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ABSTRACT

This chapter explores the multifaceted relationship between culture and health from an economic perspective, integrating insights from anthropology, psychology, and political science. It begins by examining how culture provides meaning to illness and suffering and explores how culturally grounded "disease theory systems" influence beliefs about what causes illness, how and whether suffering should be remedied, and the appropriate role of the state in allocating health care resources. The importance of culture in defining the boundary between normal and abnormal pathology is highlighted via case studies. The chapter next reviews evidence on how health behaviors such as smoking, firearm ownership, dietary practices, and reproductive decisions are influenced by cultural norms of masculinity and religiosity. Lastly, it examines how firms, governments, and civil society leverage and advance cultural narratives to influence individual behavior and public policy. Thus, culture in relation to health both naturally evolves and is actively constructed, with implications for health inequality and health policy.

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I Introduction

This chapter explores the relationship between culture and health from an economic perspective. Culture is defined as the distribution of beliefs, values, and behaviors in a population that are transmitted socially (Schmelz and Bowles 2022) and adapt in response to economic incentives and environmental changes (Boyd, Richerson and Henrich 2013; Giuliano and Nunn 2021). Yet, there are certain aspects of the human experience that are perennial – among them, the search for meaning in the face of death and the drive for reproductive success. Social scientists from various disciplines have interpreted culture as a response to these enduring challenges, thus fundamentally linking culture with health. Cultural shifts derive not only from natural selection, but are actively shaped and sometimes commodified, often with profound implications for the distribution and outcomes of disease. Therefore, in this chapter, we argue a cultural lens is essential to understanding variation in health policy and behaviors.

We begin with an overview of how different societies conceptualize illness and suffering. Drawing on work by medical anthropologists, the chapter first reviews "disease theory systems," or culturally grounded narratives and frameworks that explain why illness occurs and how it should be managed. Disease theory systems vary widely – from supernatural and religious explanations to biomedical and naturalistic models. In several disease theory systems, including Traditional Chinese Medicine, Ayurveda, and Indigenous practices, illness is often linked to cosmic disharmony rather than molecular dysfunction. Disease theory systems are not necessarily mutually exclusive, with many individuals blending different mental models to cope with adversity or invoking a particular belief system in response to a specific condition or context.

In addition to the explanatory frameworks of disease theory systems, we consider how societies conceptualize the lived experience of illness. Building off the work of Melzack and Wall (1965), we distinguish between the sensation of pain and the experience of suffering. While pain has physiological dimensions that are fairly universal, the manifestation of suffering varies substantially. Expressions vary from quiet stoicism to loud vocalization of prayers. We note, however, that mistaken beliefs about pain perception across groups have led to disparities in treatment, including unequal access to analgesics. Perhaps the most frequently encountered acute pain, that of giving birth, is used to exemplify how different cultures approach pain and the tension that sometimes arises between traditional beliefs regarding the purpose of suffering and the adoption of medical technology designed to relieve it.

The chapter then turns to the ways in which culture influences the very definition of illness. Simply put, what is considered abnormal is often in reference to a measure of central tendency or societal norm, which can vary substantially across groups. Population distributions of attributes or behaviors can in turn be shifted by macroeconomic shocks, which then move the boundary between sickness and health. We present historical and contemporary examples, from the medicalization of obesity to evolving classifications of sexuality in the Diagnostic and Statistical Manual of Mental Disorders, that illustrate the cultural construction of disease.

Next, we widen the lens to explore how culture influences the allocation of health care resources. Key theoretical contributions from Kenneth Arrow, Michael Grossman, and Amartya Sen offer different conceptualizations of health and provide support for varying levels of state involvement. Building on the comparative analysis by Frank Sloan and Chee-Ruey Hsieh, we categorize health systems according to the degree to which they rely on public financing and provision. Disease theory systems can help explain health system variation: when illness is viewed primarily as the result of individual choice and effort rather than structural forces or luck, political support for social insurance, including health insurance, tends to weaken.

We then examine health behaviors, such as smoking, firearm ownership, reproductive decisions, and

dietary choices, which are also shaped by culture. We review evidence from both observational and experimental studies showing that masculinity norms, religiosity, and historical trauma can influence health investments and outcomes. Religiosity is often associated with protective health behaviors, as it tends to discourage harmful activities, offers informal risk-sharing mechanisms, and provides individuals with a sense of purpose. Tobacco use is a leading cause of preventable death and highly gendered, with nearly every country recording a greater share of adult men smoking than adult women. Indeed, in many settings, masculinity norms are associated with higher premature mortality among men and increased morbidity and chronic disease for women.

Finally, we examine how culture is not only passively transmitted but also actively constructed. Firms and governments frequently invoke cultural themes to frame products, behaviors, and policies. Advertising campaigns appeal to gender ideals, nationalist values, or religious symbols to promote consumption that may carry health externalities. For instance, tobacco and firearms marketing often appeal to masculine ideals, suggesting that consumption can restore power or assert dominance. At the same time, culturally sensitive public health messaging embedded in entertainment has been shown to shift norms and reduce risky sexual behaviors among youth.

Overall, the chapter advances the notion that culture and health are inextricably linked and much perspective can be gained from considering them together. Health systems and individual health behaviors are embedded within systems of beliefs that strive to create meaning in the face of certain death. These cultural frameworks shape how illness is understood, how care is delivered, and define who is considered normal. Importantly, culture can be strategically leveraged to pursue objectives that either improve, disregard, or worsen population health.

II Disease Theory Systems

There are ample examples of attempts to understand the cause of illness in different faith traditions, or what medical anthropologists call "disease theory systems." As Foster and Anderson explain in their textbook on medical anthropology, "a disease theory system embraces beliefs about the nature of health, the causes of illness and the remedies" (Foster and Anderson 1978, p. 37).[1] Many religiously grounded systems locate these causes in divine will, linking illness not just to the body, but to broader cosmological forces. A well-known narrative that explores explanations for God's allowance of suffering can be found in the Biblical Book of Job, wherein God's "blameless" and "upright" servant was forced to suffer as a test of faith, part of a bet Yahweh makes with Satan. Job's wealth, children, and finally, his physical body are stricken during the test. Another example comes from the Ila-speaking people of modern day Zambia, where an old woman was beset by Leza, the Supreme Being; the woman was "perplexed by the riddle of this painful earth" and her grave misfortune, as everyone connected to her died. She set out to inquire why she was suffering, even building a tower to heaven, but never discovered the answer. Unlike Job, whose wealth is restored alongside new progeny, Ila is left wandering, confronted by others who note that the besetter "sits on the back of every one of us, and we cannot shake him off" (Smith and Dale 1920, p. 197-198).

Many cultures understand illness to derive not from the antics of gods but rather from the cursing of other humans. As noted by Rivers in *Medicine, Magic and Religion*, "if we examine the beliefs of mankind in general concerning the causes of disease, we find that causes may be grouped into three chief classes:

[1] Related is the idea of theodicy, which seeks to explain how suffering and evil, such as illness, can exist in a world governed by a benevolent god (Ekstrom 2024).

(1) human agency, in which it is believed that disease is directly due to action on the part of some human being; (2) the action of some spiritual or supernatural being, or more exactly, the action of some agent who is not human, but is yet more or less definitely personified; and (3) what we ordinarily call natural causes," (Rivers 1924, p. 7). The notion that illness or misfortune is due to the envious gaze (*i.e.*, evil eye) of others is a common theme in many cultures. The persistence of many supernatural causes of illness has been linked to low access to modern medicine and weak institutions (Gershman 2015). It has also been shown, however, that people espouse multiple disease belief systems simultaneously. According to Rivers, "There are many peoples among whom the three sets of social process [medicine, magic, and religion] are so closely interrelated that the disentanglement of each from the rest is difficult or impossible," (Rivers 1924, p. 1).

