects on traditionally matrilineal versus non-matrilineal ethnic groups of a reform in Ghana that defined inheritance rights and ensured property was left to sons. Consistent with the idea that, pre-reform, matrilineal par-

ents were substituting human capital investment for inheritance, after the reform, human capital investment fell differentially for matrilineal sons.

Lowes (2017) studies the effect of matrilineality on household cooperation. In the context of the Democratic Republic of Congo, she quantitatively tests a hypothesis from the anthropological literature that spouses in matrilineal households will be less cooperative because they belong to different lineage groups (e.g., Radcliffe-Brown and Forde, 1950).³⁴ To measure the relationship between matrilineal traditions and cooperation, she invited couples from a large city in the DRC, some of whom are from matrilineal groups while others are not, to take part in a lab-in-the-field public goods game. She finds that matrilineal spouses behave less cooperatively in the game, especially when they can hide their endowment, but that matrilineal individuals do not behave less cooperatively when playing with a non-spouse. She also finds that matrilineal individuals exhibit a higher biological stress response when playing the game with a spouse and that the results are robust to using a geographic discontinuity strategy (based on the location of participants' ancestral villages) to instrument for matrilineality. Interestingly, reduced cooperation may be due to the greater empowerment of matrilineal wives, who she finds have relatively more decision-making power in the household in the Demographic and Health Surveys. Despite the evidence suggesting that matrilineal spouses are less cooperative, matrilineal children receive greater educational investment, perhaps in line with the greater empowerment of matrilineal mothers.

Finally, Gneezy et al. (2009) study the gender gap in willingness to engage in competition between two societies, the Khasi (a matrilineal society in India) and the Maasai (a patriarchal society in Tanzania). The goal of this comparison is to show that cultural settings exist that reverse the usual male-female gender gap in willingness to engage in competition. Khasi women always live in households in which women (themselves or their mothers) have authority over most household decisions, whereas the Khasi husband "dwells in a household in which he has no authority or property, is expected to work for the gain of his wife's family, and has no social roles deemed important."³⁵ This implies that Khasi families have the incentive to raise daughters with characteristics that primarily benefit the household whereas a family in a patriarchal society, on the other hand, have an incentive to raise daughters whose characteristics are most appreciated by others outside the household. In Khasi society, a girl with a more competitive attitude can increase family wealth. In the Maasai society, on the other hand, a man's wife (often plural) and children are thought of as property, and women receive less education than men.³⁶ Using a task that participants have no experience with in either culture (tossing a tennis ball into a basket placed 3 meters

³⁴In patrilineal societies, a wife typically joins her husband's lineage group at the time of marriage, and children belong to the husband's lineage group.

³⁵See p. 1640-41 in Gneezy et al. (2009).

³⁶In both societies, however, many important social positions such as politics, defence, justice, and priesthood are the exclusive province of men. See Gneezy et al. (2009).

away), the authors show that the typical male-female gender gap in opting into a payment scheme that rewards out-performing an anonymous competitor arises among the patriarchal Maasai in Tanzania, but this gap is reversed among the matrilineal Khasi of India. Furthermore, the Khasi women are at least as competitive as the Maasai men. Their paper demonstrates that the degree of competitiveness by gender may well be a function of the cultural attitudes of the family.

Intimate Partner Violence. Intimate partner violence (IPV) is one of the more disturbing ways for men (overwhelmingly) to exercise power over their partner to influence outcomes, and it is a widespread problem throughout the world. In developed countries such as the US, surveys show that 37% of women say that they have experienced IPV over their lifetimes, and it is even more prevalent in developing countries.³⁷ In addition to the immediate negative consequences of IPV, women affected by IPV are more likely to develop mental health problems, alcohol and substance abuse, unintended pregnancies, and employment difficulties.³⁸ Children also suffer negative consequences: they tend to have lower birth weights and impose negative externalities on their peers in school.³⁹

Cultural attitudes towards IPV vary significantly. As shown in Figure 5, the attitudes of women towards IPV are positively correlated with its incidence in that country. The relationship between culture and IPV is studied in González and Rodríguez-Planas (2020) following the epidemiological approach. Using data from a 2012 EU survey on violence against women, the authors show that first and second generation immigrant women from countries with lower gender equality as measured by the World Economic Forum's gender gap index (GGI) suffer higher rates of IPV in the country in which they are living.⁴⁰ This holds even after controlling for a set of individual and partner characteristics (e.g. education) as well as a country fixed effect.⁴¹ In the absence of data on country of ancestry of the partner, the authors cannot determine how the partner's culture (country of ancestry) may matter. Interestingly, upon examining the subindices that make up the GGI, the authors find that the index that measures economic participation and opportunity has the greatest impact in decreasing the incidence and frequency of IPV. Note that this approach allows one to be fairly certain that the causality is through cultural beliefs rather than institutional or economic factors in the country of ancestry, although confining the sample to only second-generation immigrants (i.e., those born in the host country) would strengthen the analysis.⁴²

³⁷See Doyle and Aizer (2018).

