

REVIEW ARTICLE

# Determinants of social norms II – religion and family as mediators

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(Received 8 September 2022; revised 10 November 2023; accepted 15 November 2023)

## Abstract

It is now abundantly clear that social norms channel behaviour and impact economic development. This insight leads to the question: How do social norms evolve? In a companion paper (Voigt (2023). *Journal of Institutional Economics*, 20), I survey studies showing that geographical conditions can have direct and long-lasting effects on social norms. This paper goes one step further: It surveys studies that show how different geographical conditions affect both religious beliefs as well as traditions of family organization and how these, in turn, affect social norms.

**Keywords:** family; geography; informal institutions; institutional economics; internal institutions; religion; social norms

**JEL classification:** A13; D90; K00; O10; Z10

## Introduction

In his survey on the emergence of social norms, Elster (1989) did not want to exclude the possibility that they might be entirely determined by chance, implying that at the time of his writing, there was no convincing theory regarding their emergence. That has fundamentally changed. A companion paper (Voigt, 2023) shows that by now, there are many studies establishing strong links between various aspects of geography and the types of social norms shared to this day. The norms taken into consideration there have all been shown to impact economic development in some way. They include norms endorsing individualism (or its opposite, namely collectivism), cooperation norms, sharing norms, equality norms, and norms of honesty. As their potential determinants, six aspects of geography were explicitly taken into consideration and it was found that all six aspects have long-lasting effects on the social norms shared by most members of society. But the connection between geography and social norms might not always be as direct as indicated by arrow 1 in Figure 1.

In this paper, I therefore survey studies that analyse to what degree religion as well as family structure mediates between geography and social norms as indicated by arrows 2a and 2b in Figure 1. While geography is clearly exogenous, religion and family organization are not but have proven to be almost time-invariant. Although geography is likely to be an important determinant of these man-made practices, they may, in turn, impact on the development of social norms above and beyond the direct effect of geography. Therefore, this paper surveys two types of studies namely ones that establish a link between geography and religion or family structure (arrows 2a and 2b in Figure 1) and ones that, in turn, establish religion and (or) family to have an impact on social norms (arrows 3a and 3b in that Figure). Note that this is not a meta-study but a survey of studies dealing with the transmission channels just mentioned. Neither is it an attempt to propose any ‘grand theory’ tying all of these elements together in a unified framework.

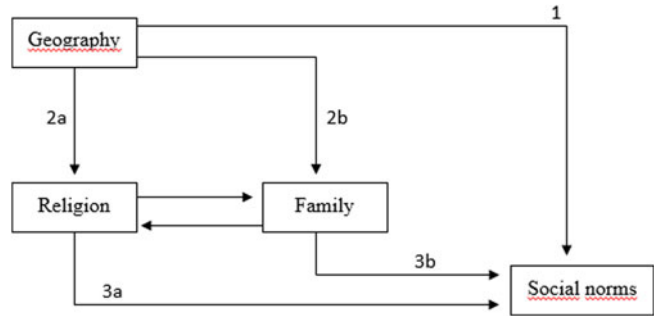


Figure 1. The impact of geography on social norms.

The rest of the paper is organized as follows: The ‘Definitions and approach’ section serves to delineate the central terms used in this paper and describes its approach. The ‘Religion as mediating factor’ section focuses on how religious practices are shaped by geography and how they influence social norms in turn. The ‘Family organization as mediating factor’ section asks the same questions about family structures. The ‘Conclusions and outlook’ section concludes.

### Definitions and approach

I use a broad delineation of the term geography. Six aspects are included, namely predominant historic subsistence mode, pathogen prevalence, volatility of weather conditions, proneness to natural disasters, terrain characteristics, and long-term climate change. Some of these aspects are historic while others are contemporaneous. All of them are, however, largely exempt from explicit manipulation by humans in the short term and can, thus, be considered as exogenous. In principle, one could also talk of ‘ecology’ or ‘habitat’ but I prefer to use the term geography because it has been discussed as constituting a deep determinant of economic development by many in recent decades (see, e.g. Galor, 2022).

Over the last couple of decades, religion emerged as an important subject of analysis in economics. Iannaccone (e.g. 1998) and Kuran (e.g. 2012) are probably the best known scholars. Sociologist Rodney Stark and his co-authors (e.g. Stark and Bainbridge, 1987 or Stark and Finke, 2000) had an early analysis relying entirely on rational choice. Research shows that religious beliefs and practices impact economic development (McCleary and Barro, 2019 with a recent survey). Émile Durkheim (1915) famously defined religion as a ‘unified system of beliefs and practices relative to sacred things.’ This definition is still widely used although it has been criticized by many. Durkheim never defined ‘sacred things’ and apparently used it primarily because he did not want to refer to anything ‘supernatural’. In his definition, Parsons (1951) later simply substituted supernatural for Durkheim’s ‘sacred things’,<sup>1</sup> a modification we follow here.<sup>2</sup> This definition is broad enough to include very different kinds of worship such as nature worship, animism, totemism, and ancestor worship.

The family is the oldest known type of organization. Many scholars from Aristotle on have argued that it is not only the most important transmitter of values and norms across the generations but that the architecture of state institutions would reflect its basic traits (see, e.g. Aristotle, 1944, book 1). In delineating different types of family organization, French anthropologist Emmanuel Todd (1985) proposes to distinguish between three dimensions: do married children continue to live with their parents, who receives an inheritance, and is cousin marriage encouraged or prohibited. Economists have focused more on family *ties* rather than family *types* (e.g. Alesina and Giuliano, 2011, 2014).

In the companion paper, social norms are defined as informal rules endowed with sanctions that are administered by members of society (and not by representatives of the state). This definition is also used here. Institutions have been defined as generally known rules used to structure recurrent interaction situations that are endorsed with a sanctioning mechanism (e.g. Voigt, 2013, but see already

<sup>1</sup>Stark and Finke (2000: 89f. and passim) critically discuss Durkheim’s proposal.

<sup>2</sup>See also Swanson (1960) who follows Durkheim in spirit but writes of the supernatural, including witchcraft.

Ostrom, 1986 with a very similar definition). Social norms can thus be considered a specific type of institution. Beyond social norms, there are other types of institutions where the sanctioning is not carried out by representatives of the state.