Sievert (2024) investigated this possibility in the Democratic Republic of Congo (DRC), where traditional medicine and supernatural beliefs are prevalent. Beliefs about supernatural causes of disease varied both across and within individuals: Conditions such as malaria were widely acknowledged to be related to disease pathogens (only 6% surveyed endorsed supernatural causes) but epilepsy was almost unanimously (93% surveyed) considered supernatural in origin. This association may stem from the nature of epileptic episodes, which often involve an observable trance-like (*i.e.*, absence seizures) or rhythmic (*i.e.*, convulsive seizures) state a person abruptly enters.

Sievert also designed a field experiment to test whether providing information about the biomedical causes and availability of modern treatment for seizures altered people's beliefs about the etiology of epilepsy and their willingness to accept modern medicine. She randomly assigned respondents to informational videos narrated by a local physician and provided vouchers for epilepsy treatment. The videos shifted respondents' beliefs away from supernatural causes and towards biomedical explanations across all medical conditions. In addition, the intervention reduced stigma against those with epilepsy. Together, these results suggest that culturally sensitive informational campaigns can play a powerful role in reshaping health beliefs and reducing stigma, even in settings where supernatural explanations are prevalent.

Also in the DRC, Le Rossignol, Lowes and Nunn (2022) used lab-in-the-field experiments to examine the social consequences of holding strong traditional African religious beliefs. In this setting, individuals often have a dual belief system, believing in both Christianity and traditional African religion, or *bokoko*. The research team found that participants behaved less pro-socially and were less inclined to help or cooperate with those who hold stronger traditional beliefs. One potential implication of these results is that, in communities where traditional supernatural beliefs are prevalent, social cohesion and trust may be imperiled. This may compromise community health, as tasks such as caring for the aged, adhering to public health guidelines, and participating in prevention activities rely on inter-personal trust and pro-sociality.

The belief that disease is caused by disruption in the natural order is prominent in many cultures (National Center for Complementary and Alternative Medicine 2013). Humoral medicine associated with Hippocrates and ancient Greco-Roman traditions was based on a balance between blood, phlegm, yellow and black bile (Kalachanis and Michailidis 2015). Traditional Chinese Medicine (TCM) dates back thousands of years, when ancient Chinese scholars developed the concept of two independent, opposing but complementary forces known as *yin* – the material aspects of the organism – and *yang* – the intangible, functional aspects. Another central concept is that of *qi* – a freely flowing energy or life force. According to TCM, disease is due to a "disturbance in the balance" between *yin* and *yang* or in the "flow of *qi* or blood, or disharmony in the organs" (Tang, Liu and Ma 2008, p. 1939).

Disharmony can arise from external factors like the climate – wind, heat, dampness, dryness, and cold – and toxins, which can affect the body. Internal factors, such as strong negative emotions, can also disrupt

the balance of *qi* and lead to illness (Lozano 2014). For example, resentment and anger in TCM is thought to negatively harm the liver, hurting the harmony inside the body and therefore result in both emotional and physical symptoms (Karchmer 2013). Early Chinese medicine integrated traditional beliefs about ancestors and spirits, often attributing certain illnesses and misfortunes to these supernatural forces (Unschuld 1987). To restore harmony, TCM employs a range of practices, including acupuncture to unblock *qi* along the body's meridians, herbal medicine to balance internal energies, and *qigong* exercises that integrate breathing, movement, and meditation. Dietary therapy also plays a crucial role, with food categorized by its thermal and energetic properties to complement an individual's *yin* and *yang* balance. In this sense, TCM incorporates Taoist concepts of living life in harmony with the universe and oneself. Healing is thus not only a physical, medical process, but also a spiritual process, which aims to restore harmony with ones' ancestors and the spirits (Lao, Xu and Xu 2012).

Ayurveda or Traditional Indian Medicine (TIM), is another ancient medical system originating over 3,000 years ago. Ayurveda is a Sanskrit term derived from *Veda* meaning science or knowledge and *Ayur* meaning life (Chopra and Doiphode 2002). Similar to TCM, it views health as the result of a harmonious balance between the mind, body, and the spirit. Just like TCM's close ties to Taoism, Ayurveda is deeply intertwined with Hindu philosophical teachings such as Vaisheshika and Nyaya (Pondomatti et al. 2024), which advocate diagnosing conditions through logic and observation (Namboothiri et al. 2025). The universe according to Ayurveda is comprised of five elements (air, water, ether/space, earth, and fire) which combine to form three life-regulating energies or *doshas*: Vata, Pitta, and Kapha. Maintaining balance between the three *doshas* is key to good health (Patwardhan et al. 2005). Ayurveda prescribes various practices to restore harmony if balance is broken, including detoxification, massage, and yoga (Vinjamury et al. 2011). Ayurveda also integrates spiritual perspectives, viewing the human body as a microcosm of the cosmic universe. Hence, disruptions to external harmony, such as seasonal changes or emotional disturbances, can potentially disrupt the balance influencing health (Jaiswal and Williams 2017).

The Navajo (or Dinè) people from the Southwestern United States provide a window into Indigenous disease theory systems. In this matrilineal society, there is a rich tradition of ceremonial song, many of which are focused on diagnosis or treatment for maladies of the mind, body or spirit (Wyman and Kluckhohn 1938). The concept of *hozho* is considered one of the foundations of Navajo life. Although difficult to perfectly translate into English, the concept has been described as "both an aesthetic and an ethical concept, global in meaning, encompassing such attributes as congruence and harmony" (Schneider and DeHaven 2003, p. 418). Similar to both TCM and TIM, illness occurs when there is disharmony and can be restored through ceremonials (Hall 1994). Healing ceremonies are often performed by a *hataalii* and can last for hours to several nights (Wyman and Kluckhohn 1938). For example, the *Blessing Way* chant typically lasts two nights and is used to guard against any misfortune, rather than to directly cure illness. The *Night Chant*, which lasts generally nine nights and includes intricate sand paintings and songs, serves to restore stability and harmony in the community (Wyman and Kluckhohn 1938). These chants are used to repel misfortune, often perceived to stem from violating taboos, natural disasters, or encounters with the paranormal powers. Ceremonies are often accompanied by symbolic dances as well as chants: The *Mountain Chant* is often accompanied by the *Fire Dance*, where each dancer tries to chase the person in front of him in a circle with a fire-lit stick (Schneider and DeHaven 2003). The Navajo ceremonies address physical and spiritual malaise, but also help reaffirm the shared understandings and values of the community.

TCM, TIM, and Indigenous belief systems represent holistic approaches to maintaining health and understanding how to restore health once disease occurs. By contrast, the Western or biomedical model tends to be reductionist – attributing disease to specific etiologic agents (*e.g.*, microbes, genetics). The Western

biomedical model, while scientifically rigorous, thus often lacks the meaning-making dimension found in traditional healing systems. Yet the Western world continues to be heavily influenced by Judeo-Christian religious traditions which tend to complement the biomedical paradigm, providing an explanation for *why* innocent suffering exists. In addition, integrative medicine – which combines complementary and alternative medicine (CAM) practices such as yoga and acupuncture with the biomedical approach – has increased in popularity (World Health Organization 2025*b*) with a center in the NIH formally established in 1999 (National Institutes of Health 2023).