³⁸See Erten and Keskin (2018) for a review of the literature.

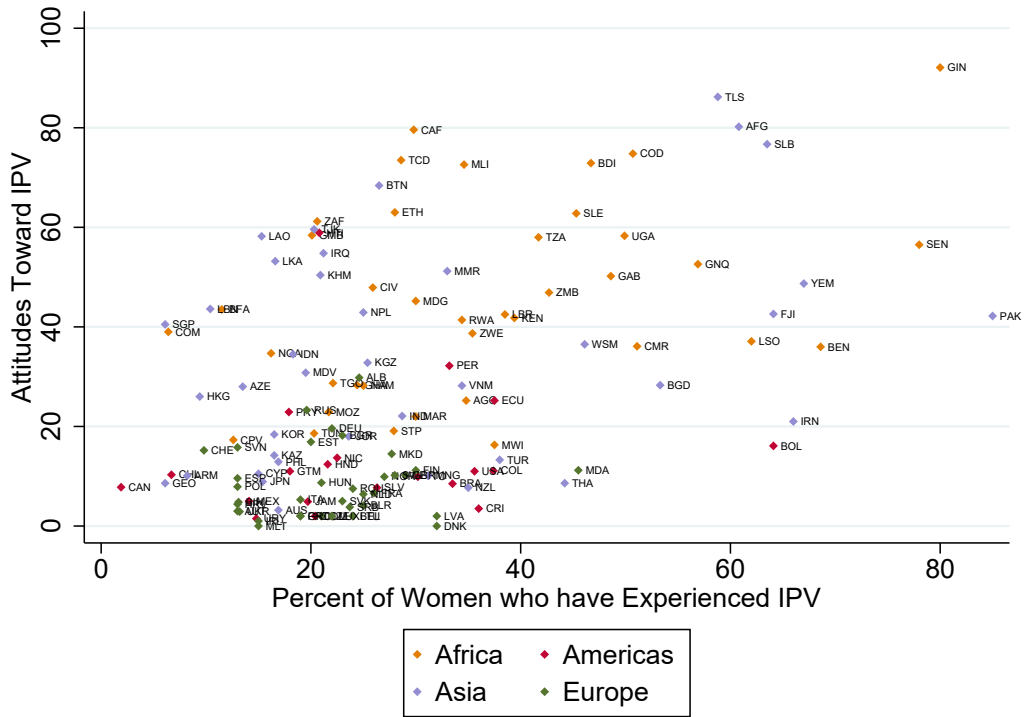
³⁹See Carrell and Hoekstra (2010).

⁴⁰The 2012 European Union Fundamental Rights Agency household survey on violence against women collected women's experiences of physical, sexual, and psychological violence by partners in 28 EU countries in face-to-face interviews. The GGI measures women's economic and political opportunities, education, and well-being, relative to those of men. It is a composite of four different indices and ranges from zero to one.

⁴¹Unfortunately, there is no finer geographic data on location.

⁴²The authors perform this exercise, but the sample size is smaller, and the estimate is not statistically significant at

Figure 5: Intimate Partner Violence



Note: X-axis is “Percentage of ever-partnered women who have ever experienced physical and/or sexual violence from an intimate partner.” Y-axis is “Attitudes toward violence: Percentage of women aged 15–49 years who consider a husband to be justified in hitting or beating his wife for at least one of the specified reasons, i.e., if his wife burns the food, argues with him, goes out without telling him, neglects the children or refuses sexual relations.” Source: OECD. Gender, Institutions, and Development Statistics (2019).

