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CHANGING CULTURE AND NORMS IN DEVELOPING COUNTRIES

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ABSTRACT

We survey recent research on changing culture and social norms in developing countries and propose a simple framework to interpret these changes. We conceptualize individual utility from a given action as a function of three components: intrinsic valuations, material payoffs, and social interactions. Using this lens, we review evidence on interventions that target each component and their interactions.

First, we discuss efforts to shift intrinsic values through schooling and curricula, information campaigns, mass media, and empowerment programs, with particular attention to gender norms, intimate partner violence, and harmful practices such as female genital cutting. Second, we examine social determinants of behavior, including misperceptions about others' beliefs, coordination failures, and the role of intermediate "stepping-stone" actions in facilitating or hindering norm transitions. Third, we analyze how changes in material incentives, via labor market opportunities, transfers, and legal reforms, affect behavior and underlying norms.

Throughout, we highlight methodological challenges in measuring norms and identifying mechanisms, and we emphasize that policy effects depend critically on existing social structures and belief distributions. We conclude by outlining open questions from a positive and normative perspective.

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1 Introduction

Culture and norms shape individual behavior in fundamental ways, both in the economic sphere and in other aspects of life. We understand culture to encompass the beliefs, values, customs, behaviors and artifacts that define a certain group or society.[1]. Social norms, while related to culture, have a narrower definition, corresponding to informal rules that govern behavior, or a 'grammar for social interactions' (Bicchieri, 2006): "instead of dictating the way in which words are formed and ordered, they dictate behavior that people are expected to engage in while in particular situations".[2] In this chapter we discuss recent contributions on changing culture and social norms in developing countries.

Why focus on developing countries? Three features make these countries especially interesting for the study of changing culture and norms. The first is that informal rules play a crucial role in settings with missing or imperfect markets. This means that the economic repercussions of certain traits or norms may be particularly deep and that development policy may be ineffective if it does not take into account such cultural or social constraints. The second reason is that, while 'inefficient' norms exist both in high- and in low-income settings, the potential for such norms to trigger a 'poverty trap' is higher in the latter. For example, norms that exclude certain groups from high-earning occupations may contribute to perpetuating their status of economic and social exclusion (e.g., Munshi and Rosenzweig, 2006). Finally, the intersection of development economics and the economics of culture has been an incredibly vibrant research area in recent years. This may be attributable in part to

*We thank Anastasiia Khromenko and German Orbegozo for excellent research assistance.

[1]UNESCO's 2001 Universal Declaration on Cultural Diversity states that "culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs".

[2]Bicchieri (2018), p. 23.

the fast-evolving economic and social landscape in some of the regions under study, and in part to methodological considerations, such as the widespread use of randomized controlled trials (RCTs) in development, which has allowed testing the effectiveness of interventions aimed at changing culture and norms.

Before diving into conceptual frameworks and empirical studies on interventions that causally affect culture, we may start by asking: What is cultural change? How much change is there? These simple questions are, perhaps surprisingly, quite difficult to provide firm answers on. Culture and social norms are somewhat elusive concepts, especially once one aims to approach them using data. In a sense, defining what is *not* culture, or a measure of it, is easier. Culture as a concept is arguably more useful when contrasting heterogeneity across societies.

To see this, consider Figure 1. It uses standard World Values Survey (WVS) data from low and lower-middle income countries (in blue), as well as upper-middle-income countries (in black).[3] The United States is included as high-income country benchmark. Panel (a) shows the percent of people who view *family* as 'very important' in life. The x-axis captures the value for the baseline period (1994-2004, depending on the country) and the y-axis shows it for the most recent data (2017-2022). The data span a time period of approximately twenty years, where the solid 45-degree line captures no change. There is relatively little heterogeneity across the world: in all countries, a vast majority view family as very important. Moreover, there are some changes over time and these tend to be in the direction of family being more important, but one should also consider the overall high baseline values. Is the importance of family a measure of culture? Clearly, there is a lot of persistence, which is often viewed as a defining feature of culture. On the other hand, the time period for which we have data only spans a few decades. If one had data allowing one to go back many more decades, or centuries, another picture may emerge. The lack of consistent and uniform panel data across long time periods makes it difficult to draw firm conclusions about cultural change. Overall, while within the range of high values there is some heterogeneity in the importance of family across countries and over time, there is less cross-country heterogeneity in the importance of family relative to other dimensions, as we next illustrate.

For example, consider panel (b). The graph shows the importance of *religion* in people's lives. There is tremendous heterogeneity across countries, spanning the spectrum from almost zero to one hundred percent of the population. In Indonesia and Nigeria, it is important to almost everyone, whereas in China and Vietnam, it is important only to a small fraction. Moreover, we observe substantial change over time in many cases. In Chile, for example,

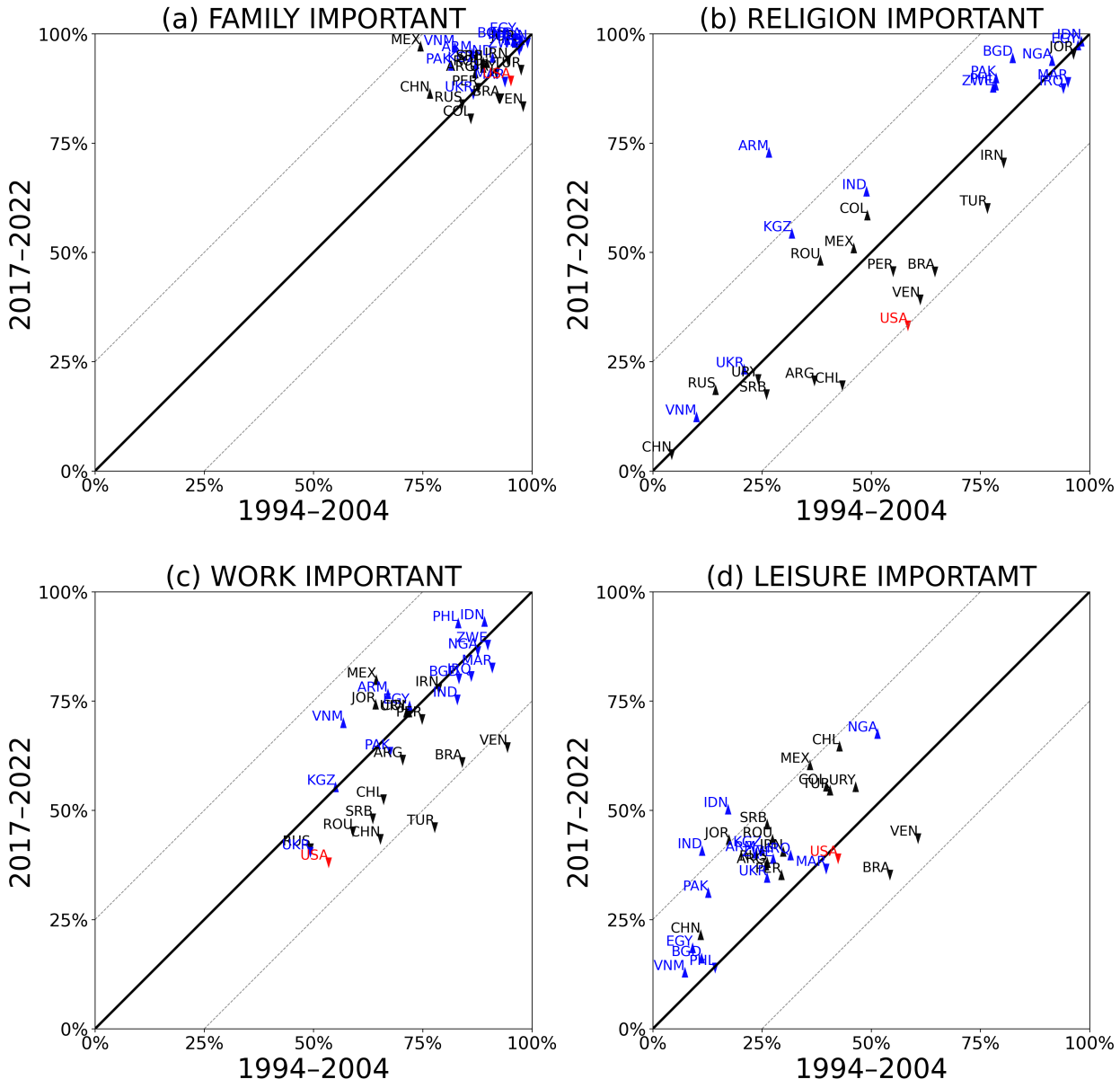
[3]We use the World Bank classification, for each country as of 2010. The WVS data includes all countries where the survey was asked in both the baseline and endline period.

the importance of religion decreased more than 25 percentage points (more than 50 percent compared to the baseline) during this twenty-year period, similar to the reduction in the United States. Clearly, the importance of religion is a cultural trait. The same can be said for the data in panels (c) and (d), which show the importance of *work* and *leisure*. We observe a lot of cross-country heterogeneity and non-trivial changes over time. For example, in Chile people are around 25 percentage points less likely to report that work is very important in their lives and 12 percentage points more likely to report that leisure is. Across the board, leisure appears increasingly important in people's lives over time, in both low- and middle-income countries.