III Meaning in Suffering and Expressions of Pain

In addition to providing an explanatory framework and potential interventions for illness, culture informs the experience of suffering. As Clifford Geertz, a leading anthropologist of the twentieth century, wrote: "the problem of suffering is, paradoxically, not how to avoid suffering but how to suffer, how to make a physical pain, personal loss, worldly defeat, or the helpless contemplation of others' agony something bearable, supportable – something, as we say, sufferable," (Geertz 1966, p. 104). In other words, cultural practices at least partially are designed to help human beings find meaning in suffering. We next describe two significant events in the lives of humans that often are associated with anguish and often, pain: childbirth and death.

III.1 Birth

One of the most predictably painful experiences is that of giving birth to a child. It is referenced in the third chapter of the first Book of the Bible:

"To the woman he said, 'I will greatly increase your pangs in childbearing; in pain you shall bring forth children, yet your desire shall be for your husband, and he shall rule over you.'" (Genesis 3:16) (Bible 1989)

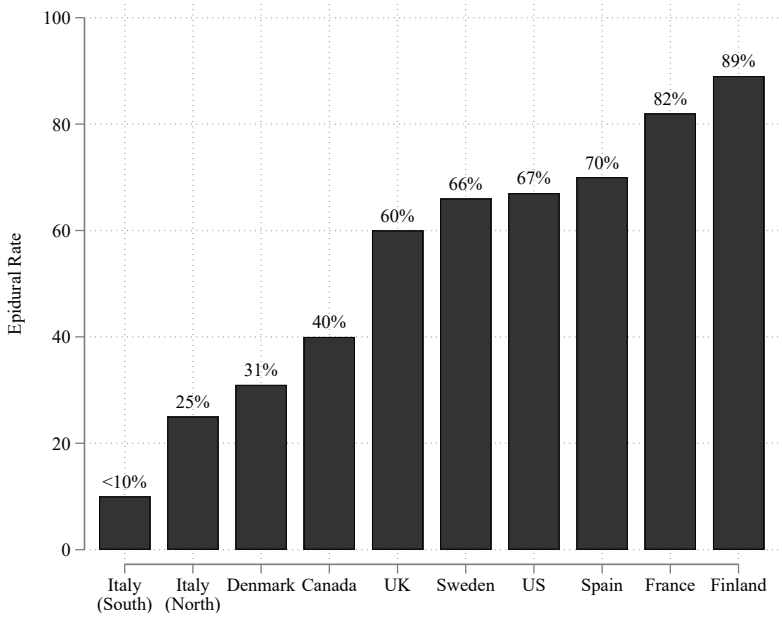
According to some followers of the Catholic faith, the suffering associated with childbirth – including the weight gain, varicose veins and the pain of labor – are explained by Eve's disobedience in the Garden of Eden (Whitmore 2022). By one argument, women's eternal salvation is secured primarily via bearing children and raising those children in the faith. Pain relief medications during childbirth are debated since they potentially interfere with this feminine path to salvation (Got Questions 2025).

In Italy, a country where about 80% of the population identify as Catholic, women could not easily access epidurals until recently. A campaign led by Italian attorney Alessandra Battisti, called "Basta tacere" (or "no longer silent") spread awareness about the issue through conferences and social media platforms (Cicali 2018). In 2016, the National Health Service of Italy began covering epidurals as part of the standard of care. However, Battisti expressed concern that even after the coverage decision, there might still be providers who refuse giving epidurals to women (Strauss 2016). A combination of norms and supply side constraints may be influencing the sharp North-South divide seen in epidural rates across the country (see Figure 1): only about 10% of women in Southern Italy receive an epidural compared to 20-38%, depending on the region, in Northern Italy (Montalto Monella 2018).[2]

Pain, more generally, is often described as having a sensory component and an affective component (Talbot et al. 2019). Sensation is proxied for by pain *thresholds* and is distinct from how pain is *perceived* or expressed (Melzack and Wall 1965). A recent meta-analysis suggests that there are few differences across ancestral groups in pain thresholds; however, discredited views on threshold variation across cultures have

[2]We thank Paola Sapienza for the example of childbirth and pain control in Italy.

Figure 1: Epidural Rates by Country



Notes: National data for Italy is not available (Tarlazzi and Parma 2023). *Data Source*: Seijmonsbergen-Schermers et al. (2020) and Montalto Monella (2018).

been slow to extinguish (Kim et al. 2017). A survey of U.S. medical students in 2016 found that many endorsed false beliefs about pain physiology, including that Black patients had tougher skin and were less likely to feel pain than White patients (Hoffman et al. 2016). Clinicians who held such views were less likely to recommend pain management for Black patients. Similarly, patients with sickle cell disease, 90% of whom are Black, reported experiencing discrimination based on race, with clinicians questioning their pain ratings leading to unmet symptom management (Mahase 2021). In the U.S., a large observational literature finds pain medication is often prescribed less frequently to Black Americans (Pletcher et al. 2008; Meghani, Byun and Gallagher 2012; Goyal et al. 2015; Shah et al. 2015; Singhal, Tien and Hsia 2016).

Although pain thresholds do not appear to differ substantially across groups, the affective component of pain expression has been shown to differ and this may be influenced by the health care environment and cultural views on the acceptability of such expression (Kim et al. 2017; Weber 1996). Regarding the former, health care workers might interpret pain expressions differently across groups. Patients who are not well-represented in the health care workforce may hide or otherwise distort pain expressions (Mathur et al. 2014).[3] Regarding the latter, pain expression may vary with ideals or interpretations. For instance, silent endurance of pain might stem from a Western tradition of stoicism or Buddhist traditions that view pain as part of spiritual journey. Returning to the subject of pain during childbirth, within Benin, Bariba women – who are from the northern part of the country – are expected to endure labor pain silently as a demonstration of courage and family honor, while Fon women in the south vocalize their suffering, believing it may hasten delivery (Sargent 1989). In Chinese and Mayan cultures, silence during childbirth is valued, as restraint is seen as a mark of endurance and control. However, in China, as in the case of Italy, epidurals during births are starting to increase (Fan, Gao and Yang 2007). In 2017 a pregnant woman in China jumped to

[3]For example, Reid (1992) studying female respondents reaction to cold, reported that the race and personal warmth of the experimenter had an effect on the measured racial difference in pain tolerance, as did the educational background of the respondent.

her death reportedly due to the excruciating pain of childbirth and her family refusing to allow her to have a C-section, a surgery many women there use to manage labor pains (Allen 2017; Liu et al. 2017). Since then, the Chinese government has started a program to increase access to anesthesia and epidurals during childbirth (Shirakawa 2019; The State Council, People's Republic of China 2024).

III.2 Death

Death can be viewed as a relief and an end to suffering, but it presents its own unique challenges for finding meaning (Zunner-Keating, Avetyan and Shepard 2020). Human puzzlement about and desire to make sense of death generates the central components of many religious beliefs, as argued by anthropologist Bronislaw Malinowski in his book of essays entitled: *Magic, Science and Religion* (Malinowski 1948, p. 33):

> Grasping at it [spiritual life], man reaches the comforting belief in spiritual continuity and in the life after death... to the intense desire of immortality, to the difficulty in one's own case, almost the impossibility, of facing annihilation there are opposed powerful and terrible forebodings. The testimony of the senses, the gruesome decomposition of the corpse, the visible disappearance of the personality – certain apparently instinctive suggestions of fear and horror seem to threaten man at all stages of culture with some idea of annihilation, with some hidden fears and forebodings. And here into this play of emotional forces, in to this supreme dilemma of life and final death, religion steps in, selecting the positive creed, the comforting view, the culturally valuable belief in immortality in the spirit independent of the body, and in the continuance of life after death.