Other studies have examined the link between IPV and economic factors by studying how the former varies as a function of employment and cash transfers. Viewed through the lens of bargaining theory, the effect of female employment on IPV is ambiguous. On the one hand, greater employment for women may increase their bargaining power by improving their outside options. On the other hand, there are now more resources to be extracted and a man may use the threat and actual imposition of violence to do this, as long as the value of the outside option is still too low to be exercised.⁴³ Bhalotra et al. (2019b) examine how changes in unemployment at the macroeconomic level correlate with variation in intimate partner violence using DHS data for over 30 developing countries. Isolating the cyclical component of both female and male unemployment at the country level and including time and country fixed effects as well as a set of individual level controls, the authors show that an increase in cyclical male unemployment, controlling for female unemployment, is associated with significant increases in intimate partner violence. In contrast, an increase in the cyclical component of female unemployment is associated with reductions in the incidence of violence. The authors interpret this as male “backlash” in which greater job opportunities for women can threaten gender stereotypes or male identity leading to greater violence. The increase in IPV associated with greater male unemployment, on the other hand, may be a consequence of increased stress, which could occur for financial and/or cultural reasons since unemployment may threaten the identification of men as the breadwinner in the household. Interestingly, as noted by the the authors, the signs are reversed for the US (see Aizer (2010)) and the UK (see Anderberg et al. (2016)).⁴⁴ This may be due to the fact that women can more easily walk away from a marriage in those countries and, indeed, distinguishing between countries in which the access to divorce is unequal for women versus men, the authors show that these countries drive the result. What may matter but is not studied in this paper, however, is not unequal access to divorce but rather the absolute level of ease with which a woman can leave a marriage, which depends on cultural, economic, and legal factors.⁴⁵

A related literature examines the effect of cash transfers (almost always to women) on IPV. Baranov et al. (2021) contains an excellent review of this literature, including a meta-analysis of the findings.⁴⁶ The authors provide a household bargaining model which allows violence to affect directly a man’s utility (either positively or negatively), his relative status (positively), his bargaining

conventional levels and does not include individual or partner characteristics.

⁴³For example, Heath (2014) finds a positive correlation between IPV and employment in Bangladesh only for women with a low education.

⁴⁴Aizer (2010) studies demand-driven changes in female relative to male wages, and Anderberg et al. (2016) examines relative employment rates.

⁴⁵In the context of US, Stevenson and Wolfers (2006) exploit the time variation in the introduction of unilateral divorce laws across states to show that greater ease of divorce led to lower female suicide rates, decreased domestic violence (both male and female), and fewer female homicides.

⁴⁶See also Doyle and Aizer (2018).

power (positively), and the woman's productivity both inside and outside the house (negatively).⁴⁷ A cash transfer to the woman increases her bargaining power and decreases the man's status. The effects of a cash transfer hence are very complex, as although they may increase a woman's threat point in a bargaining context, the extent that they do so depends, as with employment, on her ability to walk away from the relationship. Thus, violence may decrease as a result of a woman's greater bargaining power or via lower household financial stress or it may increase for instrumental reasons (to extract resources), or to increase the man's status. The relative magnitudes of these effects determine the final outcome. Their meta-analysis of the literature concludes that, on average, cash transfers seem to decrease IPV. To draw a conclusion about the importance of cultural relative to purely economic factors (bargaining threat point) is not simple, however, and a cash transfer may have very different effects on status or challenges to the male image as the breadwinner than female employment. It would be very interesting to see further work in this area that directly compares cash transfers to employment opportunities for women.

Several other papers (in addition to those on dowry discussed in Section 4) document the role of cultural factors in IPV. Alesina et al. (forthcoming) show that ancestral traits of different African ethnic groups are correlated with IPV. In line with the argument from Boserup (2007) discussed previously, in ethnic groups that originally used the plough, as well as those based on fishing and animal husbandry, women had a less active role in the economy. The authors tend to find a positive relationship between IPV and ancestral production modes in which women played a less active role.

Tur-Prats (2019) analyzes the relationship between IPV and family types in Spain. The paper distinguishes between patrilineal "stem" families in which one son inherits all the land and stays in the parental home with his family and "nuclear" families in which all children receive a share of the inheritance when they leave the parental home to start their own households (see discussion of family classifications in Section 3). The hypothesis explored is that IPV should be lower in places with a historical legacy of stem families, as the presence of a mother-in-law allowed the wife to contribute more to non-domestic work. Tur-Prats (2019) uses the 1860 Spanish census to compute the average number of married and widowed women per household at the province level and instruments for family type using the establishment of different inheritance laws in different areas of Spain. These laws are taken as exogenous, as they were established many centuries ago in response to the different strengths of the nobility in the West of the country relative to those in the East. Using a host of individual controls, as well as historical and contemporary controls for development, the author finds that territories where the stem family was more prevalent in the past exhibit lower IPV rates today. Using the World Value Survey to study gender attitudes, the paper also finds that individuals who currently live in places that were historically associated with

⁴⁷See Eswaran and Malhotra (2011) and Ramos (2016) for related models.

stem families have more gender-equal attitudes. This is indicative of the cultural transmission of attitudes towards domestic violence as the family type in contemporary Spain is overwhelmingly nuclear.