It is not hard to see that such cultural change can drive *economic decisions* such as labor supply, consistent with what a standard economic model with labor-leisure preferences would suggest. When real wages are held constant, the willingness to accept a job will fall if preferences have shifted; cultural change in this case would move the labor supply curve to the left. By contrast, survey responses indicating that leisure has become more important might not reflect any shift in preferences at all. Economics 101 tells us that if incomes rise due to higher wages (perhaps driven by productivity improvements), the substitution effect pushes people away from leisure, while the income effect pulls them toward it. Observing a net rise in the reported importance of leisure implies that the income effect dominates. Thus, when people say that leisure is more important, this need not indicate that culture itself has changed. This discussion should make clear that distinguishing between "standard" economic determinants versus "cultural" determinants of behavior must necessarily incorporate the role of material (pecuniary) incentives.

Many manifestations of social norms correlate with levels of economic development. Consider attitudes around sexuality and gender roles. For example, regarding homosexuality, WVS has been asking the question *Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: Homosexuality.* Respondents are asked to answer on a scale from 1 to 10, where 1 means "never justifiable" and 10 means "always justifiable". Panel (b) in Figure 2 makes clear that there is not only strong heterogeneity across countries, but also an overall tendency towards more tolerant attitudes. The most striking example of changing norms can be seen in Vietnam, where there has been approximately a 70 percentage point drop in whether people think homosexuality can never be justified. A significant share of the literature has focused on norms around gender. A standard measurement in this literature comes from whether people agree with the statement *When jobs are scarce, men should have more right to a job than women*, as measured in WVS. Panel (b) in Figure 2 shows the percent that agree (as opposed to disagreeing or neither agreeing nor disagreeing). In the available data for low and lower-middle

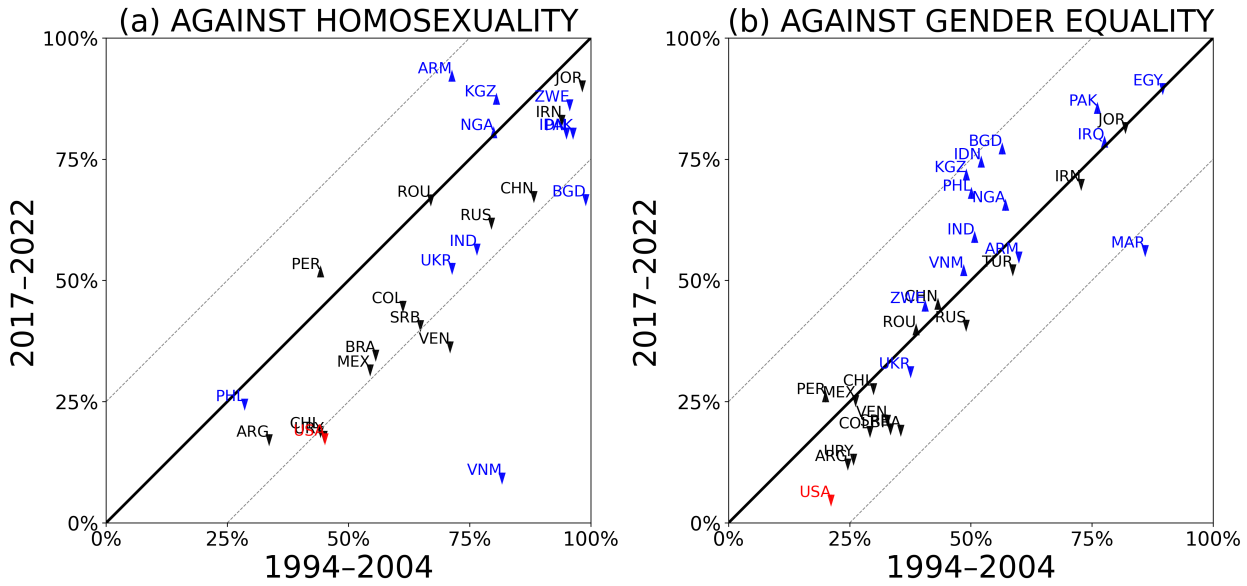
Figure 1: Cultural Change Across Domains Over Two Decades



Notes: Figure shows the share of respondents who consider certain life domains "very important," using World Values Survey data. Arrows indicate the direction of change between a baseline period (1994–2004) across Waves 3 and 4, using the earliest data in Wave 3 unless the country was only surveyed Wave 4, and Wave 7 (2017–2022). Each dot represents a country. Blue = low and lower-middle income; **Black** = upper-middle income; Red = USA (used as a high-income benchmark). Income groups are based on the World Bank classification as of 2010. The 45-degree line represents no change. Panels show: (a) Family, (b) Religion, (c) Work, and (d) Leisure. Importance is measured as the percent of people rating the domain "very important." The solid 45-degree line represents no change. The two dotted 45-degree lines represent a 25 percentage point change from the baseline to the endline period.

income countries, the share that agrees is often half (or more) of the population. Strikingly, in almost all low-income countries we have seen a rising share that agrees that men should

Figure 2: Changing Norms Around Sexuality and Gender



Notes: Panel (a) shows the share who say homosexuality is "never justifiable". Panel (b) shows the share who agree that "when jobs are scarce, men should have more right to a job than women. World Values Survey data from available countries. Arrows indicate change from a baseline period (1994–2004) to endline (2017–2022). Each dot represents a country. Blue = low and lower-middle income; **Black** = upper-middle income; Red = USA (used as a high-income benchmark). The solid 45-degree line represents no change. The two dotted 45-degree lines represent a 25 percentage point change from the baseline to the endline period.

have more right to a job when they are scarce. Measured this way, attitudes are changing in many places. However, gender norms appear to be turning in a less progressive direction in the less economically developed countries, whereas in upper middle countries the opposite pattern can be seen.

While interesting, similar to survey responses on what is important in people's lives, data like these can have many interpretations. It is not clear how they map into individual choices. Most importantly for the purpose of this chapter, can policy interventions influence attitudes and beliefs in ways that lead to meaningful behavioral changes and impacts on economic outcomes? What kinds of interventions can we envision and under what conditions would we expect them to matter? To tackle such questions, it is key to engage with conceptual frameworks that allows us to move between theory and data. Importantly, our aim is to discuss ideas and evidence from a positive – not normative – perspective. Although some interventions plainly correct market failures, others may raise equity or value concerns. The desirability of culture-changing interventions therefore depends on one's normative stance toward these trade-offs.

The remainder of the chapter is organized as follows. In section 2, we present a simple conceptual framework that can guide the analysis of the various components of cultural

change. Sections 3, 4 and 5 discuss, respectively, changes in the 'intrinsic', 'social', and 'material' determinants of culture, as defined in the conceptual framework. Section 6 discusses feedback mechanisms among the three types of determinants, and section 7 concludes, offering some directions for future research.

2 Conceptual framework

To distinguish between "standard" economic determinants and "cultural" determinants of behavior one should, arguably, incorporate the role of material (pecuniary) incentives. Furthermore, the conceptual framework around which we organize the literature conceives culture as the product of individual choices in a context with interdependency among actors. In particular, we can represent the utility that an individual derives from an action or trait $a \in A$ as depending on three sets of factors:

- y_a : a material payoff deriving from action a (e.g., a monetary compensation or a fine);
- v_a : the 'intrinsic' valuation that the individual places on the action, that is, the valuation that is independent of what other people choose. This could capture individual, non-material payoffs;
- p_a : the fraction of individuals in the population who choose the same action as the individual. This term reflects the 'social' valuation of the action and it captures an interdependency among people's choices that is not mediated by market returns.

The utility of the individual from choosing action or trait a can thus be written as

$$u_a = f(v_a, y_a, p_a). \tag{1}$$

Conventionally, $u(.)$ is increasing in y_a and v_a; in the presence of conformity motives, it is also increasing in p_a.

Different versions of (1) have been employed in the theoretical literature to study choice in the presence of social interactions. In their seminal contribution, Brock and Durlauf (2001) model a finite population of agents who choose a binary action $a \in \{-1, 1\}$. They model the utility of an individual i as

$$u(a_i) = v(a_i) + S(a_i, \mu_i^e(\mathbf{a_{-i}})) + \varepsilon(a_i), \tag{2}$$

where $S(.)$ is the social utility function; $\mu_i^e(\mathbf{a_{-i}})$ denotes i's expectation about the choice that other agents will make; and $\varepsilon(a_i)$ is an i.i.d. random utility term. The authors prove the

existence of multiple equilibria which exhibit tipping properties. This framework, while not explicitly distinguishing material and intrinsic payoffs, has constituted the basis for many interventions aimed at shifting aggregate behavior by altering the choices of a 'critical mass' of people.

Using a modified version of (2), Gulesci et al. (2025) extend the binary choice model to N actions to study how the presence of 'intermediate' actions affects the dynamics of norms change, and in particular whether such actions can serve as 'stepping stones' to transition from 'bad' to 'good' equilibria.

Benabou and Tirole (2011) model agents' binary choices, as well as the optimal policy set by a principal, in the presence of intrinsic motivation, material incentives and social or self-image concerns. They represent individual i's utility from choosing action $a_i \in \{0, 1\}$ as

$$U = (v_i + y - c)a_i + e\bar{a} + \mu E(v_i|a_i), \tag{3}$$

where v_i is the individual's 'intrinsic motivation', observed only by him/herself; y is the material incentive provided by the principal to those who choose $a = 1$; c is the (effort) cost born by the individual when choosing $a = 1$; e parameterizes the externality that the individual receives from the aggregate level of the action ($\bar{a}$); and the last term in (3) represents reputational concerns. In particular, the model allows other players to update their prior on i's intrinsic motivation after observing i's choice of action, as reflected in the posterior $E(v_i|a_i)$, and μ is the extent to which individuals care about social (or self-) image.