Theologian Douglas Davies (2002), in his examination of the rhetoric of funerary rites, viewed death as a phenomenon to which humans have needed to adapt. According to this argument, a need to make sense of death and continue on led societies to create mortuary rituals. These rituals promote hope during a time when the emotional toll of the death of a loved one threatens to overwhelm an individual. Anthropologists Peter Metcalf and Richard Huntington saw instrumental value in mortuary rituals, citing rekindling social networks, providing in-kind support through food or gifts, and helping to process strong emotions as all part of their functions. In this way, cultural traditions are not only attempting to find meaning and purpose in a life that will ultimately end, but also as a way to process this ending. Their book *Celebrations of Death: The Anthropology of Mortuary Ritual*, begins by describing the variety of mortuary rituals and their relationship to fundamental aspects of culture (p. 1):

> In all societies, regardless of whether their customs called for festive or restrained behavior, life becomes transparent against the background of death, and fundamental social and cultural issues are revealed...In Africa, the politically fragmented Nyakyusa and Dinka peoples reveal in their funerals basic survival values of warriorhood and cooperation. In centralized kingdoms everywhere – Africa, Europe, Asia – events surrounding the death of the king reveal most strikingly the nature of each polity and the structure of its political competition. In the United States, the individualism, materialism and commercialism that characterize our national ethic seem to stand in particularly sharp relief in the context of our funeral industry.

Beyond mortuary ritual, the fact of death has, according to anthropologist Edward Burnett Tylor, led to the concept of a human soul, a fundamental aspect of many religions. Tylor describes the origination of the concept of the soul by "primitive" humans, who in the observation of death and dreaming, wondered "what is it that makes the difference between a living body and a dead one...what are those human shapes which

appear in dreams and visions?" (Tylor 1920, p. 428). The soul became the answer, allowing individuals to exist even after leaving their physical body behind. This idea of a personal soul would then lead to concepts of an afterlife, living on when an individual dies, a commonality across many belief systems.

IV Illness as Culturally Defined

In addition to cultures having distinct disease belief systems and characteristic responses to pain and death, what constitutes illness itself can be influenced by culture. According to Foster and Anderson (1978, p. 40) illness can be defined as the "social recognition that a person is unable to fulfill his normal roles adequately." Thus, what is deemed an illness embeds what society views as normal.

For instance, when medical historian Erwin Ackerknecht was attempting to document the decline in malaria in the Upper Mississippi Valley, he remarked on the general lack of records, noting that malaria – so commonly encountered – was not considered an illness. "[J]ust as its height malaria (or 'fever and ague,' the 'chills,' intermittent, remittent, bilious fever whatever it was called) was so common that by many it was no longer regarded as a disease at all and therefore, of course, not recorded as such," (Ackerknecht 1945, p.4). This is an example of a parasitic infection that, by social convention, lost the disease label. Medical anthropologists Paul Farmer and Byron Good emphasized this point in their joint chapter on *Illness Representations in Medical Anthropology* stating: "Cultures...not merely individuals, vary as to how bodily sensations of illness labels are evaluated, given meaning, how sufferers and their families respond and seek care" (Farmer and Good 1991, p. 132).

Good's scholarship concerns the culture of psychiatry, a branch of medicine focused on mental, emotional and behavioral disorders. There is broad scope for cultural interpretation of illness in this field, as pointed out by anthropologist Ruth Benedict (1934) in her article "Anthropology and the Abnormal" published in the *Journal of General Psychology*. Benedict viewed a universal classification of human behavior as potentially ill-conceived: "One of these problems relates to the customary normal-abnormal categories and our conclusions regarding them. In how far are such categories culturally determined or in how far can we with assurance regard them as absolute?" Benedict pointed to trance and catalepsy as behaviors that are considered problematic in some societies yet are revered in others, and further, were even used in Western civilizations as a criteria for sainthood.[4]

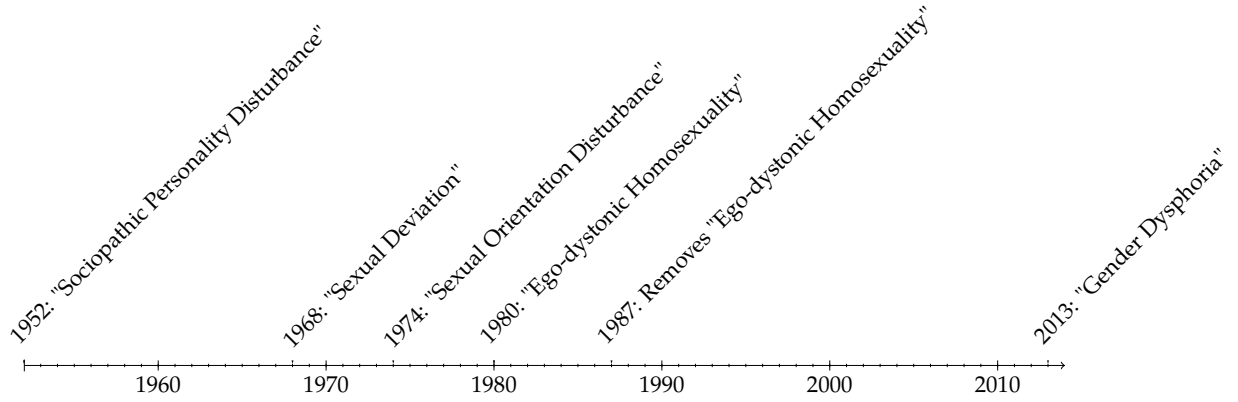
Benedict outlined several behavioral manifestations beyond madness, including abnormal generosity and acceptable murder, that varied across cultures. Reflecting on these patterns, Benedict wrote: "These illustrations, which it has been possible to indicate in only the briefest manner, force upon us the fact that normality is culturally defined," (Benedict 1934, p. 3). According to this view, standards for normal-abnormal might be anticipated to shift not only across cultures but also within cultures as they change over time.

An empirical example of this from Western society is sexual orientation. In 1952, when the American Psychiatric Association (APA) published the first edition of the Diagnostic and Statistical Manual (DSM-I) – which is considered the authoritative text for diagnosis of mental illness – homosexuality was listed as a "sociopathic personality disturbance" and classified under "personality disorder," (Drescher 2015; American Psychiatric Association 1952, p. 38-39). In 1968, the DSM-II removed the subclassification of "sociopathic

[4]Michel Foucault (1961), in his book *Madness and Civilization: A History of Insanity and Reason*, echoed some of these questions, tracing the concept of madness back in time and arguing it was once part of the social fabric, only to be later diagnosed and institutionalized by confining people deemed mad to asylums, hospitals or prisons. These observations fit within Foucault's broader argument that clinical medicine is a means for social control. See also *The Myth of Mental Illness: Foundations of a Theory of Personal Conduct* by psychiatrist Thomas Szasz (1961).

personality disturbance" but continued classifying homosexuality as a type of "personality disorder", and, perhaps due to the Stonewall Inn Riots, by 1974 a new diagnosis emerged: Sexual Orientation Disturbance. Today, the DSM-V uses the term "gender dysphoria" to describe people who experience distress due to incongruence between their experienced gender and sex assigned at birth. DSM-V points out that the definition does not include distress related to disease stigma (American Psychiatric Association 1952, 1968, 1973, 1980, 1987, 2013; McHenry 2022).

Figure 2: Timeline of changes in DSM classifications related to sexuality



Notes: Figure plots a timeline of the changing definitions of homosexuality (and later LGBTQ+) in the Diagnostic and Statistical Manual of Mental Disorders (DSM) by the American Psychiatric Association (APA). *Source*: American Psychiatric Association (1952, 1968, 1973, 1980, 1987, 2013).