5 The Family and Cultural Change

Although the empirical literature on culture and the family has mostly focused on showing that culture has persistent effects, there is also evidence that culture can rapidly change, even within a single generation. Why does culture change? In general, starting from a steady state, cultural change requires a “shock” to technology, institutions, or to knowledge/information that affects beliefs and/or changes incentives to behave in norm-conforming ways. In this section, we examine how the portrayal of families by the media and the salience of particular issues can lead to cultural change and affect economic outcomes. New technologies that favor the labor of one sex more the other are shown to have long-run effects on gender attitudes and women’s work. Furthermore, we discuss how new policies affect the persistence of historical family institutions and important outcomes such as investment in children’s human capital. Lastly, persistently skewed sex ratios are shown to yield significant differences in gender attitudes and women’s labor force participation.

Learning. Culture affects attitudes and beliefs, which in turn affect decision-making. Role models and/or the portrayal of alternative beliefs can change cultural beliefs. This is illustrated in the papers by La Ferrara et al. (2012) and Jensen and Oster (2009), which study the effect on attitudes and other outcomes of the introduction of certain television programs in Brazil and India, respectively.

In Brazil, the vast majority of the population watches the 8pm soap opera aired by Rede Globo, which has had a virtual monopoly over their production. Over the period studied by La Ferrara et al. (2012), over 70% of the female characters portrayed had no children, and some 20% of them had only one; the average number of children for the population was substantially higher though declining over this time period. The authors hypothesize that exposure to these different family models could affect fertility and examine this thesis by using variation in the timing of the availability of Globo’s signal across geographic areas. They show that, *ceteris paribus*, Globo coverage is associated with a decrease in fertility, especially for households with lower education.

In a related vein, Jensen and Oster (2009) use a three-year, individual-level panel to examine the effect of the introduction of cable television on women’s status in rural India. Cable television offers viewers different programs than those available on government channels. The most popular Indian serials take place in urban settings, featuring women with more progressive attitudes than are prevalent in rural areas. The authors find that those villages that saw cable television introduced in the three-year period studied experienced significant decreases in the reported acceptability of domestic violence towards women and in son preference, as well as increases in women’s au-

tonomy and decreases in fertility. The findings in the two papers show that attitudes can change quickly when individuals are exposed to a different set of social norms.

Learning may also play an important role in explaining changes in female labor force participation (LFP). Taking inspiration from the “S-shaped” curve that characterizes the evolution of married women’s labor force participation in countries with lengthy longitudinal data (e.g., the US, England, and France), Fernández (2013) develops a model of intergenerational learning in which individuals learn from their parents and from observing other people’s work decisions. In the model, women are unsure about the true cost (to a woman’s marriage, to her psyche, or to her children’s outcomes) of working outside the home, an issue which has long been a source of private and social anxiety. Information about the cost of working is available both from private (noisy) signals, which are then passed on to the woman’s children, and from observing an (again noisy) signal of the labor force participation of the prior generation. The latter endogenously reflects the beliefs of the prior generation as well as the economic return to working. The model generically produces an S-shape in which, if society starts out believing in general that it is bad for women to work outside the home, then women’s labor force participation is low and beliefs change only slowly at first. Beliefs take a long time to change when few women work because of the noise in the public signal which makes it hard to distinguish between the LFP that would be generated if women had positive signals on average relative to negative ones. At some point, when a large enough proportion of women are working, beliefs change rapidly, as does labor force participation. Once beliefs place a large enough probability on the possibility that working is not too costly, both learning and changes in work behavior slow down, producing altogether the S-shaped curve. An interesting implication of the model is that policies that push against prevailing cultural beliefs can have positive welfare implications even if the government has the same social beliefs as everyone else. For example, subsidizing female wages when their labor force participation is low can increase welfare not because women earn more, but rather because by encouraging more women to work, intergenerational learning is sped up because it is easier to distinguish the aggregate signal from the noise. The author uses the model as a lens to study 120 years of married women’s labor force participation in the US. Calibrating the model to data moments in the 1990s and 2000s for married women, including the propensity for a woman to work as a function of whether her mother worked, and feeding in the time series of wage distributions for men and women, the author shows that the model does a good job of replicating 120 years of married women’s labor force participation. Women’s labor force participation starts out very low in the 1880s and increases very slowly until the mid 19th century, accelerating markedly between 1970 and 1990 and then flattening out. Moreover, making use of Roper poll data available from 1936 onward regarding the “appropriateness” of a married woman working if she has a husband capable of supporting her, Fernández (2013) shows that the evolution of the model’s median belief regarding the cost of working does