Two key insights from Benabou and Tirole's model are particularly relevant for understanding norms change. The first is that an increase in the share of people who choose $a = 1$ does not necessarily translate into a greater pressure to conform, different from the models cited above. The reason is that, while the 'stigma' for not participating increases, the 'honor' from 'doing the right thing' decreases because there are now many people who do it. The second insight is that material incentives may backfire: while incentivizing $a = 1$ by increasing y may seem a good idea, it also reduces the reputational value of the action, because it makes the choice of $a = 1$ seem driven relatively more by material benefits than by intrinsic motivation. In other words, y acts as a source of noise in the signal extraction problem for v_i. The authors show that material incentives are relatively more effective for incentivizing 'respectable' actions (i.e., those chosen by a large number of people, where material incentives 'crowd in' stigma from non-compliance), and less effective for incentivizing 'admirable' actions (chosen by few people, where crowding out prevails).

Bueno de Mesquita and Shadmehr (2023) propose a model where individuals are intrinsically motivated and also wish to conform to other people's behavior, but are uncertain about

others' internal motivations, which change over time. They study the dynamics of social change under two types of internal motivations: (i) common value settings where there is an objective truth but individuals differ in the information they have about it; and (ii) private value settings where individuals actually disagree on what the proper behavior should be. The authors show that in equilibrium individuals overweigh common knowledge about past behavior, which leads to *inertia*: behavior changes more slowly than internal motivations. In such a scenario, policies that provide public information may improve the ability to coordinate and re-align choice with the underlying change in intrinsic preferences, as we will see in section 4.2. Another interesting prediction of their framework is that the average action will be in between the average perceived *descriptive* norm (i.e., what one thinks others will do) and the average perceived *injunctive* norm (i.e., what one thinks others believe is the right thing to do). This has implications for the interpretation of survey data about beliefs and attitudes and their relation to actual behavior.

Moving from the above conceptual framework to the issue of changing norms and culture, a premise is in order. Do we need to change norms or culture? From an evolutionary perspective, one would expect the prevailing norms and traits to have some functional advantage over alternatives, hence one approach may be to simply let evolution run its course. Such an approach would be too simplistic, as there are various instances in which the resulting equilibria may be improved upon.

Take, for example, the mismatch described in the model of Bueno de Mesquita and Shadmehr (2023), where the equilibrium gives too much weight to the past, generating inertia, or in the framework of Nunn (2022), where following tradition can bring advantages but also generate mismatch. In such circumstances, one may want to 'nudge' culture to be better aligned with the contemporaneous environment. Another example comes from cultural equilibria that reflect imbalances of power, e.g., in intra-household decision making. As we discuss below, this is the case for norms on intimate partner violence (IPV) in many parts of the world. Yet another example comes from instances where individuals hold misaligned beliefs, and take actions based on the 'wrong' premises. Finally, the classical case of coordination failure in social equilibria is one in which society may be stuck in a 'bad' equilibrium for a long time, simply because no one has incentives to move unilaterally. Some of these instances can benefit from interventions that change individual traits (e.g., the IPV example). In other cases, shifting a critical mass of individuals may be necessary (e.g., the coordination failures).

In the following sections, we zoom in on the three main ingredients of preferences as represented by our theoretical framework –intrinsic motivation, social concerns and material incentives– and review the existing evidence on whether and how leveraging these compon-

ents can lead to changes in the prevailing norms and culture across low- and middle-income countries.

3 Changing the 'intrinsic' determinants of culture

Intrinsic values are clearly an important determinant of individuals' culture and norm adherence. Consider, for example, female genital cutting (FGC) – a custom with deep historical roots (e.g., Becker (2022); Corno et al. (2025)). In an empirical study on 13 West African countries, Bellemare et al. (2015) show that on average 87 percent of the variation in FGC persistence is attributable to household-level and individual-level factors. We know that such values may be persistent and slow-moving, for several reasons: because their roots may lie in long-term historical features (e.g., Alesina et al., 2013); because the dynamics of adjustment in the presence of uncertainty about common values generates inertia (Bueno de Mesquita and Shadmehr, 2023); and because by nature many of these traits are transmitted intergenerationally (e.g., Bisin and Verdier, 2001).

The inter-generational nature of socialization implies that in some cases older generations may socialize younger ones to values that correspond to the environment where the older generations themselves were raised, thus building an element of persistence into culture. This is in line with the analysis by Nunn (2022), who models society as consisting of 'traditionalists' and 'non-traditionalists' and shows how there may be a *mismatch* between the action that tradition prescribes and the action that is best given the current (dynamically evolved) environment. For instance, Dhar et al. (2019) show that in the state of Haryana (India), children of parents who hold discriminatory gender attitudes are significantly more likely to hold discriminatory views. Also, adolescents' gender attitudes are more strongly correlated with those of their parents (in particular, their mother), than with those of their peers. Even more strikingly, Alesina et al. (2020) show that in China individuals whose *grandparents* belonged to the elite before the Communist Revolution are more individualistic and more likely to hold pro-market values today.

Despite the strong intergenerational persistence, recent evidence suggests that deliberate policy action or contextual factors can change these intrinsic values, and that in some cases the change can occur in a relatively short period of time. We review this evidence starting from deliberate efforts by governments or other actors to shape intrinsic preferences, and then moving to less direct influences.

3.1 Schooling and curriculum

Embedding a certain set of values into the school curriculum is one of the ways in which governments have been shaping national identity and other cultural traits throughout history. In a well known study, Cantoni et al. (2017) study a textbook reform implemented by the Chinese Communist Party during 2004-2010, which had the goal of improving students' opinion of Chinese institutions and governance, cementing national identity and raising awareness about the environment. Exploiting variation in the timing of introduction across provinces, the authors show that students exposed to the new curriculum exhibit greater trust towards the government, and in general values more aligned with the objectives of the reform. In a similar vein, Braghieri and Eichmeyer (2024) exploit variation in the high school history curriculum taught in one of the German states to show that students who learn about a given authoritarian regime are less likely to support extremist views associated with that regime.[4]

While the above evidence suggests the importance of textbook *content* in shaping culture, we know less about the role that images play. In a recent paper, Adukia et al. (2023) employ artificial intelligence tools to classify images and text from children's books. They find that Black and Latinx characters are underrepresented relative to their share in the U.S. population and that female characters are more likely to appear in images than in the text. A key question is to what extent such biases in representation may contribute to the formation (and transmission) of racial and gender stereotypes, and ultimately to the formation of culture. While the authors do not investigate this question, this seems an interesting avenue for future research. Images have acquired a growing role in the content to which young generations are exposed, partly due to the use of digital content within and outside educational settings. A better understanding of the impact of visual representation on the evolution of culture is needed to counteract potential biases.[5]

It is worth noting that most of the literature discussed above is about high income countries. A likely reason for this is that getting data on school curricula and textbooks may be more complex in lower income settings; another reason is that in these settings the use (and the number) of textbooks may be more limited, thus making it more difficult to get an accurate picture of who gets taught what. Still, it seems important to improve our understanding of the messages to which young generations are exposed in school and on how these messages shape culture in developing countries.

[4]This is not confined to political attitudes. Arold (2024) show that exposure to more extensive coverage of evolution theory in U.S. schools reduces anti-scientific attitudes in adulthood.

[5]In recent work, Caprini (2024) documents the existence of partisanship and 'visual bias' in the images reported by U.S. news media and shows that they exert an influence on individual's own political attitudes.

One way in which researchers have addressed the limited availability of observational data on school curricula in low and middle-income settings has been to rely on experiments. To the best of our knowledge, such experiments have not altered the *content* of textbooks, but rather complemented existing (standard) curricula with discussion sessions and other materials directly aimed at targeting certain norms and values.

A well known example is Dhar et al. (2022), who evaluate the impact of an intervention conducted in secondary schools by the nonprofit Breakthrough in the Indian state of Haryana. The intervention lasted for 2.5 years and consisted in 45 minutes-long classroom discussions every three weeks, during which various aspects of gender equality were addressed. While some of the content prompted participants to reassess women's rights to education, women's role inside and outside the home, and the benefits from female employment (thus potentially leading to updates in v_a in our framework), other parts of the curriculum tackled societal expectations and endowed students with tools to persuade their parents (thus embedding a 'social' component that would enter the parameter μ). The effects were striking: three months after the end of the program, gender attitudes improved by 0.18 SD and the effect persisted almost with the same magnitude two years after the end of the program. The impact was stronger for boys, who also reported doing more household chores at home. Surprisingly, the effects were not differential by parents' baseline attitudes. If we think of what this could mean for the relative importance of v_a and μ, we cannot say that one prevails over the other, but we can plausibly argue that –for this sample– the main reference group entering the μ factor may not be the parents. At the same time, this may be due to the design of the program itself, which made the peer group very salient by engaging students in discussions with the whole class every three weeks. [6]

A common feature of the above interventions is that they targeted individuals in a phase of their life –adolescence– where preferences may be particularly malleable. An additional advantage of the structure of those interventions is that, by being offered in school and by involving repeated and regular discussions with peers, they could potentially activate both 'intrinsic' and 'social' components of cultural change. In turn, these could have various effects on behavior and second-order externality effects, as suggested by equation 3. Targeting adult populations is more challenging, both because their intrinsic values may be harder to change, and because there may be less overlap in the set of 'social referents' of different individuals (as opposed to, say, classmates). The closest analog to 'curricula interventions' for adults in the space of gender norms comes from programs that target couples within communities, often offering the content in a collective format. For example, Dunkle et al. (2020) assess the

[6]Positive effects were also found by Edmonds et al. (2023), who evaluated a school-based life skills curriculum offered to girls in 6th grade in Rajastan, India.

impact of a curriculum for couples aimed at preventing intimate partner violence (IPV) and offered by civil society organizations in Rwanda. Couples were recruited from Village Savings and Loan Associations (VSLAs) to participate in sessions covering power dynamics, triggers of IPV, alternatives to violence and aspirations. The program reduced the incidence of IPV, as reported by both men and women. It also led to decreased acceptability of domestic violence, suggesting a shift in local social norms.