Weight is another issue that is culturally contextualized, with some societies viewing excessive thinness as a marker of poverty and others viewing it as a beauty ideal. In Western industrialized nations, thinness is more common among higher income individuals, often reflecting better access to healthy food, a safe space to exercise, and the time to prepare meals and engage in physical activity. In addition, thinness is often associated with Protestant values of self-discipline and personal restraint. The notion of thinness being a more elusive, and therefore idealized, physique may change as technologies that curb appetite become more broadly available, discussed in Section VI.6.

Together, these examples illustrate that definitions of normality are not fixed but evolving cultural constructs, shaped by changing social values, medical authority, and the priorities embedded in health care systems.

V Culture and the Allocation of Health Care Resources

Related to how societies define illness, understand the cause of disease, and cope with its consequences, there is also the matter of defining social obligations, if any, to protect the health of others. Typically, these safeguards take the form of laws and regulations that govern the organization of health care resources, including their supply and distribution. Views on how human health is determined and society's role in safeguarding it are intricately related. If health is viewed as mainly a product of individual choice, produced though a combination of purchased medical services and healthy behaviors, then letting market forces determine the distribution of such resources seems reasonable (Grossman 1972). If, on the other hand, health is considered a capability, fundamental to achieving anything else in life (Sen 1999), or at the macro-level,

an input into economic growth (Commission on Macroeconomics and Health 2001), then ensuring essential health goods and services are broadly available to all citizens is a reasonable organizing framework. Note these latter "instrumental" views on health care organization are distinct from other normative or positive arguments that highlight either the "moral imperative" to provide health care (Reinhardt 2007) or economic justifications that health care is unique given its multiple market failures (Arrow 1963). Furthermore, assuring some universal level health care leaves open the question of how such resources are financed and provided, though practically most countries use price regulation coupled with quality standards to meet universal goals.

Health care systems vary across countries and can be categorized in various ways. We adopt the Sloan and Hsieh (2012) typology which describes "public" systems as those with both high public *financing* and high public *provision*. A typical example is the United Kingdom's National Health Service (NHS). While "private" systems are those with low public financing and provision, such as the United States (see Figure 3). Many low- and middle-income countries are "cash" systems, relying heavily on out-of-pocket expenditures. In cash systems, limited health care financing and high out-of-pocket costs contribute to higher rates of preventable mortality, as access to essential services like vaccinations, maternal care, and treatments for chronic diseases remain constrained.[5]

The cross-country variation in financing and provision of health care raises questions about what drives these patterns. Sloan and Hsieh (2012) find a positive relationship between a country's national income and the share of health spending that is public (with the United States a notable outlier), but do not find such a pattern for the share of health care services that are publicly provided. They contend that "rather than being related to national income, the choice of public supply share seems to reflect such factors as historical context, culture, and social values" (Sloan and Hsieh 2012, p. 478). Other health economists have further highlighted the significant role of culture in determining the role of the public sector in health and health care (Maynard 2005). For instance, Williams (1988, p. 174) argues, "Equal opportunity of access for those in equal need should be the dominant ethic in the egalitarian system of health care provision..."[6]

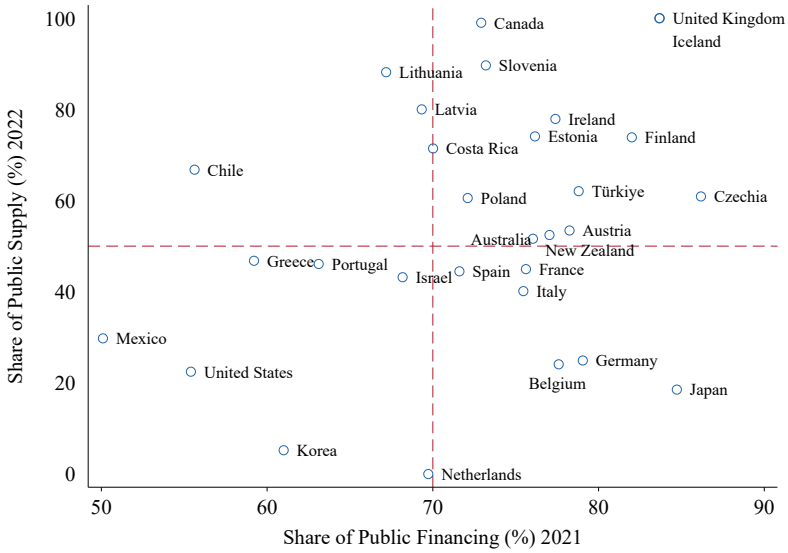
Germany provides an example of how cultural values can shape health care institutions. The German state introduced the world's first statutory health insurance system in 1883 under Chancellor Otto von Bismarck. Health insurance introduction under Bismark has been associated with a reduction in mortality rates for blue-collar workers and a narrowing of occupational gradients in mortality (Bauernschuster, Driva and Hornung 2020). Although the system has changed markedly since the late nineteenth century, it is still based on the principle of solidarity. According to Busse et al. (2017, p. 882), "[S]olidarity manifests itself both on the income side and the provision side of statutory health insurance: all insured persons, irrespective of health risk, contribute a percentage of their income, and these contributions entitle the individuals to benefits according to health needs – irrespective of their socioeconomic situation, ability to pay, or geographical location. In this pooled-risk system, people with high income support people with low income, young people support elderly people, healthy people support people who are sick, and people without children support people with children." Indeed, this "solidarity" speaks to a basic rationale of insurance, which is to

[5]High-income countries generally perform better on measures of preventable mortality, though significant variation still exists. Countries with strong primary care systems and high levels of public investment in health care, like Sweden and Norway, tend to have lower rates of preventable mortality than those with more privatized or fragmented systems (Kringos et al. 2013).

[6]Princeton economist Uwe Reinhardt wrote that health care debates are often framed in the "jargon of economics" but that this was a distraction. Rather, the crux of the debate is the question: "To what extent should the better-off members of society be made to be their poorer and sick brothers' and sisters' keepers in health care?" Reinhardt (2019, p. 1).

transfer risk across states of the world. The result is a health care system that promotes equity and social cohesion.

Figure 3: Typology of Health Care Systems



Notes: All OECD countries displayed excluding Colombia, Denmark, Hungary, Luxembourg, Norway, Slovakia, Sweden, and Switzerland due to missing data. Share of public financing is defined by domestic general government health expenditure as a percent of current health expenditure, from the WHO's Global Health Expenditures Database (World Health Organization 2022). Share of public supply is defined as the share of public hospitals in a country's hospital sector following Sloan and Hsieh (2012). Hospital data are from the OECD Data Explorer (OECD 2023).

These differences in health valuation extend beyond regulations and laws concerning medical care and are even reflected in countries' founding principles. Heymann et al. (2013) studied the constitutions of 191 countries to document how protections varied across the year of constitutional adoption, national income group and region. The authors found that about 14% of countries guaranteed the right to public health, 38% guaranteed the right to medical care and 36% guaranteed overall health. Countries with younger constitutions were more likely to guarantee health rights than older constitutions: only a third of the constitutions that were adopted pre-1970 mentioned at least one health right, 60% of constitutions adopted between 1970 and 1979 included a right to health care, and only one of the 33 constitutions adopted between 2000 and 2011 did not explicitly guarantee at least one health right. Even countries with a shared border and democratic ancestry may set different expectations about the social contract for health in their constitutions. As pointed out by physician Williams (2008, p. 176) when comparing health systems across industrialized nations, the U.S. mantra is "life, liberty and the pursuit of happiness" whereas Canadians focus on "peace, order and good government."