Conventions are one such type and the grammatical rules of language an example. Here, a speaker cannot make herself better off by not complying with the rules of language if her goal is to be understood by others. Internalized ethical rules are another such type. If a person aspires to comply with specific ethical standards and does not in practice, then she is likely to feel guilty. Here, the sanction is thus administered by the actor herself. This may sound ephemeral but it is not. Henrich *et al.* (2012: 659) observe: ‘... humans readily internalize social norms, at least partially. This means norms become internalized such that norm adherence is intrinsically rewarding. Work in neuroscience has shown how both adhering to local norms and punishing norm violators activates the brain’s reward circuitry.’ It is, hence, likely that the social norms prevalent in a society will be reflected in the ethical rules that its members aspire to comply with. In this way, they serve to reduce decision-making costs, i.e. one type of transactions costs.

A basic assumption of this paper is that both family and religion have functioned as mediator variables re-enforcing the impact of geography on social norms. Due to technological progress, geography has become somewhat less relevant for our daily lives in many places. Given that family structures and religious beliefs are largely time-invariant and that it can be shown that they have also been affected by geography, they are likely to serve as important stabilizers of traditional social norms even though the original reason for their emergence may not be as impactful anymore today.

This paper does not, however, contain a formal mediation analysis. This would not only presuppose a clearly delineated dependent variable but also that data for a sufficiently large number of countries were available. Neither condition is met. Instead of focusing on a single dependent variable, I am reporting results concerning a number of social norms. Nor is this paper a meta study in the formal sense. The economics of religion has become a huge field over the last three decades with important subfields such as the experimental economics of religion (Hoffmann, 2013 is an early survey). I do not intend to survey this huge field here at all. In particular, this paper does not reference the huge literature on the effects of religion on economic development in general. It is limited to the connection between religious beliefs and institutions and social norms in particular (which may, in turn, have an effect on economic development). Rather, I picked those studies that focus on either of the transmission channels described above (and illustrated by arrows 2a and 3a in Figure 1). The economic literature on family types and ties is not as comprehensive yet, but here, too, studies were selected with the two possible transmission mechanisms in mind.

Finally, religious beliefs and family structures are closely intertwined with scholars discussing which of the two is the ‘more exogenous’ one. This is echoed in Figure 1 by the two unnumbered lines in Figure 1.

## Religion as mediating factor

### *Preliminary remarks*

This survey is primarily concerned with the mediating effects of religion as well as family structure on the social norms shared by most members of a society.<sup>3</sup> The possibility that geography may influence religious beliefs and practices is discussed in the ‘Religion as endogenous’ section. This possibility implies that religion in and of itself might be an important factor directly affecting (not just mediating) social norms, which is dealt with in the section on ‘Religion as a determinant of social norms.’

In dealing with the effects of religion, the distinction between local or tribal religions on the one hand and world or universal religions on the other plays an important role. The concept of so-called

<sup>3</sup>As geographical conditions can vary enormously within current day nation states, societies are unlikely to be identical with these. Many of the relevant studies rely on the Ethnographic Atlas (Murdock, 1967) which contains information on 1,265 historic societies.

'Big Gods' or moralizing high gods is a critical aspect of our discussion as well. These are supernatural beings that are believed to have created and/or to govern all reality, intervene in human affairs, and enforce or support human morality (Roes and Raymond, 2003; for the concept of Big Gods, see Norenzayan, 2013).<sup>4</sup>

Countless studies spanning more than a century show time and again that religion and religious practices have important effects on economic development and beyond (these have been surveyed, e.g. by Basedau *et al.*, 2018, Iyer, 2010, or Becker *et al.*, 2021). The distinction between beliefs and practices was established quite some time ago. Both can be thought of as enhancing the compliance with and, therefore, the effects of social norms in different ways. People actually practicing their religion monitor each other which enhances norm compliance. Here, the co-religionists are the monitors (and potential sanctioning agents) and we are thus dealing with social norms as defined above. But religious believers may also have internalized some basic precepts of their religion. For observers, it is difficult to judge whether it is this internalization or the belief that God constantly monitors them which makes them more norm-abiding. I also briefly survey priming experiments where participants receive more or less subtle reminders of their religious beliefs that may elicit adjustments in their behaviour. For this sort of 'reminding' technique to work, the subjects must have internalized certain norms.

### *Religion as endogenous*

#### *Religion as determined by geography*

There is a long list of famous scholars who have argued that climate influences religion, ranging from Hippocrates and Ibn Khaldun to Montesquieu and Ellsworth Huntington. Huntington (1945) was convinced that people living in the desert would lean toward monotheism, whereas people living in the forest would lean toward polytheism. Huntington also believed that the rise of Islam was a consequence of climate change. People subject to heightened stress because of a dryer climate were willing to accept Islam as their new religion. Over the last couple of decades, his views have been treated with contempt. But more recently, the conjecture that various aspects of geography are an important determinant of religious beliefs has been revived again. In this section, I first discuss studies dealing with the geographic factors that are associated with moralizing or big gods and then move on to survey studies analysing the effects of geographic events (in particular natural disasters) on religious intensity.

*Where were Big Gods likely to emerge?* The concept of so-called moralizing high gods (MHGs) has caused lots of controversy. The core idea is that a God who is moral, powerful, omniscient, and punishing allows societies to grow beyond the size that would be attainable if cooperation norms were based on kin and reputation alone (Swanson, 1960 is an early contribution).<sup>5</sup> With regard to MHGs, we are primarily interested in two questions, namely (1) is geography likely to have contributed to that concept of god and (2) does such a concept come with a specific set of social norms?<sup>6</sup>

In an early study of the recent research wave concerned with moralizing gods, Snarey (1996) hypothesized that societies suffering from water scarcity are more likely to establish a morally concerned deity. Next to oxygen, water is the most important resource enabling humans to survive. Snarey points out that societies suffering from water scarcity are in need of cooperation norms making sure that single individuals do not use up significantly more water than their fair share. In economics,

<sup>4</sup>Swanson (1960) introduced the concept of 'high gods' who are 'considered ultimately responsible for all events, whether as history's creator, its director, or both.'

<sup>5</sup>The notion of MHGs preceding the emergency of complex societies has been disputed by many: Whitehouse *et al.* (2019), e.g. claim that complex societies evolved before the concept of MHGs took hold (however, they later retracted their paper). Beheim *et al.* (2019) show that the data used by the critics may be unreliable. The accuracy of the data was also challenged by Slingerland *et al.* (2020) to which Whitehouse *et al.* (2022) replied admitting serious shortcomings of the database but claiming that the main results of their first paper still hold after mistakes have been corrected. This heated debate attests to the fact that the evolution of religion has become an active field of research which is, however, only marginally relevant here.