a good job of tracking this time series as well. Culture (social beliefs) and outcomes (LFP) move together over time.

Cultural change can also occur when people rethink their positions on social issues. Fernández et al. (2021) hypothesize that this is what occurred with attitudes towards same-sex relationships, which underwent remarkably rapid change in a few decades. Whereas in 1973 80% of the US population thought that same-sex relationships were “always wrong” or “almost always wrong,” by 2016 this proportion fell to 41%.⁴⁸ In many countries, gay couples can now legally marry, have children, and enjoy all the rights previously restricted to opposite-sex couples. This would have been inconceivable a scant thirty years ago. Why did this change occur? In the context of the US, Fernández et al. (2021) show that that after twenty years of very stable negative attitudes towards same-sex relationships, opinions turned markedly more favorable following the 1992 presidential election. Between 1991 and 1993, the percentage who answered the GSS poll question “Is it wrong for same-sex adults to have sexual relations?” with either “not wrong at all,” or “sometimes wrong,” instead of “almost always wrong” and “always wrong” jumped by around 10 percentage points.⁴⁹ The election saw, for the first time, the two main political parties adopt explicitly opposing stands with respect to gay people serving openly in the military, and the debate over this policy continued during most of 1993. This was accompanied by an unprecedented level of media attention on gay-related concerns over the same period. The authors hypothesize that the debate and accompanying salience of gay-related concerns led individuals to debate and reconsider their positions. In keeping with contact theory (Allport et al., 1954) or simply greater local salience of an issue, they show that opinion change was greatest in those areas (states and counties) with a larger gay population as measured in a variety of ways. This paper is suggestive of the fact that people learn or rethink their beliefs when an issue becomes more salient and they are repeatedly exposed to debate on an issue.⁵⁰

Learning/new information can also change attitudes if individuals learn about the beliefs of others. How people behave is influenced not only by their private beliefs but by how they think their behavior will be judged by others. Culture is a social phenomenon and is maintained not only via beliefs but also via social rewards and punishments. An individual may be reluctant to change their actions, e.g., work as a married woman with children, if others would believe that this behavior makes her a bad mother and ostracize her. An interesting confirmation of the importance of second-order beliefs is provided in a field experiment by Bursztyn et al. (2020) in the context of

⁴⁸Calculated using General Social Survey (GSS) poll data.

⁴⁹The authors show that there was a clear structural break in the evolution of attitudes in 1992.

⁵⁰In a related paper, Fernández and Parsa (forthcoming) show that the change in attitudes towards same-sex relationships did not occur along partisan lines and hence cannot be ascribed to individuals taking the cues from party leaders. The opinion gap between self-identified Democrats and Republicans widened in the mid to late 1980s and did not increase during 1991-93.

contemporary Saudi Arabia. In that country, few women work outside the home, and the custom of male guardianship implies that a husband's approval is needed for a wife to work. Recruiting samples of 30 young, college-educated married men by neighborhood in Riyadh, the authors show that men's individual opinions about their wives working outside the home are positive, but that their incentivized guesses about their neighbors' opinions are on average too negative. Providing information about the neighborhood average approval of wives working, randomized at the individual level, induces men to sign up their wives to a mobile phone job-matching service rather than choose a \$5 amazon gift card. Hence, in the context of a country in which opinions are evolving rapidly, providing individuals with more accurate information about others' beliefs affects their behavior towards allowing their wife working outside the home.