Enke, Rodríguez-Padilla and Zimmermann (2023) explore how moral universalism – a cultural value emphasizing equal altruism and trust towards all individuals – creates ideological clusters and shapes policy views across Western democracies. The authors show that individuals with a higher proclivity for universalism are more likely to support policies such as redistribution and environmental protection, while opposing spending on border control, military, and law enforcement. Interestingly, the authors find that in countries where universal health care is already established (every country in their sample except the United States), moral universalism has a weak relationship with support for universal health coverage. The authors suggest this may be because when universal health care already exists, as it has in Europe for decades, it becomes

a standard expectation. In a similar vein, Sweden, with the goal of increasing gender equality, introduced a second "daddy month," *i.e.*, an additional month of pay-related parental leave reserved exclusively for each parent in 2002, and a third in 2016. This policy increased men's parental leave uptake and decreased women's. Albrecht et al. (2024) find that the changed incentives from the policy and changing social norms played an important role in generating this outcome. These findings underscore the feedback loop between policies – which might be considered codified norms – and culture: policies can shift norms of what is considered standard for society.[7]

Health insurance is just one aspect of a broader social insurance system that is intended to protect citizens against threats to income loss such as unemployment, disability, and old age (Rubinow 1904). In a seminal paper, Alesina, Glaeser and Sacerdote (2001) analyze the differences in social insurance between the United States and Europe, focusing on understanding why the U.S. tends to have a smaller welfare state and less redistributive policies compared to European countries, despite being the wealthiest nation. While economic factors, such as income distribution and volatility, may play a role in shaping redistributive policies, the authors argue that cultural factors are the most important. Specifically, they find a robust correlation between racial fractionalization and social spending at the state-level and interpret this as evidence that Americans reject support for those deemed "undeserving." Using data from the 2012 European Social Survey, Oser and Hooghe (2018) found that, although support for democratic ideals was similar on both continents, the notion that a function of state is to relieve poverty and reduce income inequality was much less important among Americans.

Alesina and Angeletos (2005) model how societal beliefs about fairness and redistributive policies can create self-fulfilling equilibria. In societies where individuals believe that wealth is primarily determined by hard work and personal responsibility, there is less support for redistributive policies, including universal health care. Conversely, in societies where people believe that economic success is largely a matter of luck or external factors, there is greater support for redistributive policies that promote equity in access to health care. In their model, these cultural beliefs become reinforced over time through policy choices. The feedback loop between law and culture is clear: legal frameworks entrench and amplify existing cultural norms. Over time social policy, similar to the discussion in Section IV with respect to illness, may influence what citizens view as "normal" and expected as part of their social contract.

If health is considered of vital importance to individual well being for reasons articulated by Amartya Sen, then the degree to which individuals feel secure in their health care might influence their broader views on the legitimacy and trust in their government. Cammett, Lynch and Bilev (2015) explore this idea using individual-level data from the European Social Survey and country-level health care financing data. The authors analyze the relationship between the share of private financing in health care and trust in government across 25 countries and find that, conditional on known predictors of trust at the individual and country level, trust in government is significantly lower in countries where private financing of health care is higher. The effect is primarily driven by low-income individuals who are uncertain about their ability to access necessary care when needed.

VI Culture and Health Behaviors

Health systems alone do not determine health outcomes. Individual behaviors have important consequences for health outcomes as well. Smoking, dietary habits, reproductive health practices, firearm ownership and

[7] Aksoy et al. (2020) provide compelling evidence that legal recognition of same-sex relationships can significantly shape societal attitudes towards sexual minorities.

physical activity vary widely, contributing to differences in premature morbidity and mortality. Beliefs regarding the role of women, position of men relative to women and general stratification also create gradients in health outcomes.

VI.1 Tobacco Use

Tobacco use is incredibly common, and especially deadly.[8] According to the American Lung Association, smoking is the number one cause of preventable disease and death worldwide, and is a risk factor for nearly every form of cancer, cardiovascular disease, chronic obstructive pulmonary disease, and diabetes. Tobacco use also impairs healing and worsens autoimmune disease (American Lung Association 2025). The World Health Organization (WHO) estimates that more than 7 million people each year die from tobacco use, including an estimated 1.3 million non-smokers who are exposed to second-hand smoke. Tobacco use is especially a problem in LMICs, where about 80% of the world's 1.3 billion tobacco users live (World Health Organization 2025*a*).

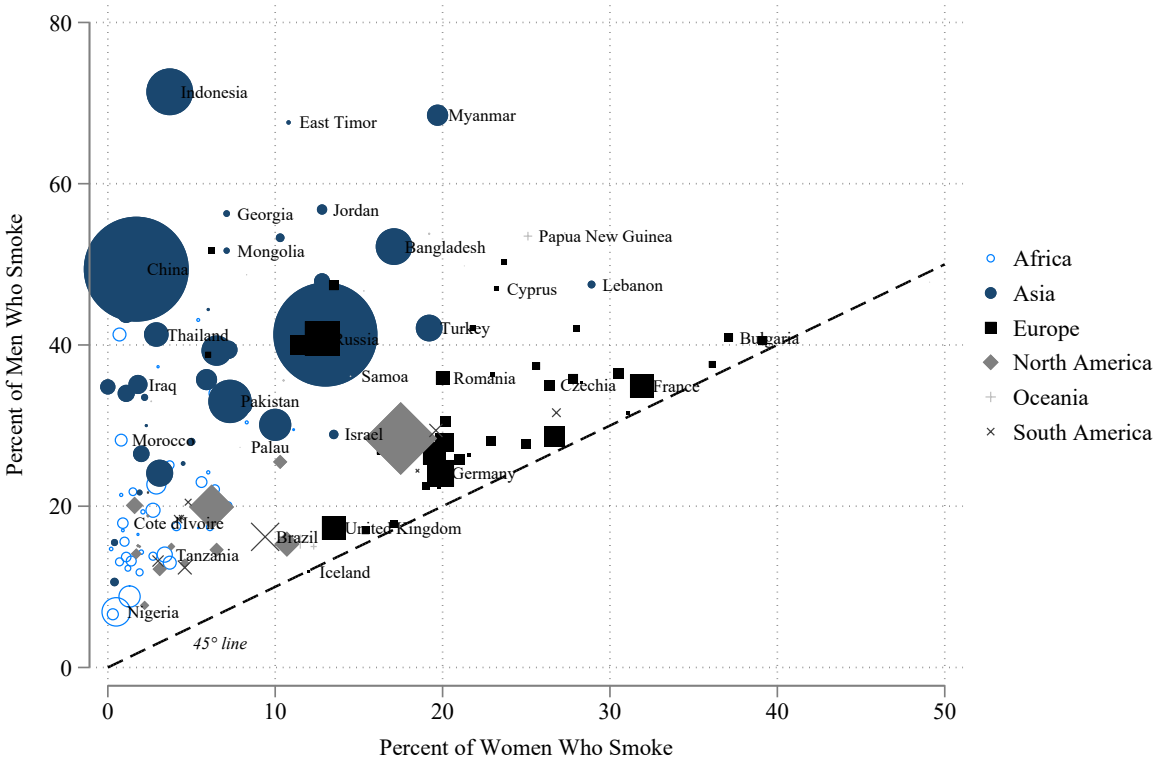
The history of tobacco consumption exemplifies how cultural norms and policy (indirectly shaped by war and technology) influence behavior. The smoking of tobacco products was limited to a past-time of the elite until the introduction of the Bonsack machine in 1880, which rolled cigarettes more efficiently. This technology was leveraged by American industrialist James Buchanan Duke to mass produce cheaper cigarettes. The outbreak of World War I brought massive purchasing orders from the armed forces and ushered in the mid-twentieth century "golden age of smoking" (Henningfield and Rose 2025). Smoking in the trenches was glorified in films and advertising (see SRITA (2025) for examples). According to Kurcina (2023), "[t]obacco became highly valued as a wartime necessity, a sentiment that the tobacco industry skillfully exploited in its advertising campaigns featuring soldiers, flags, and the symbols of a triumphant nation safeguarding democracy." Tobacco use has also been shown to be transmitted across generations. Christopoulou and Lillard (2015) finds that British migrants who originated from a smoking-heavy culture, proxied for by cohort-specific smoking prevalence rates in the U.K., are more likely to have children who smoke both in Australia and the U.S.