<sup>6</sup>The second question will be discussed in 'Religion as a determinant of social norms' section below.

this problem is known as the tragedy of the commons (Hardin, 1968; Ostrom, 1990, with options to deal with it by relying on social norms). To make sure this does not happen, a monitoring agent that is omniscient and powerful would be ideal. The monitoring agent needs to be powerful enough to sanction those who have not complied, and it needs to be omniscient so that those who have complied with the water extraction norms are not sanctioned. The desirability of such a deity is, of course, not sufficient for its creation (claiming that it was would be tantamount to committing the functionalist fallacy). Yet, societies that were able to create such a deity might have enjoyed advantages over those societies that did not. Snarey uses the Standard Cross-Cultural Sample (Murdock and White, 1969) to test his hypothesis and finds that societies with a low water budget (defined as a natural environment in which neither precipitation nor surface water was abundant) are significantly more likely to believe in a morally concerned high god.<sup>7</sup> He is, however, explicit in not claiming to have established a causal relationship.

Roes and Raymond (2003) are also interested in the rise of MHGs but start from a different point than Snarey. They observe that favourable habitats are populated by larger groups because due to competition for these habitats, being large is an advantage. But they also find that larger groups are more likely to believe in MHGs. This result seems to contradict Snarey (1996) as he finds MHGs to be more prevalent in groups with unfavourable habitats (scarce water). Yet, this is only a seeming contradiction: due to the competition for favourable habitats, large groups are often engaged in external conflicts and MHGs facilitate collective action and thereby increase survival chances. Both studies thus find that existential threats are associated with a higher probability of believing in a MHG. The studies are also united in not interpreting these associations as causal.

Comparing these papers, one is led to ask if it is resource scarcity or the size of the group which is decisive here. Brown and Eff (2010) quarrel with a number of methodological choices underlying the Roes and Raymond (2003) paper and find that moralizing gods are less likely in resource-rich environments contradicting the Roes & Raymond's findings, but confirming Snarey's. They also find that the relationship between the presence of moralizing gods and the size of society has an inverted u-shape, and suggest that the monitoring function of moralizing gods can also be provided by well-functioning states. This finding is, however, based on currently existing states and should, hence, not be relied upon for hypothesizing about the original determinants of MHGs.

Taking up the concept of moralizing high gods, Botero *et al.* (2014) find that belief in high gods is more likely to be found in societies inhabiting poorer environments that are more prone to ecological duress. They include two components in their principal component analysis, namely 'resource abundance' which includes abundant rainfall, higher primary productivity, and greater biodiversity. The second component is dubbed 'climate stability' and is defined as: 'exposure to more predictable annual cycles of precipitation and temperature, as well as to warmer, more stable temperatures throughout the year' (*ibid.*: 16785). This study shows that belief in moralizing high gods is associated with a higher presence of animal husbandry, as well as with less access to food and water. In a sense, then, their paper can be read as a generalization of Snarey (1996). Peoples and Marlowe (2012) find animal husbandry contributes to the emergence of MHGs.

Societies extending beyond the clan depend on norms of cooperation. The notion of MHGs now plays an important role in research on why some groups managed to form large and complex societies. Widespread belief in MHGs significantly reduces monitoring and transaction costs. It seems that MHGs were more likely to emerge in ecologically challenging conditions such as water scarcity. Assuming that resource-scarce environments are causal for the belief in MHGs and MHGs facilitate in-group cooperation, then a disadvantage caused by geography is compensated by religious beliefs. It

<sup>7</sup>Witchcraft is one kind of belief in the supernatural and belief in witches has been identified as one means of re-enforcing social norms. Several decades ago, anthropologist Paul Baxter (1972) argued that societies relying on pastoralism were less likely to believe in witchcraft. Pastoralists were not stuck to a particular plot of land and conflicts could, thus, be avoided by simply moving elsewhere. Recently this hypothesis has been put to an empirical test, and Araujo *et al.* (2022) do not only find a negative correlation between historical reliance on pastoralism and beliefs in witchcraft, but also a positive association between historical reliance on pastoralism and trust.

would be interesting to enquire into the relative importance of effects making up for disadvantages in productivity caused by nature. I am not aware of any such studies though.

Given that MHGs are a precondition for large and complex societies, the next step in this research programme is to ask whether differences in the way different religions perceive of their MHGs can be explained by differences in geographical conditions. Michalopoulos *et al.* (2018) observe that Islam spread successfully in regions ecologically similar to the birthplace of the religion, namely the Arabian peninsula but systematic knowledge regarding both the diffusion of different religions as well as the way they are practiced in different places remains scarce.

*Possible effects of geography on intensity of beliefs:* Our discussion in the companion paper (Voigt, 2023) showed that prevalence of pathogen stress encourages the development of collectivist social norms. Moving to pathogen stress and its impact on religion, Fincher and Thornhill (2012) find that parasite stress and religiosity are positively associated both across the states of the U.S. and cross-nationally. They refer to the idea that members of close-knit religious communities can easily recognize their in-group as ‘in-group assortative sociality’.

Ager and Ciccone (2018) analyse the degree to which weather variability impacts church membership. They assume that mutual insurance against idiosyncratic risks is more valuable in regions where such risks are more common. They focus on the late 19th century, and analyse whether U.S. regions with higher rainfall risks are associated with higher church membership. At that time, agriculture was the dominant occupation almost everywhere in the U.S., and rainfall risk an important common risk. The authors find a significant association between rainfall risk and church membership and interpret this as one way of insuring against the vicissitudes of idiosyncratic risk.

New Zealand was hit by two earthquakes in 2010 and 2011. It would be fascinating to know whether those affected were likely to become more religious. This question is inspired by the so-called ‘religious comfort hypothesis’ which posits that religion offers relief after having experienced anxiety, grief, randomness, death etc. The hypothesis can be traced back to Feuerbach, Marx and Freud and there is substantial evidence in its favour (see, e.g. Atran, 2002). Actually, Sibley and Bulbulia (2012) were lucky in the sense that a first wave of a survey was administered in 2009 and a second one in 2011 which enabled them to analyse how an earthquake affects religious beliefs. They find that at the national level the number of apostates was higher than the number of converts between 2009 and 2011. However, in the Canterbury region, which was hit by the earthquakes, the number of converts outnumbers the number of apostates. This is yet another example that natural disasters, as one aspect of geography, do affect religiosity.