Policy Changes. In addition to, and as a complement to learning, changes in the environment resulting from the introduction of new policies can change incentives and also lead to changes in attitudes and practices over time. Several papers demonstrate this. Bastian (2020) studies the effect of the introduction of the Earned Income Tax Credit (EITC) in 1975 on the labor supply of women with children, particularly unmarried women. Using cross-state demographic heterogeneity to predict the size of the response, the author shows that attitudes towards married women working changed (positively) the most in the states that were predicted to have the largest labor supply response.

Campa and Serafinelli (2019) study the effects of State Socialism – a very large-scale policy change – on gender attitudes, exploiting the partition of East and West Germany. They find that East German women place greater importance on career success and that both women and men alike are less likely to hold traditional gender attitudes. In line with the findings of Bastian (2020), the authors find that the changes in attitudes are greater in areas with greater growth in female employment.

Bau (2021) directly studies the effect of policy on two cultural traditions – matrilocality and patrilocality – that determine co-residence practices. Under matrilocality daughters reside with parents after marriage and care for them in their old age, whereas under patrilocality the sons stay with their parents. These traditions are particularly valuable for studying cultural change, since co-residence patterns can be observed to some extent in most household survey datasets, including censuses. Bau hypothesizes that these traditions both provide parents with old age support and mitigate incomplete contracting problems in human capital investment by incentivizing parents to invest in the children who will remain in the household as adults. The introduction of pension plans should decrease the value of transmitting cultural traditions of matrilocality/patrilocality to the next generation, reducing these practices among those who were children when the plans were introduced. Consequently, parents should also have less incentive to invest in the education of the children who now no longer care for them in their old age. Bau tests these predictions using

triple-differences regressions that exploit ethnicity-level variation in cultural traditions from the *Ethnographic Atlas*, geographic variation in pension plan exposure, and cohort-level variation in exposure to pension policies. Consistent with the predictions, the introduction of a pension plan in Indonesia reduced both traditionally matrilineal women's educational attainment and the probability that they resided with their parents after marriage. The results are symmetric for males from traditionally patrilineal ethnic groups in Ghana. Thus, a specific government policy can lead to culture change within a single generation.

In another example of a policy leading to cultural change with effects on the family, Beaman et al. (2009) exploit random assignment of gender quotas for leadership positions on village councils in West Bengal which started in 1998. They show that after ten years of quotas, women are more likely to stand for, and win, elected positions in councils required to have a female chief councilor in the previous two elections. Furthermore, they show that changed attitudes are a likely channel, as prior exposure to a female chief councilor improves perceptions of female leaders' effectiveness and weakens stereotypes about gender roles in the public and domestic spheres. At the level of family, evidence of cultural change in the form of changed aspirations for daughters is provided in the same setting by Beaman et al. (2012). Using surveys of adolescents and their parents collected in 2006-2007, parents in twice-treated villages (i.e., who had quotas for two electoral periods) had higher aspirations for their daughters (relative to those in non-treated villages), closing the gender gap in aspirations for sons versus daughters by 20%. These aspirations include the desire for their child to have a high-education job, to at least graduate from high school, and to marry after the age of eighteen. The aspirations of the adolescents themselves were also changed, with girls becoming more ambitious than before (using the same set of questions asked of parents), closing a similar percentage of the gender gap in aspirations. Both for parents and their adolescent children, the changes were driven by greater aspirations for/by girls, without changing those of boys. In terms of outcomes, the gender gap in educational outcomes was completely erased in twice-treated villages (in untreated villages, boys were 6% more likely to attend school and had a higher likelihood of being able to read and write). As before, these gains did not come as expense of boys. The authors also present suggestive evidence that the gains to girls are driven by changed parental and adolescent aspirations, and show that for young adult women (age 16 to 30) there does not appear to be changes in their careers, education, or labor market outcomes.

Technological Change. Changes in technology can also change incentives and ultimately persistently change culture. One example is Fernández-Villaverde et al. (2014), which develops a model in which contraceptive technology (in particular the probability that contraception does not fail) improves over time and parents make a costly effort to socialize their daughter to feel shame if she has a child out-of-wedlock. An out-of-wedlock child reduces the daughter's economic prospects, which is what parents care about for their offspring. The daughter cares about her economic

prospects as well, but in addition enjoys sex. The authors calibrate the steady-state of the model to various moments of the data for the US in 2000 and show how technological improvements in contraception reduce the level of effort parents expend on inculcating their children with higher levels of shame and increase the prevalence of premarital sex.