3.2 Information campaigns

Another way to shift intrinsic values is to provide information about the benefits and costs of specific actions. This has traditionally been done in the health domain (e.g., for HIV prevention, Dupas, 2011 and Delavande and Kohler, 2016), but more recent work has looked at information interventions directly aimed at changing norms.

Corno and La Ferrara (2024) study the effectiveness of two community level interventions implemented in Sierra Leone by a local NGO and aimed at reducing the incidence of female genital cutting. In Sierra Leone, the practice of FGC is known as 'Bondo' and it marks a girl's entry into women's secret society. This constitutes an important initiation ritual where girls receive training in life skills, in how to become wives and mothers, and where they cement social relationships. Both interventions in Corno and La Ferrara (2024) involved sensitization and group meetings, but they differed in the emphasis placed on potential determinants of individual values. The first intervention –'information' treatment– was centered around collective discussions of the pros and cons of FGC in terms of health consequences, education, etc. The second intervention –'Bondo without cutting'– consisted in meetings where community members were encouraged to replace the cutting ritual in the Bondo ceremony with an 'alternative sign' chosen by the participants themselves. One could conceive both interventions as affecting the individual valuation v_a –one by highlighting the health costs and the other by changing the 'identity benefits'–, while the second approach may also affect the expected social sanctions from not complying with the cutting norm. Three years after implementation, both interventions resulted in a 7-8 percentage point (23%) reduction in the probability that a girl was cut.

A different type of information campaign against FGC is studied by Khalifa (2022). Over the period 1994-2003, the Ministry of Health in Egypt sponsored a radio campaign against FGC, whose content was centered around the health consequences of the practice. Exploiting variation in radio signal reception across villages, combined with variation in girls' age at the time of the campaign, the author shows that women exposed to the campaign are 13% less likely to be cut. These women also receive a 25% lower bride price, consistent with the

interpretation of FGC as a marker for chastity that is valued in the marriage market.

Information need not necessarily be provided through large scale campaigns. Many recent attempts have exploited small scale, tailored interventions to shape individual values and correct potential misinformation. In the context of attitudes towards female employment in India, Dean and Jayachandran (2019) study the effects of two interventions sponsored by employers in order to retain female teachers in the presence of family pressure to quit working. One of the interventions consists in short videos including testimonials by other teachers who emphasize the benefits of employment for personal fulfillment, as well as the minimal risk of this type of job for personal safety.[7] The results suggest no impact of these videos on attitudes towards employment in general, nor towards the specific job, nor towards women's empowerment and decision making. One possibility is that the intervention was too light-touch; another possibility is that –because the intervention was sponsored by the employer, who had an interest in retaining female teachers– recipients may have discounted the informational value of the content. Yet another possible reason for the lack of effectiveness is that the intervention did not operate at the community level and, to the extent that the main constraints may have been 'social' in nature, it may not have addressed them.

3.3 Media

One way of conveying information that directly targets individuals' own valuations and at the same time affects expectations about other people's reactions is through mass media. Indeed, as we discuss below, the potential of using mass media to change second order beliefs is often overlooked in the development literature.

Radio has traditionally been the most popular media in low income countries and there are well known instances in which it has been instrumentally used for propaganda purposes in a way that generated long term effects on culture. Among these cases, Yanagizawa-Drott (2014) documents the effects of radio broadcasts on violence during the Rwandan genocide, while R. Qian (2024) finds that the Communist propaganda on radio during the 1950s-1970s in China contributed to greater gender equality in educational and labor outcomes.

In more recent years, the rapid spread of television has spurred a vivid research on its effects. Early contributions by Jensen and Oster (2009) and La Ferrara et al. (2012) show that widely disseminated commercial TV programs in India and Brazil had the effect of altering norms and behaviors related to women's empowerment and fertility. The former authors find that the introduction of cable TV across Indian villages exposed viewers to different values and ways of life and led to a reduction in the acceptability of domestic

[7]The other intervention aimed at facilitating a conversation on the topic with family members.

violence, in son preference, in fertility rates, and increased reported women's autonomy.

La Ferrara et al. (2012) study the effects of soap operas ('novelas') on fertility rates in Brazil over the period 1965-1990. Exploiting the staggered entrace of Rede Globo – the producer of these programs– across municipalities, they find that exposure to Globo programming led to a reduction in fertility rates comparable to that of increasing women's education by 1.6 years. Interestingly, the plots of the *novelas* produced by Globo during this period involved families where most female characters where either childless or had one child. The reduction in fertility is thus consistent with an interpretation whereby the desirable life styles of the female 'role models' portrayed on TV may have induced a reduction in the demand for children. Suggestive evidence in this respect comes from the fact that the effect is stronger for women closer in age to the main female characters in a given year (who could better identify with the characters) and in years where the story portrayed upward social mobility (and was therefore more aspirational).

An important feature of Brazilian novelas has traditionally been their high penetration across all segments of society: the exceptionally high audience rates imply that when viewers are exposed to certain messages, they can anticipate that most other people in their communities will also be exposed to the same messages. Not only does this facilitate conversation on the topic, but it also contributes to aligning expectations in a way that might facilitate 'tipping' to a new equilibrium. While the 'second order beliefs' (SOB) argument is not the one that is typically put forward to promote the use of mass media for norm interventions (the main argument being that these media convey information in an easily understandable way and at low marginal cost), we believe the 'coordination' aspect that mass media programs –and increasingly social media– implicitly embed deserves more attention.

Moving from the effects of commercial TV to development policy, recent approaches have promoted the inclusion of educational messages into entertainment programs – the so called 'entertainment education' or '*edutainment*' approach, which has its roots in the work of Bandura (1976). The rationale for doing so is that the entertaining component may allow to engage viewers and make them more receptive of the educational message, especially if such messages are delivered by characters with whom viewers can identify. The exemplification also contributes to a goal setting process that can induce people to take action on the messages received.

One of the first rigorous evaluations of edutainment in the context of norms change is the work of Paluck (2009) and Paluck and Green (2009). The authors conducted an RCT in Rwanda to estimate the impact of a radio soap opera that promoted reconciliation on norms of trust and reciprocity. They find that the program significantly affected 'prescriptive' norms (i.e., how people were expected to behave) on inter-ethnic marriages, right to dissent

and trust. However, no effect was found on 'descriptive' norms (i.e., on perceptions of how other people actually behaved) in the same domains. This is in line with the argument on 'inertia' made by Bueno de Mesquita and Shadmehr (2023).

More recently, Banerjee, La Ferrara and Orozco (2019) and Banerjee, La Ferrara and Orozco (2019) conducted an RCT in Nigeria to study the effects of an edutainment TV series produced by MTV Staying Alive Foundation on values and norms in the domain of HIV-AIDS and domestic violence, respectively. The series, titled *Shuga*, aimed at reducing negative stereotypes against HIV+ people and inducing safer sexual behavior. One of the sub-plots also featured a young married couple where the husband was violent. Banerjee, La Ferrara and Orozco (2019) show that exposure to Shuga led to a reduction in the acceptability of domestic violence for men, but not for women.[8] As for other attitudes, Banerjee, La Ferrara and Orozco (2019) find that attitudes related to HIV (e.g., intention to reveal one's HIV status, acceptance of HIV+ people, etc.) significantly improved in response to the program, as did HIV testing rates. However, attitudes towards risky sexual behavior (e.g., dating sugar daddies, using condoms, etc.) were not significantly affected, nor was actual condom use. The program was pretty explicit on the expected health benefits from using condoms, which in our theoretical framework should have led to a change in the intrinsic valuation v_a. The fact that it did not suggests that other factors may have been at play, be it the 'social' component of the norm or the ability to negotiate condom use by the partner exposed to the information. The importance of agency, negotiation and empowerment for norms change is what we turn to next.

3.4 Empowerment interventions

Learning about factors that affect the intrinsic valuation for certain actions (v_a) may not be enough to induce change, especially when one's agency is limited and/or when there are frictions in decision-making. A large literature has stressed the importance of intra-household bargaining in the development context.[9] It is therefore natural to investigate the relationship between cultural change and individuals' ability to influence relevant decisions.