Another study focusing on the effects of natural disasters on religiosity is based on Canada. Canada and New Zealand are interesting because both countries have well-functioning institutions, offer welfare services and are not very disaster prone. In case religiosity is increased subsequent to a disaster, it is, hence, unlikely to be the consequence of demanding ex post insurance or similar (discussed in ‘Religion as a determinant of social norms’ section). In his study on the effects of climate disasters in Canada, Zapata (2018) finds that such disasters impact religious preferences in two opposite directions: the number of annual disasters as well as their economic costs tends to erode the belief in God whereas the number of human losses tends to increase religiosity among the believers.

More general insights on the relationship between natural disasters and religiosity are provided by Bentzen (2019). She finds that people who experience earthquakes become more religious. The effect decreases over time, but children of immigrants who experienced earthquakes still display higher levels of religiosity. Other unpredictable disasters have similar effects. Interestingly, these effects are found everywhere for adherents of all religions, except for Buddhists. Bentzen (*ibid.*: 2315) speculates that this may be due to Buddhist beliefs being ‘more efficient in providing stress relief than other beliefs, thus reducing the need for religion in the long term.’

Gelfand has popularized the idea of drawing a distinction between tight and loose cultures. She describes tight cultures as having strong norms and a low tolerance for deviant behaviour and loose cultures as having weak social norms and a high tolerance for deviant behaviour. The distinction



can be considered an important trait characterizing social norms and institutions more generally. Tightness (as well as looseness) can refer to both the rule part as well as the sanctioning part of an institution.<sup>8</sup> In a cross-country study covering 33 countries, Gelfand *et al.* (2011) are interested in both the effects and the determinants of tight/loose cultures. They find tight cultures to be associated with higher degrees of religiosity. Tightness itself is significantly associated with the number of years lost due to communicable diseases (a measure of pathogen stress) and with the prevalence of natural disasters. Based on these insights, it appears that the correlation between parasite stress and a high likelihood of natural disasters (aspects of geography) and religiosity is mediated via tightness norms, i.e. norms displaying little tolerance vis-à-vis people deviating from them.

A more recent study on tightness/looseness hypothesizes that beliefs in a punitive god could be caused by ecological threats but mediated through tightness (Jackson *et al.*, 2021). If tightness is one trait of social norms, this hypothesis is, then, making an argument exactly opposite to the one advanced here. Interestingly, the authors find support in both directions, leading them to hypothesize that religious beliefs and social norms (in this case: their tightness) might mutually re-enforce each other. One shortcoming of their study is that all empirical evidence is limited to the U.S. and it is therefore unclear to what degree its findings hold beyond the U.S.

In this section, I have surveyed a number of studies showing that both the content as well as the intensity of religious beliefs are influenced by geographic factors. It would be interesting to estimate the relative influence of the different dimensions of geography on religious beliefs. It would further be interesting to run a formal mediation analysis quantifying the respective relationships.

#### *Religion as influenced by family organization and vice versa*

The question of whether religion impacts family organization and/or family organization made the success and diffusion of particular religions more likely has been discussed for a long time. Todd (1985), for example, emphasizes that family organization is less time-variant than religion. He points out that, in order to be successful in East Asia, Islam had to become more liberal on some of its doctrines regarding inheritance (*ibid.*: 137). On the other hand, there are those who argue that organized religion has had huge impacts on family structures. Schulz *et al.* (2019), for example, claim that the Catholic church systematically undermined cousin marriage in Medieval Europe, and that this promoted individualism and other cultural traits (see also Goody, 2000). In all likelihood, religion and family structure have a mutual impact on each other (as indicated by the two short arrows in Figure 1 above).<sup>9</sup>

Some of the Catholic church's policies on family organization may have triggered the emergence of what are known to be WEIRDos (people from western, educated, industrialized, rich democracies; Henrich, 2020). These policies undermined intensive kin-based institutions in Europe in a seemingly systematic fashion. This is why Henrich (*ibid.*: 165f.) dubbed them the Church's Marriage and Family Programme (MFP). The measures being part of the MFP included many prohibitions dealing with marriage to blood relatives, polygamy, marrying non-Christians and the adoption of children. The MFP also required both bride and groom to explicitly consent to their marriage, encouraged newlyweds to set up independent households and individual ownership of property and inheritance by personal testament.

Henrich claims that WEIRDos are, indeed, systematically different from non-weirdos on a number of dimensions. According to him, WEIRDos are individualistic, think analytically, believe in free will, take personal responsibility, feel guilt when they misbehave and think nepotism should be sanctioned

<sup>8</sup>I am, however, not aware of any paper that would systematically integrate the tightness/looseness dimension into the concept of institutions. A number of interesting questions would need to be dealt with: Can institutions also be 'split' according to the distinction, i.e. combining tight (loose) rules with loose (tight) sanctions? Is it really possible to call the entire set of a society's institutions tight or loose or could some areas be tight (e.g. those referring to sexual behaviour) whereas others could be rather loose (e.g. referring to the use of drugs)?

<sup>9</sup>A reviewer pointed out that this assumption triggers a host of follow-up questions regarding the effects of the two interacting mediators. I agree that these deserve to be dealt with more rigorously.

heavily. Non-WEIRDos identify more strongly with family, tribe, clan and ethnic group, think more holistically, take responsibility for what their group does (and publicly punish those who bedraggle the group's honour), feel shame (instead of guilt) when they misbehave and think nepotism is a natural duty. Here, then, one form of organized religion may have had a huge impact not only on family organization but on a large number of social norms.<sup>10</sup>

Schulz (2022) conjectures that cousin marriage safeguarded the minimum functional size of camel herds, and claims that there is a high correlation between camel-based living and the prevalence of cousin marriage. In a sense, Islam contributed to this development because it prescribes that daughters should also inherit a share of their fathers' wealth. This argument, hence, adds a novel twist to the possible interaction between family and religion: in this case, geography could have been causal for the emergence of certain social norms based on family organization which were then reinforced by religion. Turning the argument around, one could conjecture that Islam could only be successful in this area of the world because it did not prohibit consanguineous marriage which was crucial for survival. Chaney (2020) makes exactly that argument.

Schulz shows that a high proportion of consanguineous marriages has a detrimental effect on democracy, social capital (indicated by levels of political participation) and state capacity (captured via the quality of institutions). Interestingly, he interprets these findings as an argument against the position that Islam is inimical to democracy. As with so many other studies surveyed in this paper, Schulz also relies on the epidemiological approach.