Over the second half of the twentieth century, many high-income countries experienced dramatic reductions in smoking due to public health information campaigns, purchasing and advertising restrictions on tobacco products and high excise taxes (Flor et al. 2021). Yet, the prevalence of smoking remains high in several low- and middle-income countries, particularly in parts of Eastern Europe and Asia (see Figure 4). Similar to alcohol and illicit substance use, tobacco use is disproportionately a male activity: with 37% of men and 8% of women tobacco users (World Health Organization 2024). This gendered pattern is seen within nearly every country. Indonesia is striking with over 70% of men smoking compared to less than 10% of women. Tobacco is considered crucial to the Indonesian economy – responsible for over 11 million jobs (the largest employer after the government) and accounting for 10% of government revenue in excise taxes. Tobacco companies are also key sponsors of cultural events, including sports games and festivals. Smoking has been observed to be such "an important component of masculinity that many informants commented...a man who does not smoke may be questioned or teased about whether he is a man" (Nichter et al. 2009, p. 101). This linkage between masculinity and smoking is also present in advertising in the Western World. The iconic Marlboro Man campaign associated smoking with rugged masculinity in the mid-twentieth century (Starr 1984)(see Figure 5 and Section VII).

For many American Indian and Alaska Native communities, traditional tobacco is considered a sacred

[8]The terms smoking and tobacco use will be used interchangeably in this section.

Figure 4: Smoking by Gender, 2020



Notes: The share of men versus the share of women aged 15 years and older who consume any form of tobacco, including cigarettes, cigars, pipes or any other tobacco products. Electronic cigarettes are not included. Figure reproduced from "Our World in Data". Numbers are weighted by population. *Data Source:* Multiple sources compiled by World Bank (2020), processed by "Our World in Data" (Ritchie and Roser 2023).

gift that is hand-prepared for spiritual, ceremonial and medicinal purposes. However, forced assimilation and targeted marketing by tobacco companies made Indigenous communities more vulnerable to commercial tobacco use. State-level tobacco control policies did not apply to sovereign tribal nations in the U.S., limiting their effectiveness. Consequently, American Indian communities continue to experience disproportionately high rates of commercial tobacco use and related chronic diseases. Efforts to promote more culturally grounded public health messages – honoring traditional tobacco while addressing harms of commercial tobacco – have shown greater success in resonating with Indigenous communities (Nadeau et al. 2012).

VI.2 Lethal Firearm Ownership

Another risky health behavior that is more specific to the U.S. is personal firearm ownership. An estimated 393 million guns are held by American civilians out of the estimated global total of 857 million (46%) (Karp 2018). While the number of firearms in the United States exceeds the number of its inhabitants, ownership is not evenly spread across the population: three in ten U.S. adults report owning a gun, with two-thirds owning more than one gun (Parker et al. 2017). For most gun owners (74%), the right to own a gun is closely tied to individualism, freedom and self-reliance. Joslyn (2020, p. 48) argues that guns "represent symbolic currency for their owners, which itself is cultivated and exploited by organizations like the NRA and gun

Figure 5: Marlboro Cigarette Advertisement

Notes: Image sourced from *SRITA (2025)* collections under fair use.

manufacturers."

Historian Richard Hofstadter, in his 1970 article "America as a Gun Culture," sought to understand American gun culture, including the role of the frontier and popular entertainment's heroification of the "western man, quick on the draw." Hofstadter noted the persistence of a "political creed" pre-dating the American Revolution that "rested upon faith in the civic virtue and military prowess of the yeoman." A third historical factor, particularly relevant in the South, was the gun as a symbol of "White male status," as even White indentured servants were permitted to have guns, but both free and enslaved Blacks were not (Hofstadter 1970).

Buttrick and Mazen (2022) hypothesize that American gun culture is rooted in the belief that firearms provide both physical and psychological security, a sentiment they trace to backlash against the Reconstruction following the American Civil War. The authors tested this hypothesis by studying the relationship between slavery in a county measured in 1860 with contemporary firearm ownership, finding a robust positive association. They argue the fear extended beyond the U.S. South through social connections (proxied for via the Facebook Social Connectedness Index). In Bazzi, Fiszbein and Gebresilasse (2020)'s exploration of the roots of "rugged individualism," the authors find that U.S. counties with increased total frontier experience (TFE) were more likely to oppose banning assault rifles.

In recent work, Alsan, Schwartzstein and Stantcheva (2025) investigate why Americans choose to own (or not own) lethal firearms. Drawing on a large, representative survey of 6000 Americans and experimental treatments, the authors distinguished lethal firearm owners (LFAO), non-owners interested in acquiring firearms (NO-I), and non-owners uninterested in ownership (NO-U). Similar to Buttrick and Mazen (2022), the authors found safety was an important rationale for LFAO, but note this sentiment was also shared by non-gun owners. Where the groups diverged was in how they believed safety could be achieved. The authors uncovered stark emotional and perceptual differences to firearm ownership: LFAO associated own-

ership with safety and confidence, while NO-U associated ownership with fear and unease. Furthermore, NO-I were the most fearful and sought personal protection. Information treatments that made salient the health risks to LFAO were not found to durably change policy views on gun safety regulation among current owners. In contrast, introducing current owners to non-lethal firearm alternatives boosted interest in such products, especially when paired with a trusted endorsement from a conservative figure. Taken together, the findings suggest reframing conversations around shared values like safety and expanding knowledge about alternatives for achieving personal safety, may offer promising pathways for risk reduction.

In cross-country work, Squires (2000) examined the gun cultures of the U.S. and the U.K. In the U.S., self-defense is generally viewed as a legitimate rationale for private gun ownership (as discussed above), whereas no such tradition exists in the U.K. Stark differences can be found in the policy response to firearm-related massacres. Following the 1996 Dunblane Primary School shooting in the U.K. where 16 children and a teacher were killed, public pressure mounted with 750,000 signatures gathered in just ten weeks, precipitating the passage of the Firearms (Amendment) Act of 1997. This act banned private ownership of handguns (Solly 2021). Major gun control measures were also enacted in Australia in 1996 after a mass shooting in which 35 people were killed, and in New Zealand after the 2019 Christ church mass shooting, in which 51 people were killed (Chapman et al. 2006; Neilson 2019). These responses are in stark contrast to the U.S., where legislative efforts for gun control remain highly contested despite recent massacres and high-profile political assassinations.

VI.3 Diet and Body Type

Dietary risks are responsible for 22% of deaths among adults globally and in the U.S., nearly one-third of U.S. adults 20 years of age or older suffer from cardiovascular disease (Afshin, Ashkan et al. 2019; Center for Science in the Public Interest 2025; Matthews and Kurnat-Thoma 2024).