On the one hand, existing norms and institutions affect the balance of power among members of the household. Formal or customary laws about divorce (Voena, 2015), bride price (Anderson, 2007), inheritance (La Ferrara and Milazzo, 2017) and polygyny (Rossi, 2019) may reduce the outside options available to women and thus contribute to perpetuating

[8]Interestingly, only 9% of women in the sample identified with the female character who was the victim of violence, and this may possibly explain the lack of an impact on them. On the other hand, distancing oneself from the violent (male) character was clearly something appealing for male viewers.

[9]For an early review, see Doss (2013)

gender-unequal cultures. Low outside options may also derive from (endogenous) choices of the household, e.g., irreversible investments in education (Ashraf, Bau, Nunn and Voena, 2020), early fertility and specialization. Bargaining frictions can also be generated by intergenerational co-residence patterns in patrilocal societies (Khanna and Pandey, 2024) and by widespread use and acceptability of intimate partner violence (Bloch and Rao, 2002).[10]

On the other hand, changes in bargaining power within the household, and more broadly within society, can lead to important changes in attitudes, behaviors, and ultimately to a change in norms and culture themselves. A key parameter in models of bargaining within the household is each member's outside option. A number of studies have investigated how norms and behavior around intimate partner violence (IPV) respond to increases in women's outside options. Anderson (2021) exploits variation in the strength of women's property rights generated by patterns of colonization in Sub-Saharan Africa to show that stronger marital property rights for women lead to lower acceptability of IPV, as well as a lower incidence of IPV itself.

Motivated by the goal of achieving a more balanced distribution of power across genders, several organizations have promoted empowerment programs aimed at increasing women's agency. Bandiera et al. (2020) evaluate an intervention implemented by the NGO BRAC in Uganda, which leveraged "Empowerment and Livelihood for Adolescents" (ELA) clubs to endow adolescent girls with two forms of human capital: vocational skills and soft skills that would improve their ability to make decisions about sex, marriage and fertility. The authors find that the program reduced the share of girls reporting to have had sex against their will, and increased the ideal age at marriage and at first birth.

Decreases in intimate partner violence were also observed by Shah et al. (2023) in response to an intervention, also in collaboration with BRAC, that targeted male and female adolescents in Tanzania, with the explicit goal of shifting the power dynamics in their relationships. Girls engaged in goal setting activities within ELA clubs, while boys joined soccer clubs where they received a sports-based pedagogy aimed at changing attitudes around masculinity and gender based violence.

An interesting aspect of the interventions promoted by BRAC and evaluated by Shah et al. (2023) and Bandiera et al. (2020) is the choice to target individuals during adolescence as opposed to adult age. This has two key advantages: one is that preferences are relatively more malleable in this stage of emotional and psychological development, and the other –specific to the goal of shifting dynamics in relationships– is that the option of 'exiting' potentially toxic relationships is much less costly before marriage and child birth.

[10]Calvi (2020) links the excess mortality of older women in India, documented by Anderson and Ray (2010), to a reduction of women's bargaining power in the household in post-reproductive ages.

Moving from intra-generational to inter-generational negotiation dynamics, Ashraf, Bau, Low and McGinn (2020) design and evaluate an intervention aimed at empowering adolescent girls to recognize their agency within family decisions and leverage this power to negotiate "win win" solutions in discussions with their parents regarding future education. They find the effects to be greater than those of traditional empowerment curricula, especially for high ability girls.

The above intervention is a successful example of how to help young women overcome constraints to their ability to exert agency. Another example in this vein is McKelway (2024), who studies a specific internal constraint: generalized self-efficacy (GSE). In psychology the concept of GSE represents an individual's belief in their ability to reach certain goals. The author designed and implemented an intervention in collaboration with a local NGO, aimed at increasing GSE among a sample of married women in Uttar Pradesh, India. The intervention, consisting of meetings grounded in psycosocial theory, was successful at breaking a "GSE trap" that prevented women from escaping a "low" equilibrium simply because they lacked the confidence to exert effort to pursue their goals.

While the literature surveyed in this section offers important insights into the role of agency as a potential determinant of norms change, more work can be done in at least two directions. The first is to broaden our theoretical models of intra-household bargaining to incorporate notions of "power". The second is to improve our ability to measure control over decisions and resources. In this respect, promising work has been done recently on approaches that use machine learning (Jayachandran et al., 2023), structural measures based on the collective household model (Calvi et al., 2022), and lab-in-the-field experiments (Almås et al., 2018). We next turn to the 'social' determinants of norms and cultural change, and discuss those in relation to intrinsic and material incentives.

4 Changing 'social' determinants of culture

That social determinants can influence economic decisions and outcomes is, on one level, obvious. Anecdotal evidence is everywhere, and only a modicum of introspection is required to reach the conclusion that these forces exist, such as peer pressure, desires to conform, or the tendency to take actions that others find admirable. However, it has only been in recent years that economists have turned to studying these issues to empirically identify the mechanisms at play and their policy implications. While this is an exciting burgeoning literature, covered below, it is also useful to recognize the conceptual and methodological challenges that come with studying these phenomena.

Consider labor supply decisions in the context of Saudi Arabia, as studied in Bursztyn

et al. (2020). By all accounts, Saudi Arabia is a country with conservative norms, traditions and laws. A small single-digit percentage of females work outside the home. Now, imagine a mother deciding whether to work or stay home to take care of children. What are the tradeoffs? Equation 3 provides a simple way to conceptualize them. Clearly, working ($a = 1$) comes with an economic benefit, the wage y, as well as some cost from paying for child care in one form or another, c. Moreover, v could be positive if work is personally fulfilling, or manifested from a deeply held moral duty. The intrinsic motivation could be negative or positive, due to any preferences, including those due to religious views or social preferences regarding the implications for the child. Since friends, relatives and neighbors are likely to be able to observe if a woman works outside the home, she has to consider *how she will be judged*. If μ is high – the extent to which she cares about her social image, or the extent to which the action is easy to observe – her decision is particularly susceptible to the social pressure. But how exactly will her social reputation be affected, since v is not directly observable to others?

In equilibrium, there will be a cutoff value where only those that have sufficiently high intrinsic motivation will choose to work. Therefore, a rational expectation among peers is that those who work will have strong intrinsic motivation, while those who do not work do not. These two objects capture honor and stigma associated with each action. Therefore, as part of the decision, a woman has to take this into account and in equilibrium she will only work if v is sufficiently high.

This framework may seem intuitive, but before moving deeper into its implications, it is worth pointing out that social image concerns have not been, and still are not, a part of the standard curriculum in economics. If we consider the labor supply decision of women, for example, a neoclassical labor-leisure model would include material costs and benefits of working. It would also include some potentially heterogeneous preference for leisure that can be mapped to intrinsic motivations. In such a framework, culture and norms are essentially ignored, especially as intrinsic motivations are exogenously fixed and determined outside the model.

Taking seriously the social determinants of choice, our framework provides at least two avenues for change: (i) by correcting beliefs when there is strategic uncertainty about others' *intrinsic motivations* (v); and (ii) by providing some coordination mechanism when there is strategic uncertainty about others' *actions* (a).

4.1 Strategic Uncertainty About Others' Intrinsic Motivations

People can misperceive their own culture. Building on ideas in social psychology around "pluralistic ignorance", dating back to Katz et al. (1931), there could be an illusion about the distribution of intrinsic values (often referred to as first-order beliefs, FOB) in the population. These misperceptions are most likely when intrinsic values are shifting quickly – perhaps because material trade-offs have changed or due to other forces – but the information environment still discourages people from expressing those values publicly.

The condition occurs when individuals misperceive others' beliefs or preferences, creating a misalignment between first-order beliefs (FOB) and second-order beliefs (SOB). Formally, this misperception can be defined as the difference between the average subjective expected mean of intrinsic incentives v (average SOB) in a reference group, such as a village or workplace, and the objective mean of v (average FOB). This misalignment can sustain an inefficient equilibrium or perpetuate harmful norms, even when most individuals privately disapprove of the behavior. Bursztyn et al. (2020) document inefficient misperceptions in Saudi Arabia, regarding whether women should be allowed to work outside of home. Ferreira et al. (2024) document misperceptions in support for the worst form of female genital cutting – Pharaonic circumcision – in Somalia. Below, we describe core ideas of how cultural change can come about through this mechanism and some recent evidence from developing countries. Information interventions, such as those correcting misperceptions about gender norms in Saudi Arabia or about support for Pharaonic circumcision in Somalia, demonstrate the potential to align FOB and SOB, triggering substantial behavioral shifts.

For example, in Saudi Arabia the authors used the following survey question *'In my opinion, women should be allowed to work outside of the home'* to measure FOB among married males. A vast majority agreed, more than 80 percent, across samples and elicitation methods. Under common knowledge of intrinsic preferences, FOB, people would know this is the level of support. To capture SOB, subjects were asked *'If you had to guess, what percentage of the other participants do you think reported agreeing with the same statement?'*. Consistent with pluralistic ignorance, more than 90 percent underestimated support, even in peer groups consisting of neighbors and friends. If social image concerns drive behavior – in this case in a cultural context where husbands have a lot of power over their wives' decision to work outside the home – the theory predicts that information revealing the true distribution of FOB in the relevant peer group should affect behavior. This is exactly what the paper found; treated males were substantially more likely to forego some cash in order to sign up their wives for a job matching service. The key insight of the paper is that in cultural contexts where there are misperceptions about what people intrinsically believe

is acceptable or desirable behavior, a simple information intervention can move behavior quickly, potentially at a very low cost.