### *Religion as a determinant of social norms*

In this section of the survey, I focus on the question of whether adherence to a religion is associated with a higher degree of abiding by social norms and, in particular, with more prosocial behaviour. The term prosociality is widely used in this literature. For Shariff *et al.* (2016: 37), e.g. it encompasses 'measures related to ethical, cooperative, or generous behavior or attitudes', and includes 'sharing resources in the dictator game, contributing to a common good in the public goods game, cooperating in the prisoners' dilemma, willingness to volunteer time and effort, and refraining from lying and cheating.' As not all religions are identical in the social norms they encourage or even demand their followers to adhere to, I try to tease out differences by focusing on the following aspects:

- (1) Are different beliefs connected to different social norms and, at the end of the day, to different behaviour? A focus is on belief in afterlife, in heaven or hell, but also on whether gods are believed to be moralizing and/or omniscient.
- (2) How are religions practiced? I propose to distinguish between: (1) simply adhering to a religion; (2) actively participating in its meetings and, thus, experiencing a sense of belonging; (3) praying, i.e. a bilateral contact between a believer and god (the combination of the last two is often referred to as religiosity or religious intensity).
- (3) Given that believers are united by sharing similar norms, one question is whether these norms are universally applied or only vis-à-vis coreligionists. If prosocial behaviour is restricted to them and non-believers are treated rather anti-socially, the overall effect on society is not necessarily positive. This implies that issues related to in-group/out-group phenomena become relevant.
- (4) Finally, the activation of religious beliefs may be a precondition for behaving in accordance with religious doctrine. I therefore briefly report the findings of studies in which religious beliefs were made more salient via priming.

<sup>10</sup>The Catholic Church is active in every corner of the world. But to the degree that its believers keep on following local practices, the MFP could have had limited effects there. And there are quite a few examples demonstrating that local practices have survived the advent of the Catholic Church: in Nigeria, e.g. many Catholics keep on practicing ancestor worship, in Uganda, polygamy is not unheard of even among Catholics, in matrilineal societies such as Guam, the role of women is more dominant than elsewhere, arranged marriages keep on being the norm in many countries of the Middle East as well as Africa and so on (these – and more – examples can be found at <https://www.catholicsandcultures.org/practices-values>).



Lab experiments and surveys are the most frequently used methods to answer the questions just sketched, but ‘quasi-experiments’ and other approaches have also been tried.

*Are different social norms connected to different beliefs?:* In his analysis on obstacles to development in Africa, Platteau (2009) explains the function of witchcraft in Africa, i.e. a particular form of belief in the supernatural. In order to sustain the substantial redistributive norms within kinship groups, it is essential that newly gained personal wealth is not attributed to hard work or innovative thinking, but interpreted simply as good luck. This belief strengthens the social norm that the wealth should be shared with others. As Platteau (ibid.: 679) explains: ‘While transient luck is believed to result from the ordinary course of natural events, persisting or exceptional luck is attributed to the obscure manipulation of supernatural forces. This sort of accusation is extremely grave inasmuch as witchcraft is thought to cause the treacherous exploitation of other villagers and to jeopardize the survival of the entire group.’

Belief in witchcraft is reported to be more prevalent than ever, and to negatively affect economic development as it reduces incentives to above-average achievement. Gershman (2016: 185) reports that in Tanzania parents who believe in witchcraft discourage their children from interacting with strangers because they fear witchcraft attacks and accusations. They refuse to provide food assistance to their neighbours because they are afraid of witchcraft accusations in case someone gets sick after eating the food. The question is whether the reports from Tanzania are the odd ones out or if such behaviour (and the underlying social norms) is systematically more likely among people who believe in witchcraft.

Relying on data from the European Social Survey and using an epidemiological approach, Gershman (2016) finds that belief in witchcraft is associated with antisocial attitudes. Belief in witchcraft is negatively correlated with charitable giving which is one way of acting prosocially. Interestingly, regional prevalence of witchcraft beliefs is associated with a coefficient around five times larger than individual beliefs in witchcraft. Formulated differently: it is not first order beliefs that are driving these results but second order beliefs, i.e. my beliefs about what I think others believe.<sup>11</sup>

Unfortunately, a similar study on the effects of ancestor worship is not available. Such a study would, however, be highly desirable as it would be located directly at the intersection between family and religion. Ancestor worship may have a number of important effects including male dominance, the preference for sons, stronger notions of in-group as well as lower geographic mobility.

Based on the finding that the world religions rely on moralizing gods, Henrich *et al.* (2010a, 2010b) examine whether adherence to one of them is associated with greater fairness to anonymous others. Their evidence is based on three experiments run across 15 diverse populations in Africa, North and South America, Oceania, and Asia. These populations included small-scale societies of hunter-gatherers, pastoralists, horticulturalists, and wage labourers. They interpret offers made in the Dictator Game as a measure of fairness and find that participation in a world religion is associated with fairer behaviour.

Botero *et al.* (2014) report results from experiments and show that beyond the increased willingness to behave fairly as just described, the concept of moralizing high gods can reduce the level of cheating (Shariff and Norenzayan, 2011) and increase the willingness to cooperate (Shariff and Norenzayan, 2007). On the other hand, there is evidence that belief in moralizing gods increases the prevalence of conflicts and casualties on the local level (Skali, 2017). Skali (ibid.) uses religion as an impediment to credible commitment for peace because societies believing in a moralizing god are unlikely to agree on any kind of middle ground regarding their religious beliefs.

Studies on the relationship between religious beliefs and prosocial behaviour have produced mixed results (Hoffmann, 2013 with an early survey). This is why Shariff and Norenzayan (2011) ask whether specific beliefs induce specific behaviour. More precisely, they focus on belief in heaven vs. hell. This study draws its data from the World Values and European Values Surveys, and covariates include

<sup>11</sup>Recent research on witchcraft is summarized in Gershman (2022).

countries' predominant religion, income inequality, GDP per capita, national imprisonment rates, life expectancy, urban density, three of the 'Big Five' personality traits (conscientiousness, neuroticism, and agreeableness), belief in god, and religious attendance. It finds that the higher the proportion of people who believe in hell, the lower the national crime rates. In contrast, belief in heaven predicts higher crime rates. These findings are not only highly significant, but also robust. These beliefs are stronger predictors of national crime rates than economic variables such as income or income inequality. Shariff and Rhemtulla (2012) are explicit about their results being correlational. They also point to an issue that deserves additional research: Why is a belief in heaven (or a loving god) correlated with antisocial effects? Their study also makes it clear that future studies should focus on individual responses rather than national means.