Xue (2020) provides another intriguing example of technology changing culture. Xue studies the persistent effects of the introduction of new technology in China in 1300, which made cotton weaving much more productive. After this introduction, cotton weaving became a major Chinese industry for hundreds of years, and due to both historical gender roles and the fact that weaving took place in the household, women dominated this industry. Xue suggests that this long-lasting increase in women's economic value changed gender norms in affected areas, with effects that persisted even after the cotton industry in China collapsed in the mid 19th Century (so that weaving no longer directly affected women's economic value). Consistent with this argument, she shows that modern-day sex ratios are more gender balanced in places where there was more weaving historically. This relationship is robust to instrumenting for weaving with relative humidity, a key determinant of the suitability of a region for weaving. Moreover, she finds that historical weaving is predictive of more positive attitudes toward women in the 2010 Chinese General Social Survey, of greater female employment in factories at the onset of the industrial revolution, and of greater likelihood of female-headed households during the period of state socialism. The last result provides a nice test of whether the effects of the cotton revolution persist even after accounting for changes in formal institutions, since during the state socialism period (from 1949 to the early 1990s), laws and institutions were centralized and fixed throughout the country.

Religious Institutions. An interesting literature considers whether the Catholic church undermined tight kinship bonds in Europe, which in turn may help explain persistent differences between the psychological behavior of Westerners and other groups (Henrich et al., 2010). This literature builds on an argument by Goody (1983), who suggests that the medieval Catholic church implemented marriage policies, including bans on cousin marriage, that greatly undermined the existing clan-based networks. Schulz et al. (2019) quantitatively test this argument. They find, at the country-level, that longer exposure to the Catholic church is associated with lower rates of cousin marriage. Within countries, greater exposure at the regional level is associated with less intensive kinship measures, as well as greater individualism, less conformity, and more fairness and trust toward strangers (all characteristics they associate with looser kinship networks). They document the same relationships between church exposure and these characteristics using the epidemiological approach and comparing the adult children of immigrants in European countries. It has been suggested that tight kinships bonds may play a negative role as the economy modernizes, hindering the mobility of individuals to more productive urban areas (see Hoff and Sen (2006)). An interesting recent working paper by Ghosh et al. (2022) uses cross-state variation in the US in

the banning of cousin marriage to show that the latter increased geographic mobility as well as the take up of higher-income occupations, providing evidence for this hypothesis.

Sex ratios and Cultural Change. A growing literature examines how accidental variation in sex ratios is correlated with attitudes, showing that culture adapts to a different environment. Grosjean and Khattar (2018) exploit variation across Australian counties that resulted from the British policy of sending (mostly male) convicts there and from the pull, primarily for free men, of opportunities for employment in agriculture and gold mines. The gender imbalance persisted for a long time. The authors show that in places with historically more skewed male-to-female ratios, present-day inhabitants have more conservative gender attitudes, female labor force participation is lower, and women enjoy more leisure. In contrast, Teso (2019) studies the long-run effects of reductions in the male-to-female sex ratio in Sub-Saharan Africa due to the trans-Atlantic slave trade. Even though sex ratios have since normalized, women from more affected ethnic groups are more likely to work today and to do so in higher ranking jobs. Teso (2019) hypothesizes that this is because the relative lack of men during the slave trade induced women to work more outside the home. Interestingly, Teso (2019) finds that both a woman’s ethnic group’s experience with the slave trade and her husband’s ethnic group’s experience matter, highlighting that part of the slave trade’s effects may be due to mothers transmitting more positive attitudes toward women working to their sons, in line with Fernández et al. (2004). Another natural experiment is provided by exogenous sex-ratio variation across French *departements* resulting from the variation in the death rates of soldiers in World War I. Using the epidemiological approach to study the work behavior of migrants within France, Gay (2018) shows that in present-day France, women whose mothers were born in higher death-rate departements work more than those whose mothers were born in low death-rate departements.

Altered sex ratios also seem to have left a mark on attitudes towards same-sex relationships. Brodeur and Haddad (2021) trace the prevalence of same-sex couples and positive attitudes towards same-sex relationships in the US to a historical event, namely the gold rush and the related high male to female ratio. Interestingly, in the Australian context, Baranov et al. (2018) show that in areas that were heavily male-biased in the 18th and 19th century, more Australians voted against same-sex marriage. Why there may be differences in reactions in the US vs Australia to a skewed sex ratio remains to be resolved.