An open question is how widespread pluralistic ignorance is across societies and decision domains. Saudi Arabia may be an outlier in many respects. However, in a recent study, Bursztyn et al. (2023) collect data from 60 countries, on essentially the same survey question. Misperceptions are ubiquitous. There is a universal underestimation of the support for basic freedom for women in essentially all developing countries. For example, in places like Ethiopia, Ghana and Kenya, more than 80 percent of of the population support women's basic freedom to work outside of the home, while most people believe the support is much lower. Misperceptions about males are particularly large. This evidence suggests that information interventions could be tested and scaled up in many countries, potentially with important behavioral responses in terms of female (and male) labor supply decisions.

The conceptual framework suggests that if people care about their social image and there is uncertainty about the intrinsic motivations of people, another potential intervention is to affect the *visibility* of actions. When actions are not visible to others, the social image implications are weak, but making actions more easily observable changes the calculus. Visibility enables people to signal their types. A nice experiment to this end comes from Sierra Leone, by Karing (2024), within the context of parents deciding on immunizations of their children. Children received wearable color-coded bracelets upon timely vaccination, which caused greater immunization rates: in particular, children were 9 percentage points more likely to complete all routine immunizations before age one. This evidence suggests that social signaling incentives can act as an informal enforcement mechanism to increase contributions to public goods. Moreover, signals appear more effective when placed on a costlier action that is more informative about individuals' intrinsic motivation.[11]

4.2 Strategic Uncertainty About Others' Actions

Coordination problems arise when individuals are willing to change but hesitate due to uncertainty about others' actions. A simple but powerful theoretical framework, dating back to at least Schelling (1978) and captured in the Brock and Durlauf (2001) model, is

[11] An interesting question is how norms may change when groups with different values mix. For example, Agte and Bernhardt (2024) studies how norms among Hindus in India change when they exogenously mix with Adivasis. They show that adherence to caste purity norms is lower for Hindus who live close to Adivasis, a minority group outside the caste system. Exploiting variation in the share of Adivasis across Indian villages, they show that women are more likely to work and earn more in villages where Adivasis are a majority. They interpret this finding as driven by the lower material returns to investing in status within the Hindu caste, but it seems reasonable that complementary mechanisms may be at play, such as the social image payoffs changing when groups with different intrinsic values mix.

that under strategic complementarities in actions, coordination challenges will give rise to multiple equilibria. The idea is also compelling from a policy-making perspective, in the sense that it suggests that small external shocks, subtle shifts in perceptions and various policy interventions can trigger tipping points, transitioning communities toward potentially better outcomes.

This idea has been studied empirically within the context of female genital cutting in Sudan by Efferson et al. (2015). Specifically, using data across 45 communities, they investigate two key predictions. First, in a simple coordination model, the distribution across communities should be bimodal, as communities should have either very low or very high cutting rates. Second, if cutting practices and attitudes vary, a pronounced discontinuity should separate non-cutting from cutting communities. They find no evidence in favor of this theory and conclude that a single threshold is unlikely to exist. This does not mean that they reject strategic complementarities with respect to FGC. Instead, the authors speculate that each family may have their own threshold where they are willing to switch.

This work suggested that basic coordination models are too simplistic. A more flexible model with threshold heterogeneity can remove the certainty that a tipping point exists and introduce the possibility of a stable internal equilibrium. Novak (2020) embraces this approach and applies it to data from communities across Burkina Faso. The author uses a novel technique to empirically construct community-level threshold distributions, finding evidence consistent with some communities having a tipping point, while other communities not having one.

Identifying models with threshold preferences, or strategic complementarities vs substitutes, is challenging from a methodological perspective. The two studies above use observational data. Causal interpretations and potential policy implications are therefore not clear. Even if a tipping point exists in a community, the extent to which external interventions can move the equilibrium is not well established. Recent experimental evidence provides a nuanced picture. First, Naved et al. (2024) study the Tipping Point Initiative in rural Bangladesh, which aims to reduce child marriage. The intervention focused on synchronized engagement with participant groups to promote the rights of adolescent girls through community-level programming. Using data from 51 communities, this cluster-randomized control trial found no statistically significant average treatment effect on behavior.

By contrast, in the experiment conducted by Ferreira et al. (2024) in Somalia, one of the treatment arms consisted of a 'public declaration' intervention where meeting participants who were in favor of abandoning Pharaonic circumcision (one of the most severe forms of FGC) were asked to step into a circle that the meeting facilitator had drawn on the ground. This action involved two key elements. First, it served as a potential coordination tool,

insofar as the participants who wanted to coordinate with others on a collective action of abandoning the norm now could see how many and which community members they could approach. The second is that by stepping into the circle, individuals would publicly reveal their position (as opposed to the anonymous expressions of one's position typical of most interventions correcting misperceptions). This second feature turned out to play a significant role in the Somali setting: in communities where participants' prior beliefs were relatively optimistic the authors observed a higher share of people stepping into the circle, and the intervention was effective in reducing cutting rates. On the other hand, in meetings were priors were relatively pessimistic, fewer people publicly revealed their position and the coordination tool did not translate into less cutting.

Interestingly, Ferreira et al. (2024) also implemented a treatment arm where an announcement on the share in support of abandoning FGC (misperception correction) was followed by the public declaration exercise, and only found this combination to be effective in communities where the share announced exceeded the share of participants who stepped into the circle. These findings point to the interplay between second-order beliefs and coordination failures, and to the importance of designing interventions that address both.

4.3 'Stepwise' cultural change

While most of the work on social norms tends to contrast binary decisions (e.g., cooperate or not, work outside the home or not, cut or not), in reality individuals often face the possibility of choosing *intermediate* options. What are the implications of the existence of such intermediate actions for the dynamics of norms change?

Gulesci et al. (2025) address this question by proposing a discrete choice model where individuals can choose among several actions and have the opportunity to revise their choices at random intervals. Individual utility depends on intrinsic preferences for the various actions, on a 'social pressure' term that generates gains from coordination, and on random shocks that produce heterogeneity among individuals. They derive conditions under which intermediate actions can act as 'stepping stones', i.e., facilitate the transition from worse to better equilibria in cases where the direct transition would not occur in a binary model. Intuitively, these conditions require that the intermediate actions are good 'social substitutes' for the 'low' and 'high' actions, in the sense that social penalties for going from the 'low' to an 'intermediate' action and then from the 'intermediate' to the 'high' action are relatively small, when compared to the intrinsic utility gains.

Gulesci et al. (2025) then develop an econometric approach that allows one to test whether intermediate actions are stepping stones, and apply it to the case of female genital cutting

in Somalia. In Somalia, FGC can take two main forms: an extremely invasive one, called 'Pharaonic' circumcision, and a less invasive form called 'Sunna'. Sunna can be considered an intermediate action, relative to the options of Uncut and Pharaonic. Using originally collected data across multiple cohorts, the authors show that a transition occurred in the 1990s from a dominant norm of Pharaonic towards Sunna, the norm to which most women in Somalia comply nowadays. They then conduct three tests for whether Sunna may be predicted to be a stepping stone, i.e., to ultimately lead to an equilibrium in which Uncut is the norm, and all three tests suggest that – absent other interventions or changes in parameters – Sunna is an absorbing state.

An interesting example to which the stepping stone framework can be applied is that of female labor force participation (FLFP). In conservative societies, FLFP is often low, and one of the reasons offered as potential explanations is that there may be a reluctance of having women engage in paid work outside the home. In such a setting, remote work may be an intermediate alternative that allows women to earn income while at the same time complying with norms of restricted mobility. Indeed, in recent work Ho et al. (2024) find that the take up rate on job offers that allow women to work from home is three time as large as that for office jobs. The question of whether flexible jobs eventually act as stepping stones, i.e., lead to an equilibrium where office work is the new norm, is an open one.[12]

4.4 Methodological challenges

The two previous subsections separate two underlying mechanisms that are related, but distinctly different conceptually. Both relate to strategic uncertainty about others.[13] But in one case, there is uncertainty about others' *types*, i.e. people's intrinsic motives. In the other, strategic uncertainty about others' *actions*. Empirically it is non-trivial to distinguish the two. The intuition is as follows: If a high share of the population has strong intrinsic motivation for an action, that will tend to induce a high share of the population to take the action. Others, which may not have as strong intrinsic motivation, will be induced to also take the action either because it is directly beneficial (others' actions matter as there is a strategic complementarity) or because such an action implies a certain signal about your type. In the latter case, what type I am perceived as matters, and my action gives rise to my social image. From a research methodology perspective, this means one may

[12]Ho et al. (2024) find that women who had been offered flexible jobs had a higher probability of accepting office jobs when offered *exclusively* the possibility of working outside the home. This is not a test for stepping stones, as one would need to examine choices when all three options are available.

[13]There is also plenty of evidence by now that misperceptions in both dimensions are common, as the review article by Bursztyn and Yang (2022) shows.

either attempt to measure types, intended actions, or both (e.g., see Aloud et al. (2020). To complicate matters further, even if uncertainty about actions and not types is the only thing that matters, assuming complementarity in actions while ignoring the possibility of substitutability could be an incorrect starting point.