Atkinson and Bourrat (2011) also use a large global survey to assess the correlation between particular beliefs and the justifiability of moral transgressions. They separately analyse three types of beliefs in the supernatural, namely (1) belief in God, (2) belief in heaven and (or) hell, and (3) belief in a personal God – as opposed to belief in Spirit or Life Force. They hypothesize that moving from one category to the next, respondents will endorse 14 types of moral transgressions (such as claiming government benefits to which one is not entitled or avoiding a fare on public transport) and find evidence in favour of all three hypotheses. This study complements the Shariff and Rhemtulla (2012) paper. It does not deal with behaviour, but the evaluation of behaviour and focuses on the individual level. The other paper, in turn, focuses on actual transgressions and is located on the collective level (here the level of the nation state). It is, of course, a desideratum to have a study that analyses actual transgressions based on the individual level.

Laurin *et al.* (2012) analyse the propensity to punish norm violators as a function of respective individual beliefs. This is important as non-compliance with social norms needs to be sanctioned or else norms are likely to vanish rather soon. The authors hypothesized that if a god is believed to be omniscient and omnipotent, he could be viewed as a perfect sanctioning actor, and believers may have fewer incentives to punish norm-violating behaviour themselves. This is what they find but, interestingly, these results are only significant when religion is made salient.

Summarizing this section, we have seen that belief in witchcraft can serve to sustain social norms. In Africa in particular, this is the case with regard to norms of redistribution. In general, evidence that religious beliefs are associated with more prosocial behaviour is mixed although there are studies that find beliefs in moralizing gods to be associated with greater fairness, less cheating, and a higher willingness to cooperate. The most striking findings refer to beliefs in hell which seem to function as a deterrent against all kinds of unwanted behaviours and, in particular, crime.

*How are religions practiced?:* Thus far, I have surveyed studies focusing on *what* religious people believe and I now move to studies that examine how differences in religious intensity and practices (*how* people believe) impact social norms and the corresponding behaviour.

Soler (2012) is interested in the effects of what she terms 'religious commitment' on cooperation among adherents of the Candomblé cult in San Salvador de Bahia (Brazil). This cult is neither a moralizing nor big god religion. Soler describes it as amoral and as having neither fixed ethical rules nor a belief in the afterlife (*ibid.*: 348). This study provides us with an interesting case in which the effects of religious commitment can be analysed separately from confounding ethical demands that would be based on religion. To measure costly religious signalling, Soler creates a Candomblé Religious Signaling Scale (CRSS), and cooperation is measured by engaging Candomblé adherents in the public goods game (PGG). Soler takes the endogeneity of the CRSS explicitly into account by assuming that people with a low income stand to gain more from Candomblé membership in terms of potential support received later on. Hence, adherents with a low income are likely to invest more into costly signals, i.e. into a higher CRSS score. She, hence, asks to what degree religious commitment is primarily determined by instrumental concerns. She finds that higher degrees of religious commitment are, indeed, associated with higher offers in the PGG. A higher intensity of religious practice is, then, associated with a higher level of prosocial behaviour. Moreover, believers with higher CRSS scores also report

having received more help from fellow Candomblé members. Finally, she also finds that income, a proxy for the potential usefulness of Candomblé membership, and CRSS scores are negatively correlated, as expected.

Frequent participation in collective rituals is one way of practicing a religion. In Judaism, males are expected to participate more in collective rituals than females. This is why Sosis and Ruffle (2003) hypothesize that when comparing the behaviour of religious males with religious females in a variant of the PGG, males would take significantly less out of an envelope to which both participants have access than females, and this is exactly what they find.

These studies are interesting because they allow us to separate behaviour due to internalized ethical beliefs from behaviour due to social norms. The effects found by Soler (2012) can be attributed to social norms as the underlying religion is described as largely void of ethical content. The differences in behaviour found in Sosis and Ruffle (2003) are attributed to the differences in attending meetings with coreligionists and are, thus, likely to be caused by social norms, too.

*Who are the norms shared with?:* Both papers surveyed in the last section analyse prosocial behaviour in experimental settings that are restricted to coreligionists. I now move to surveying some studies in which the question to whom cooperative behaviour is directed played a central role. There is, after all, the possibility that more religious people will behave more pro-socially but that this prosocial behaviour is restricted to coreligionists.

Ahmed (2009) also tries to separate individuals along their degree of religiosity. Attending religious services does not automatically confirm a high degree of religious commitment. To address this issue, Ahmad differentiates between students in India studying at madrasas to become imams with non-religious students, and has the participants play a PGG and a Dictator Game (DG). The main difference in the behaviour between the two groups is the number of participants who do not donate anything in the PGG. There is a significant difference between zero contributors with the non-religious significantly more likely to behave as predicted by a simple *homo economicus* model. But once these non-contributors are taken off the sample, no significant differences in the mean amount contributed to the public good can be ascertained. Essentially the same result holds with regard to the DG. But it is also noteworthy that almost 24% of the future imams contribute zero in the DG.

*Under what circumstances?:* It could be that people need to be reminded of their religious duties. If religion ‘corrects’ selfish propensities in humans, then reminding them of their religious duties may influence their behaviour. A few surveys exist of the many studies that analyse this question of ‘reminding’ by treating participants in experiments with so-called ‘primes’. I only report the findings of a select few studies as the religious priming literature is surveyed in Shariff *et al.* (2016) who analyse 93 studies. They examine three questions: (1) does religious priming have effects, (2) does religious priming cause subjects to behave more pro-socially, and (3) do any possible effects depend on pre-existing religious beliefs? Formulated differently, do prosocial effects of priming carry over to non-religious people? They find that, generally speaking, priming does have a small to medium effect on prosociality. Effects are, as expected, significantly stronger among the believers. These findings provide a positive answer to the three questions posed. This seems to indicate that priming relies on existing religious beliefs and is not based on more general human values. The findings hold independently of whether the data were collected in the lab, in the field, or online.

Most of the early contributions to the relationship between religiosity and prosocial behaviour surveyed here are already surveyed by Norenzayan and Shariff (2008). They are specifically interested in the premise that reputational concerns are based on a psychological mechanism unrelated to religion, and they examine whether these reputational concerns have the same effect on behaviour as those based on religion. Their survey found mixed results. To the degree that religious devotion is correlated with prosocial behaviour, it seems primarily driven by egoistic motives seeking to keep up one’s own prosocial self-image. The authors also point out that it is difficult to establish causality, as people with prosocial attitudes may also be more attracted to religion.