6 Conclusion & Directions for Future Research

The literature on culture and the family has important lessons for economists and policymakers alike. As shown in a variety of contexts, the effect of shocks and policies on economic outcomes depend not only on economic “fundamentals” but also on culture, and in particular on family institutions and beliefs. Thus, new technologies such as improved contraception, or sectoral change

that increases the potential growth of employment in the service sector, may have very different effects depending on how contraception is regarded or cultural beliefs about women's work outside the home. As discussed in this chapter, how droughts change the incidence of child marriage depends on whether bride price or dowry is practiced (Corno et al., 2020); how a society reacts to ultrasound technology depends on the strength of son preference and the existence of dowry (Chen et al., 2013; Jayachandran, 2017; Bhalotra et al., 2020a); and the effect of lower female cyclical unemployment on IPV depends on societal biases towards a male breadwinner image (Bhalotra et al., 2019b).

Just as the effects of shocks depend on cultural and family institutions, so too do the effects of policies. School construction (Ashraf et al., 2020), the introduction of pension programs (Bau, 2021), and the granting of citizenship rights for immigrants in Germany (Dahl et al., 2021) affected education and residence patterns in ways that depended on how family institutions and cultural beliefs varied across groups. Similarly, the effect of land reform and stronger inheritance rights on sex ratios and parental human capital investment in children depended on family institutions (Almond et al., 2019; La Ferrara and Milazzo, 2017). Ignoring the potential interactions of family institutions, cultural beliefs, and policies by clinging to an outdated belief in an "economic man" that lives in a social vacuum is simply bad economics. It can lead interventions to have unexpectedly negative outcomes. We note, however, that this does *not* mean that we cannot learn or draw policy lessons for one context from studies in another context. Rather, to evaluate the "external validity" of a study or adapt policies across contexts, we must take into account how the cultural institutions and prevailing social beliefs in those contexts differ.

This handbook chapter also highlights several directions for future work. First, as discussed in Section 2, family institutions are diverse. Across and within-countries there is wide variation in, for example, traditional marriage payments, post-marital residence, and polygyny. In addition to this traditional variation, key features of the modern family have undergone substantial change in recent decades. Divorce and remaining single (though cohabitating) are both increasingly common, a large proportion of children are brought up in single-parent households, and the proportion of same-sex unions is much larger. These changes in family structure are, in turn, likely to impact income and wealth inequality, gender inequality, and have significant intergenerational consequences. Yet, in many cases, the drivers of both traditional and modern variation are unclear, and the literature would benefit from additional conceptual frameworks for understanding why different institutions arise and why they change. How do/did societies establish who has the authority to decide whom a child marries or with which parent children should reside in the case of separation/divorce? Why were married women granted property rights?⁵¹ Why was child labor

⁵¹ See, e.g., Doepke and Tertilt (2009) and Fernández (2014).

abolished in high-income countries?⁵² How should we understand the changing role of the state in the family sphere, from determining the age at which individuals can marry, to punishing physical and psychological violence within the family, or to establishing grounds for divorce and the division of property after divorce? Understanding the drivers of these substantial changes, how and why various trends vary by education, socioeconomic status, race and ethnicity, and how they interact with the economy are important questions for future research.

Finally, while several papers discussed in Section 5 analyze how technological change, institutional or policy changes, learning, and exogenous shocks can lead to cultural change affecting the family, this also remains a fertile area for further study. For example, how does the introduction of incentives in taking parental leave (e.g., Sweden and Norway) change the division of work in the household, child rearing responsibilities, the stability of couples, or the gender wage gap?⁵³ Did the one-child policy in China create persistent change in social preferences towards the ideal number of children (Gao, 2021)?

Looking further into the future, the increasing ability to have children later in life and a lengthening of life expectancy may also bring dramatic changes to how families are formed and the needs they satisfy. Demographic change and an aging population will pose significant challenges and raise questions about who cares for parents. Along with the increasing cost of housing, falling fertility, and the rise of female-to-male education gaps, these changes may have profound implications for family structures. And, as family institutions change, decision-making and the division of resources within the family are likely to change in important ways as well (see Section 4). Additionally, in both high and low-income countries, as markets and social welfare policies, such as pension programs and pre-K education, continue to fill more of the roles historically satisfied through informal family institutions, families may continue to evolve in ways we cannot yet predict.

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⁵²See, e.g., Doepke and Zilibotti (2005).

⁵³See Avdic and Karimi (2018) for some evidence for Sweden.

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