To see this, consider the study by Cantoni et al. (2019). The authors examine participation in political protests in Hong Kong and provide an elegant approach to distinguish between possible mechanisms driving behavior. The key question is: Are people more likely to participate in protests if they expect many others to protest, as tipping point models assume? Or, alternatively, are they less likely to? To empirically separate between mechanisms, the authors first elicit subjects' planned participation in an upcoming protest and their prior beliefs about others' participation. Right before the protest, they randomly provide a subset of subjects with truthful information about others' protest plans. Under complementarities, a positive information shock (more people than I expected are planning to join the protest) will increase the likelihood of participation. Under substitutes, it will decrease participation. The authors find evidence for the latter. Deeper explanations for this could be that protesters aim to achieve a sufficient number of people onto the streets, but beyond this number additional people do not add much value. Protesting is similar to the provision of public goods. However, the behavior is also consistent with alternative mechanism where social image concerns drive the effects. The information resolves uncertainty in the *intrinsic motivations* of others. It may be very honorable to take to the streets if few others are expected to, and little to no stigma from not participating. As I expect more people to protest, the honor associated with the actions goes down, causing me to stay at home instead. Indeed, the authors provide some additional evidence consistent with social image concerns being present, which potentially could drive some of the observed effects.

Another key challenge is measurement itself. Researchers need to overcome measurement error in intrinsic motivations (first-order beliefs) and social image motivations (second-order beliefs, or the extent to which people care about their social image). Measurement error may arise due to various mechanisms. A common concern across many domains is social desirability bias (SDB), especially when eliciting intrinsic motivations. Eliciting second-order beliefs appears to be less sensitive, as the evidence reviewed in Bursztyn and Yang (2022) shows. Solutions to overcome SDB include anonymity guarantees, list experiments, randomized response techniques, social circle questions, forgiving outcome framing, vignette experiments, and the use of incentives. Bursztyn et al. (2025) review the evidence and provide some practical guidance. Importantly, the authors highlight that some strategies to avoid SDB can backfire, by creating confusion or inadvertently increasing perceived sensitivity of the topic the elicitation is aimed at. Validation exercises in the specific context in which the

research is being conducted seem wise.

5 Changing material incentives

Material incentives can influence behavior and norms through three main mechanisms. The first is the improvement in private returns from certain actions (e.g., the material benefit that a household may derive when adult women are allowed to work for pay). The second channel is a financial benefit that is *conditional* on adopting certain norms (e.g., monetary transfers that are disbursed only if girls stay in school instead of marrying early). The third is the role of the legal framework in disallowing certain actions and promoting others (e.g., laws establishing minimum age at marriage, or prohibiting harmful practices like female genital cutting).

5.1 Private returns from norm compliance

From an economic standpoint, an obvious determinant of individuals' adoption of certain cultural traits and compliance with certain norms is the *material payoff* that they derive from those actions – the term y_a in expression (1) of our conceptual framework.

In an influential article, Alesina et al. (2013) test a hypothesis originally developed by Boserup (1970), who argued that the adoption of the plough in ancient times put women at a disadvantage in agricultural production and facilitated the establishment of a system of beliefs where women should have a domestic role. Exploiting variation in land suitability for plough-intensive crops, Alesina et al. show that individuals from ethnic groups that traditionally relied on plough agriculture have worse gender attitudes and lower female labor force participation today.[14] A similar notion of gender differences in comparative advantage in agriculture is used by N. Qian (2008), who shows how, during the Maoist era, increases in returns to the production of tea –a crop where women have a comparative advantage– led to improvements in sex ratios, suggesting a higher appreciation of the role of women in the economy and in society.

The process of economic development and the expansion of female-intensive manufacturing sectors have contributed to changing gender norms in some settings. Heath and Mobarak (2015) show that the fast growth of the ready-made garments industry in Bangladesh led to increases in school enrollment and delayed marriage and childbirth, in response to the returns that an educated female labor force could reap in this industry.

[14]Hansen et al. (2015) show that societies that relied on agriculture for longer periods have lower female labor force participation rates today, and they propose two mechanisms as mainly responsible for this relation: higher fertility and greater specialization of women in processing cereals rather than work in the field.

New labor market opportunities created by the IT revolution are also a powerful engine of cultural transformation. Already in the early 2000s, the expansion of services in low and middle income countries generated significant labor market opportunities for women, especially those with higher education. Jensen (2012) finds that the provision of information about job opportunities in call centers to rural women in India led to a delay in marriage and in first births, increased investment in girls'education and – importantly – shifted cultural norms towards greater acceptance of women's paid work. More recently, the possibility of working from home on tasks related to the digital economy has expanded the set of employment opportunities for women (e.g., Ho et al., 2024; Alhorr, 2024). Whether this will ultimately accelerate women's employment *outside the home* or slow it down –by offering the possibility to reconcile the ability to earn money with conservative norms on mobility – remains an open question.

The effects of economic returns to female labor go beyond norms about female labor force participation and shape a broader view of women's status, including norms around gender based violence. In a historical perspective, Alesina et al. (2021) show that societies where women were less involved in production (e.g., because those societies relied on husbandry, fishing or plough agriculture) exhibit more violence against women today and higher reported acceptability of it, both by men and by women.[15]

Improving women's outside options through paid employment may reduce or increase IPV, depending on whether 'male backlash' is triggered. Sanin (2024b) studies the expansion of coffee mills in Rwanda, which increased female employment, making it costly for the husband to exert violence that would incapacitate the wife. She finds that women's contribution to household income led to a reduction in IPV.[16] On the other hand, Guarnieri and Rainer (2021) exploit a border discontinuity design to show that women living in Cameroun in areas that were formerly English territories benefited in terms of employment and wages but at the cost of increased IPV, relative to women in former French territories. This is consistent with a prevailing role of male backlash.[17] In addition, Erten and Keskin (2018) show that in Turkey the expansion of compulsory schooling, which led to increases in women's education and labor market outcomes, also let to more psychological violence (although not to more physical violence).

[15]The authors also show that prevalence and acceptability of violence against women correlate with historical marriage market customs, such as endogamy and patrilocal residence.

[16]In the US context, Aizer (2010) finds that reducing the wage gap between men and women leads to a decrease in IPV.

[17]Tur-Prats (2021) finds that the type of family structure historically prevalent in a society (nuclear vs. stem) mediates the relationship between unemployment and IPV, in a framework where violence is used to affirm gendered roles in the face of negative economic shocks.

5.2 Transfers

Public or private transfers have the potential to impact norms and culture through a variety of channels. First, to the extent that certain behaviors are driven or exacerbated by scarcity, transfers that alleviate households' budget constraints also affect those behaviors. A typical example is *intimate partner violence* (IPV). A number of contributions have studied the relationship between cash transfer programs and IPV (e.g., Bobonis et al., 2013;Hidrobo et al., 2016; Haushofer et al., 2019). One of the mechanisms through which cash transfers may reduce IPV is the reduction in the level of stress and insecurity faced by household members, which may be correlated with the 'expressive' motive for violence. Easing the budget constraint also reduces the potential conflict over allocation of scarce resources, contributing to lower IPV (e.g., Heath et al., 2020).

Transfers also alter the balance of power within the household, depending on who the recipients are. This connects to the mechanisms discussed in section 3.4. In the case of IPV, transfers –especially if targeted to women– may improve their ability to leave violent unions. At the same time, if the motive for violence is 'instrumental' (i.e., aimed at controlling or extracting resources), targeting transfers to women may lead to *increases* in IPV. Luckily, this is not what the bulk of the evidence suggests.[18]

Transfers have also been shown to affect norms around age at marriage. Corno et al. (2020) and Corno and Voena (2023) show that incentives to cash in bride price or to delay payment of dowry are powerful determinants of child marriage across Africa and South Asia. Giacobino et al. (2024) find that providing scholarships to adolescent girls in Niger increased the probability that they would stay in school and halved child marriage rates three years after the intervention. Duflo et al. (2015) also show that education subsidies (in the form of free school uniforms) led to a reduction in teenage pregnances and early marriage rates, up to seven years after the intervention.

Taking this result a step further, Buchmann et al. (2023) worked in collaboration with Save the Children and offered a *conditional* cash transfer to parents of adolescent girls: the condition required that the girl did not marry before age 18.[19] Their findings show that girls who could receive two years of transfers had a 19 p.p. lower probability of marrying before

[18]Two exceptions are Angelucci (2008) and Hidrobo and Fernald (2013). The former uses data from Mexico's Oportunidades program and finds reductions in drunken violence among recipients of small transfers, but increases among households where the wife receives large transfers and the husband has low education. The latter finds increases in emotional violence in response to cash transfers in Ecuador for couples where the man is less educated than the woman. In both cases, the mechanism can be reconducted to challenging the man's status.

[19]For a comparison of conditional and unconditional transfers in a different setting, see Baird et al. (2011).

18.[20] An interesting aspect if this study is that the main mechanism underlying the effects seems to be not so much the alleviation of financial constraints, but rather the fact that the conditional transfer disrupts the *signaling* value of age at marriage (in their framework, marrying early signals 'desirable' characteristics of the bride, such as adherence to traditional norms).

5.3 Laws

Laws are an important component of the material incentives that in the framework of Benabou and Tirole (2011) determines cultural equilibria. A key feature determining the effects of legal reforms on behavior is the extent to which they align with existing social norms, and the mechanisms for formal or informal enforcement. Acemoglu and Jackson (2017) offer a useful framework to understand these interactions, where the ability to detect violations and enforce the law depends on individuals' willingness to report. In this case, if only few people support a new law, compliance is likely to be low. An implication is that new laws that are in strong conflict with pre-existing norms face a risk of backlash, resulting from individuals' reluctance to report violations. In contrast, a gradual tuning of new laws –possibly in alignment with gradually shifting norms– may be able to tip expectations and lead to the desired equilibrium.