In Norenzayan *et al.* (2013), these mixed findings are explicitly acknowledged, and the authors enquire into the possible reasons underlying them. A possible reason mentioned is the continuous presence (absence) of religious reminders. This would be the case in kibbutzim, madrasas, or Candomblé communities. A second possible reason is that in the experiments that found prosocial behaviour, the prosocial behaviour was only for the benefit of in-group members; prosocial behaviour would, hence, not be universal. A third possible reason could be the weakness (strength) of secular institutions.

A possible conclusion from the results reported here is that even with regard to beliefs as strongly held as religious ones they do not seem to be internalized to such a degree that no external reminders are needed. If 'religious reminders' increase, indeed, prosocial behaviour, arguments in favour of institutionalizing such reminders in the public sphere may arise. As very little is known about the effects of 'high frequency' priming, i.e. priming that is repeated time and again, such advice seems, however, premature.

## Family organization as mediating factor

### Introduction

The 'Religion as mediating factor' section discusses insights about religion as a mediating factor between geography and social norms. In this section, we survey some of the insights about the same mediating factors offered by family organization. Over the past ten years, the economic consequences of family types and (the strength of) family ties have gained more attention. Alesina and Giuliano (2011, 2014) are interested in identifying the strength of family ties and measure strength by counting the number of generations living under one roof. Even more recently, Enke (2019) focuses on the strength of kinship ties and distinguishes between tight and loose ties. It turns out that kinship tightness is strongly negatively correlated with per capita income today.

Long before Alesina and Giuliano, French anthropologist Emmanuel Todd (1985) claimed that differences in family types have far-reaching effects on economic, political, and social development. These claims remained untested by economists for a long time until Gutmann and Voigt (2022) found that communitarian family types (those in which sons continue to reside with their parents even after they have married and all sons are treated the same with regard to inheritance) are linked to low levels of the rule of law as well as late industrialization. Countries in which cousin marriage is frequently practiced display high levels of state fragility and weak civil society organizations.

There is, hence, evidence that family organization does have important consequences on social organization (including that of the state) and economic development. This is why I now ask to what degree family structures have been determined by geography ('Family structure as determined by geography') and to what degree differences in social norms can be attributed to differences in family structures ('Family structure as a determinant of social norms').

### Family structure as determined by geography

Differences in subsistence mode not only impact social norms via religion but also via differences in family structure. Mitterauer (2010), for example, observes that for some kinds of agriculture, a division of labour along gender lines as well as the cooperation between male adults was key. Given that this was the case, he expects patrilineal systems to emerge that will be connected via a clan system (*ibid.*: 89). He observes that such family structures have survived in the West Balkans until today. Beyond that, Mitterauer (2010: 66ff.) shows that the way in which a particular agricultural system was constitutionalized could have far-reaching consequences on family structures. He argues that the way the kingdom of the Franks structured its agriculture may be the source for what was termed the 'European Marriage Pattern' by Hajnal (1965).

The European Marriage Pattern can be interpreted as consisting of a set of institutions, comprising the social norms that women do not marry if they are very young, that not marrying at all is socially accepted and that most families are organized as nuclear families. Carmichael *et al.* (2016: 199) add

that traits such as women being able to own property, to have a share in inheritance and that marriage is strictly monogamous as well as exogamous and evaluate them as ‘perhaps almost as important.’

It has long been argued that the Black Death caused important changes in Europe (e.g. Bailey, 2021) such as the liberalization of serfdom. But because there was a severe shortage of labour, it may also have strengthened those social norms empowering women vis-à-vis men (Carmichael *et al.*, 2016).

Enke (2019) is primarily interested in the determinants of moral systems. He not only looks at the determinants of the main dimensions of moral foundations theory (namely care, fairness, loyalty, authority, and sanctity as introduced by Graham *et al.*, 2013), but also at the contributions that people make to the provision of public goods, the extent to which people trust each other, etc. The aspect of family structure that his study focuses on is kinship, which he interprets as encompassing family structure and descent systems. To produce a kinship indicator he relies on four variables from the Ethnographic Atlas: the domestic organization of the family (distinguishing between nuclear and extended families) and post wedding residence (asking whether the wife is expected to move in with her husband) to cover family structure and lineages (defined as a group of people who are linked by being able to trace a common known ancestor), and segmented communities and clans (when lineages become very large, they may split into multiple lineages but may still be united in a clan) to cover descent systems.

Based on the assumption that sedentary agriculture necessitates more collective action than hunter gatherer societies, Enke (2019) does find that societies that practiced agriculture were characterized by tighter kinship relations. As the overwhelming number of societies no longer relies on hunting and gathering, he asks whether pathogen prevalence could be an important determinant of tight kinship relations. Following Fincher and Thornhill (2012), who find that higher parasite stress is correlated with stronger family ties because pathogen prevalence makes travelling and interaction with others more dangerous, Enke (2019) uses three measures of pathogen prevalence, and his estimates support those conjectures.<sup>12</sup>

Whereas pathogen prevalence is hypothesized to cause strong family ties, both weather variability and wheat suitability have been hypothesized to be associated with weak family ties. In societies subject to high weather variability, it would be imprudent to rely on your family alone, as the other family members are also likely to be affected by a bad harvest. Establishing ties to non-family members would serve as insurance. Durante (2009) finds some evidence in favour of this argument.

Except during sowing and harvesting, growing wheat is not very labour intensive. Historically, women were often responsible for wheat growing, while the men tended to the cattle and were often away from home for extended periods which increased the number of interactions with non-family members. Relying on these stylized facts, Ang and Fredriksson (2017) hypothesize that in societies that have historically relied on cultivating wheat, family ties are weaker. Relying on individual data, cross-state data for the U.S., and cross-country data they find strong evidence supporting their hypothesis. An analysis based on the epidemiological approach shows that second-generation immigrants originating from wheat-oriented cultures place little emphasis on family ties.

The study by Ang and Frederiksson is of particular interest because they run a horse race and include not only wheat suitability, but also temperature variability and pathogen stress to see how robust their findings are. It turns out that wheat suitability always remains highly negatively associated with the strength of family ties, neither temperature variability nor pathogen stress are close to being significant.