The experience of countries that implemented laws against female genital cutting illustrates the point. Shell-Duncan et al. (2013) study the the anti-FGC law passed in Senegal in 1999. Using a mixed methods approach, they report that in communities where the support for FGC was strong, the law did not lead to behavior change, and in some cases even backfired. On the other hand, in communities where a constituency against FGC already existed, the law served as an 'enabler' to coordinate towards lower cutting rates. A subsequent study of the same law, by García-Hombrados and Salgado (2023), uses a difference-in-differences approach to provide quantitative evidence. The authors find that the 1999 law actually succeeded in reducing the prevalence of FGC and led to an increase in girls' education, as parents used education as a substitute to FGC to maintain high bride prices.

A similar pattern emerges in the context of child marriage bans. Wilson (2022) conducts a large scale study of 17 low and middle income countries that raised the marriage age between 1995 and 2012. He finds that these laws decreased child marriage, but mainly in urban areas, where where old norms had less support. Laws that expanded women's rights further highlight the complex process underlying incentive change. Abou Daher et

[20]The authors also compared the conditional transfer program to a 'traditional' empowerment intervention and found that the latter did not affect child marriage rates.

al. (2023) exploit the lifting of Saudi women's driving ban in an experiment where they randomize (rationed) training slots. They find increases in mobility for all women, but gains in employment only for never-married and widowed women. For married ones, employment rates actually decreased, as did spending autonomy.The opposition from husbands points to the importance of intra-household dynamics and bargaining power in mediating the impact of legal reforms.

The last piece of evidence comes from laws against domestic violence. Sanin (2024a) studies the effects of reforms introduced in Rwanda and Uganda in the 2000s. For Rwanda, she documents significant reductions in violence and increased divorce rates in regions affected by the genocide, where female-biased sex ratios—had contributed to higher tolerance for violent marriages. Interestingly, spillovers to younger cohorts further decreased the legitimacy of violence, showing that the law can catalyze collective norm change.

6 Conclusions and directions for future research

Although there is evidence that cultural change can be induced through interventions and has important economic and social consequences, it is still early days for the literature. Many open questions remain, both positive and normative. We conclude by discussing some promising pathways for research.

Given the literature discussed above, it is now clear that cultural equilibria emanate from an intricate interplay between intrinsic, material and social incentives. We have evidence that policy makers have multiple levers to influence behavior, but in practice, their effects are not trivial to predict. To know what is socially optimal is even more difficult, even under a relatively narrow efficiency criterion.

To illustrate the point, we can use as example the well-documented problem of corruption or absenteeism in the public sector in developing countries. Textbook models of the principal-agent framework would inform about what gives rise to inefficiencies. At its core, bad behavior by public employees is difficult to observe and low effort causes inefficiencies. Potential policy interventions to improve outcomes, such as top-down or bottom-up monitoring, have been shown to matter (e.g., Olken (2007), Björkman and Svensson (2009), Duflo et al. (2012)). Yet, this literature did not tackle the potential interplay between the three forces.

To see this, note that whistleblowers in the public sector can report on wrongdoings of their peers and, by so doing, they make the wrongful action observable to many others. Suppose it is common across the population to view such reporting as a moral duty. This norm will tend to discourage bad behavior through two channels. First, through a standard

Becker-Stigler channel where the direct monetary consequence of being caught is high (e.g., losing one's job). Second, as this chapter makes clear, through another channel as there is social stigma from the behavior. To strengthen this deterrence effect, a policymaker may decide to financially incentivize whistleblowers in order to increase monitoring and reporting. However, this may be a naive approach. It is particularly problematic if deeply held moral convictions drive whistleblowers to report in the first place. Financial incentives can crowd those out. Experimental evidence from Afghanistan by Fiorin (2023) shows that this can happen. Without financial rewards, the majority of individuals say that they view reporting on their peers as a moral duty. However, when a financial reward is attached to the action, almost 70 percent find it morally repugnant. In the experiment, incentives backfired: when teachers would get a financial reward for reporting absenteeism by their peers, reporting went down significantly.

A contrasting, but similarly intricate, result on the interplay between social image concerns, intrinsic motivations and material incentives comes from the motor taxi sector in Kampala, Uganda (Raisaro (2024)). The starting point for the paper is that there is a culture of reckless driving and speeding is commonplace. Thus, this is a context with clear negative externalities. Traffic injuries are very common. Interestingly, the author documents a key factor that helps explain the equilibrium: motor taxi drivers feel peer pressure to drive above the speed limit: speeding is considered cool. However, privately, drivers do not like the norm and have an intrinsic desire to defy it. How can this culture of reckless driving be changed? Traditional economics would stipulate that enforcing speed limits, coupled with financial penalties, is optimal Pigouvian taxation. Raisaro (2024) establishes a novel mechanism that goes beyond the textbook models. In particular, when financial incentives are introduced in the experiment to encourage lawful behavior – and those incentives are made public – the evidence shows that this visibility channel functions as a social 'cover'. Drivers get an excuse to drive slowly without losing social image points among other drivers. They can credibly justify that monetary (not intrinsic) reasons explain their behavior. Moreover, drivers increase their productivity from the intervention, suggesting additional efficiency gains.

Overall, the evidence suggests that clever policy making can induce people to defy harmful norms through proper design of monetary rewards that are complementary to social image concerns. It seems that these two studies are just beginning to scratch the surface on the potential interplay between the three forces determining behavior and the cultural equilibrium.

This also relates to the idea of the 'expressive function' of laws. That is, laws can change behavior beyond the direct effects on the material costs and benefits inherent in the policy

itself. They can signal that underlying intrinsic motivations in the populations have changed. This is rational if those laws change precisely because politicians have (potentially exclusive) access to information about what policies the majority of the population supports. By this logic, laws change the calculus of social image concerns. Empirically, we would expect the updating of second-order beliefs in the population. Causal evidence to this end in developing countries is, to our knowledge, lacking.[21]

Another open question in the literature is the extent to which people care about their social image. For example, as captured by the parameter μ in the Benabou-Tirole framework. One could easily imagine heterogeneity within the population, where some people care more and others less. Similarly, across societies one can imagine heterogeneity. It may be changing over time, perhaps due to the spread of technologies like social media. Policy can potentially affect it too. This is largely unexplored territory.

The literature also lacks solid evidence on the issue of reference groups. If people care about their social image, whose opinions do they care about? That of one's friends? Relatives? Co-workers? In the aforementioned Saudi Arabia case, for example, information was collected about other participants in one of the two experiments, many of which were friends, neighbors or acquaintances. Providing correct information had an effect on behavior presumably because the information captured opinions among a relevant peer group. However, in the second experiment information was given about the national average. Also here there was a treatment effect on behavior. Does that imply that people care about the opinions of the entire country? Not necessarily. If first-order beliefs are distributed relatively evenly across communities, it would be rational to infer attitudes about some relevant sub-national peer groups. Bursztyn et al. (2023) document such belief updating in an experiment among people in Texas, where information on the U.S. national average was provided. They show that individuals update their second-order beliefs about the average in Texas, even about their co-workers. This evidence suggests that it may not be key to first establish what the relevant peer group is, before collecting and disseminating information. That said, little is known empirically about what peer groups people care about, which is a key dimension through which social image concerns operate. Research in this direction seems important.

While the vast majority of the economics literature on social norms has studied individual norms in isolation, from a broader perspective of cultural change it is plausible that different norms may be inter-related. For example, Khalifa (2022)shows that female genital cutting and marriage payments are related. More generally, child marriage may evolve in a systematic way with respect to FGC, for example if both are used to preserve virginity

[21] An additional channel is possible when laws change under complementarities in actions. The direct effect has additional knock on effects in the population, as documented in Efferson et al. (2023).

and avoid premarital sex. Work in this direction is only starting to emerge, such as ongoing work by La Ferrara, Eliana and Lim, Chaeon and Viviano, Davide (2025) on testing for the complementarity or substitutability of different social norms norms. More efforts are needed in this direction.

Finally, an important but perhaps overlooked question is: should we even try to change culture in developing countries? Who are 'we', exactly? Who decides what is a 'good' norm, versus a norm that should be changed? Culture is something that people care about deeply. Are interventions that change culture desirable because some changes are intrinsically desirable, or because they are instrumental in achieving economic development? These are challenging questions, for example when it comes to issues of gender equality (Duflo (2012)). Our aim in this chapter has been to discuss ideas and evidence from a positive – not normative – perspective. While some interventions correct market failures, others may raise equity or value concerns. The desirability of culture-changing interventions therefore depends on one's normative stance toward these trade-offs. Researchers like ourselves run the risk of engaging in a form of cultural imperialism, or perhaps in a form of paternalistic discrimination (Buchmann et al. (2024)). This is arguably problematic if there are financial carrots attached to the social programs run by organizations we collaborate with. It is also not hard to imagine that interventions can result in backlash, where ultimately the opposite effect relative to the intended one occurs. Therefore, one should recognize that there is a fine line that researchers and policymakers have to walk, as we enter into domains that are directly tied to moral values. Approaching these topics carefully, both conceptually and with appropriate data, is arguably the only way to ensure that we find ways to change culture in a truly positive direction.

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