### *Family structure as a determinant of social norms*

Inheritance rules are an important dimension of family structure. In a study covering 135 regions in 12 Western European countries, Gutmann and Voigt (2023) find that regions with family systems relying

<sup>12</sup>Davis and Williamson (2020) challenge the causal chain established by Enke and argue that geographical factors (in their case pathogen prevalence) would determine culture (with individualism/collectivism as a proxy) which would, in turn, impact on the strength of family ties.



on egalitarian inheritance rules come with a higher willingness to follow rules and orders and a stronger preference for cultural homogeneity which may indicate low tolerance for anything unknown. This second effect is even more pronounced in regions in which the communitarian family was historically dominant, i.e. a combination of egalitarian inheritance with multi-generation households was practiced.

Enke (2019) is not only interested in the determinants of family structures but also their effects on a host of dimensions, including cooperation and trust. He finds significant differences in cooperative behaviours depending on kinship tightness. Specifically, in societies with weak kinship ties, individuals are more likely to incur personal costs to sanction someone who has treated others unfairly, whereas members of societies with strong kinship ties are more likely to take revenge directly. The results for trust indicate that members of societies with tight kinship ties place their trust in the in-group, but are less trusting of foreigners and strangers in general. These results not only hold across societies, but relying on the epidemiological approach also within countries on the individual level. These findings imply that in tight kinship groups, cooperation takes place primarily within the in-group, whereas in loose kinship societies, one can enter into productive relationships with strangers without being particularly obligated to members of the in-group.

A closely related study is Moscona *et al.* (2017) who ask whether ethnic groups in Africa that have traditionally relied on segmentary lineage display different levels of trust to their in-group compared to their outgroup. The authors use segmentary lineage to describe a society that traces its ancestry back to an often mythical founder. When the society evolves its own political and economic life, a lineage is established. As different members (segments) of the society are allocated different functions (political, administrative, judicial), a segmentary lineage society develops. Moscona *et al.* (2017: 566) cite Fortes (1953: 26) who describes the consequences of segmentary lineage as ‘the individual has no legal or political status except as a member of a lineage; ... all legal and political relations in the society take place in the context of the lineage system.’ Formulated differently, societies relying on segmentary lineage are expected to be populated by people sharing collectivist norms.

Moscona *et al.* (2017) hypothesize that trust levels within such groups might be high but that, due to fewer interactions taking place with others, generalized trust levels should be low. Based on recent Afrobarometer data, they find their hypothesis largely confirmed. Moreover, it seems that differences in trust levels are not caused by higher trust vis-à-vis in-group members but, rather, lower trust vis-à-vis outgroup members.

In the companion paper (Voigt, 2023) of this survey, I quoted a number of studies showing that polygamy creates problems since it implies that some men do not get to marry at all. One consequence are higher levels of violence. Since marriageable women are scarce, societies are likely to develop norms that reduce their presence in the public. Another possible consequence could be social norms encouraging the onset of violent conflict and participation therein: if many men die, this increases the chances of the survivors to marry. I am, however, not aware of a study that would have probed this hypothesis empirically.

In this section, I have cited studies establishing a relationship between various aspects of family structure with social norms. Additional studies analysing the effects of more specific aspects of family organization, such as the dowry or bride price are definitely a desideratum.

## Conclusions and outlook

In this survey, I have tried to show that we have made huge steps toward identifying some of the basic determinants driving the emergence of social norms over the course of the last 30 years.

By now, there is very solid evidence on the direct importance of geographical conditions on social norms (presented in the companion paper) but also on its effects mediated by religion and family organization (presented in this paper). Many of the studies here reported include an epidemiological approach and show that social norms keep on being transmitted to one’s children long after the country of origin has been left. Social norms that originally emerged as responses posed by particular geographical challenges may still survive to this very day although the original challenge is less acute



today. In this paper, we have shown how both religious beliefs and aspects of family organization can function to keep these social norms alive.

In a recent paper, Davis (2021) argued that religions espouse the values indigenous to the country from which they emerged. A number of follow-up questions come immediately to the fore. E.g. is the 'social norms persistence increasing effect' of religion smaller in countries where a religion is practiced that did not originate there? Does it depend on how the religion was imported; whether forced upon the population by converted rulers or accepted on an entirely voluntary basis? What impact does the time dimension play, i.e. the number of generations an imported religion has already been practiced in a country?

Differences in geographical conditions can also lead to differences in religious beliefs and practices. In the 'Religion as influenced by family organization and vice versa' section above, I gave some examples regarding the Catholic Church. Here are some regarding Islam that were elicited by a survey among 38,000 Muslims in 39 countries by the Pew Research Center (2012). According to the survey, only 15% of Kazakhs believe in jinns whereas 86% of Moroccans do. Similarly, 89% of Tunisian respondents profess to believe in witchcraft compared to only 9% in Bangladesh. Finally, while only 1% of respondents in Malaysia appeal to deceased ancestors, 51% in Kazakhstan do. These are examples – but they cannot prove that there is a systematic relationship between local geographical conditions and the way in which religions are practiced. It is definitely a desideratum to analyse to what degree these differences can be traced back to differences in the geographical conditions.

Yet, it has also been observed that after some threshold has been reached, norms can quickly change (e.g. Bicchieri, 2016 or Centola *et al.*, 2018). Our general knowledge regarding the conditions under which social norms are likely to remain the same and under what conditions they are likely to change leaves much to be desired. With regard to the topic of this paper, more detailed questions pop up: given that due to changes in relevant constraints some social norms have become dysfunctional yet survive to the mediating factors religion and (or) family, can these mediating factors be manipulated? And if so, how? And how can misuse be prevented?

To gain solid knowledge about the time-invariance of social norms, it is, of course, essential to identify the social norms that were shared by societies 500 or even 1,000 years ago. Many studies cited in this paper rely on the Ethnographic Atlas (or the Standard Cross-Cultural Survey) as sources of data for various societies. Yet, the information contained in these sources is naturally limited and it seems apt to look for additional sources. Recently, Michalopoulos and Xue (2021) published a paper relying on the motifs of fairy tales as a first step to establish the equivalent of the World Values Survey for a time period long passed. It can only be a first step as they do not rely on fairy tales in their entirety, but only on the motifs, i.e. the short headers given these fairy tales by researchers. It could also be argued that instead of fairy tales, more attention should be given to legends and myths because legends pretend to have happened in reality whereas myths are often the founding document of group identity and could, thus, be more relevant if one is interested in social norms.

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