Yet despite the risks associated with under- or over-nutrition, what is considered a healthy body habitus is also culturally situated. Macchi (2023) uses an experimental design in Uganda to understand perceptions of weight and economic well-being. To do so, Macchi experimentally manipulated images of individuals, making some individuals appear heavier than others. Ugandan respondents providing feedback on the photos rated heavier individuals as being as wealthy as normal-weight individuals who own a car. Despite this clear association with income, there were no other associations with weight – such as beauty, self-control, ability, or trustworthiness. This contrasts data from Western Europe and the U.S., which generally shows that women in particular receive a wage premium for being thin – a premium that was estimated to rise over time (from 4.29% in 1981 to 7.47% in 2000, according to estimates from Lempert (2007) at the Bureau of Labor Statistics). In the second part of the study, Macchi randomly assigned the portraits she created to loan officers, varying the profile of the hypothetical applicant in an incentivized resume rating scheme. Loan officers rated a heavier applicant as more creditworthy. According to the author: "the obesity premium is large, equivalent to the effect of a 60% increase in borrower self-reported income in the experiment," (Macchi 2023, p. 2289).

Technology might well impact the way obesity is culturally conceived in ways that have yet to be determined. For instance, the GLP-1 drugs such as semiglutide have been lauded for their ability to work in the gut and brain to reduce cravings. With each passing day, it seems the potential benefits of these drugs extend: from reducing addiction, to reducing cardiovascular and diabetes risk, and even treating dementia. A technology with such wide-ranging and readily observable physical effects could have similarly impactful consequences for culture, similar to those introduced by oral contraception and its effects on female

labor force participation (Bailey 2006; Goldin and Katz 2002). Indeed, such a comparison was drawn by *The Economist* (*2024*) in their cover story on GLP-1 agonists entitled "The Everything Drugs:"

> "[A]s the contraceptive pill encouraged women to stay in education and work, so GLP-1 drugs could lead to profound economic and social change by enhancing productivity and freedom. Some business models could be upended. If craving can be controlled, junk-food companies, advertisers and even drug-dealers may shift their focus from quantity to quality. Social mores could evolve. In the West thinness is prized as the ideal of beauty, because for so many it is hard-won, whereas obese people suffer discrimination and lower wages. If being thin is easier, that may change. Obesity and addiction may less often be seen as moral failings, but as illnesses that can be treated."

Whether body habitus is further medicalized, and whether smaller or larger body types are considered desirable, could be determined by the political economy of health insurance coverage for these drugs and the response from industries that would be affected by disruption of the status quo.

VI.4 Religiosity

Religion has long been recognized as a factor influencing both physical and mental health. According to the secularization hypothesis, religiosity, or the quality or extent of one's religious experience, declines with economic development either due to education displacing "superstitious beliefs" or a temporal tradeoff placing more weight on the current versus the future utility of everlasting life (See Iyer (2016) for a review). According to Idler and Kasl (1997), there are three main ways in which religion can affect health. First, religion serves as a regulative function, proscribing certain risky behaviors; second, it has an integrative function, providing social support and informal insurance; third and related to Section III, religion provides meaning and purpose to life.

Using data from the Gallup World Poll, Deaton (2009) explores the relationship between religiosity and health across 146 countries. Deaton first confirms well-established patterns in the data, such as the age, education and gender gap in religiosity. Conditional on these factors, Deaton finds that individuals who reported religion was important in their lives were less likely to experience pain and rated themselves in better health than their less-religious age-matched peers. These effects are more pronounced among respondents from lower-income countries. However, as emphasized by Deaton (p. 22), "the beneficial effects of religiosity on health are far from universally apparent." In particular, the benefits for men appear to be more pronounced than for women and associated with a range of other factors (*e.g.*, marriage and non-smoker status) that could help explain the positive association between religiosity and health.

Another way religion could affect health historically is through the legacy of missionaries. Christian missions brought intangible (*e.g.*, knowledge) and tangible (*e.g.*, health centers and technology) assets alongside their religious convictions. The effect of missionary influence on Indigenous peoples' health varies (see Becker et al. (2024) in this Handbook for further information). Rossella and Mantovanelli (2018) find a robust positive association between proximity to nineteenth-century Protestant medical missionary settlements in India and better health among contemporary individuals. Cagé and Rueda (2020) examine the impact of Protestant and Catholic missionary activity on HIV in sub-Saharan Africa. They show that proximity to historical missionary health facilities was related to decreased likelihood of HIV and better present-day access to health care. However, disparities between Indigenous and non-Indigenous individuals show the enduring impact of missionaries was not uniformly positive. Schultz et al. (2018) compare

angiography patients who are First Nations and non-Indigenous individuals in Manitoba, Canada, finding that First Nations patients experience higher cardiovascular mortality and less health care engagement following the procedure, relating this to mistrust due to intergenerational trauma.

VI.5 Trauma, Social Capital and Health Seeking Behavior

Traumatic experiences that target a particular group can have negative health consequences in the short and long run. When such trauma is perpetuated by health care professionals, it can also lead to distrust of the broader health care system, leading to under-utilization of care and worsened health outcomes. Lowes and Montero (2021) study medical campaigns by French colonial governments in Cameroon, Central African Republic, Chad, Republic of Congo, and Gabon between 1921 and 1956. The campaigns sought to manage a variety of diseases, including sleeping sickness – the focus of their paper. Through these campaigns, millions of villagers were forcibly examined and injected with medications with severe side effects, including blindness and death. The medications were also ineffective, potentially spreading contagious disease through the reuse of needles. The authors find that being visited by colonial medical campaigns for an average of 15 years is associated with a 5.8 percentage point reduction in vaccination rates relative to a baseline of 53.2% and a 5.4 percentage point increase in refusals of diagnostic blood tests, compared to a baseline refusal rate of 4.8%. Furthermore, they find that higher exposure to the campaigns is associated with individuals waiting longer amounts of time before seeking medical treatment and a lower likelihood of interacting with the health sector, despite no differential access to health services.

Exploitation by medical personnel is also present in the United States as highlighted by Alsan and Wanamaker's 2018 study on the impact of the disclosure of the decades-long Tuskegee study of untreated syphilis in Black men. From 1932 to 1972, the United States Public Health Service conducted an unethical experiment following hundreds of low-income Black men in Tuskegee, Alabama with untreated syphilis to observe the natural course of the disease (Brandt 1978). The men were discouraged from seeking outside medical advice and denied known and highly effective treatments, while being led to falsely believe they were being treated. The authors find that the disclosure of the study led to increases in medical mistrust and mortality and decreases in medical care utilization for older Black men, with life expectancy at age 45 for Black men falling by up to 1.5 years. These findings are consistent with other work that has pointed to the role of the Tuskegee study in hampering public health education efforts and contributing to the spread of the HIV epidemic in the Black community (Gaston and Alleyne-Green 2013).[9]

The transmission of beliefs and its consequences for health can be viewed through the broader lens of cultural persistence. Guiso, Sapienza and Zingales (2006) suggest that beliefs, including mistrust, are passed from one generation to the next, with real-world experiences gradually updating these beliefs. In the context of health care, such patterns can lead societies to be either in a high-trust or low-trust equilibria. In a low-trust equilibrium, for example, parents may transmit skeptical beliefs about health care systems to their children, who, due to limited engagement with health services, miss opportunities to benefit from health innovation, which further reinforces feelings of alienation. Conversely, in societies where trust in health care systems is high, greater health care utilization and improved health outcomes reinforcing such trust may follow.

[9] Fernández, Parsa and Viarengo (2019) illustrate how a health crisis like AIDS can change cultural beliefs, even amid enduring legacies of trauma and mistrust. The authors find that states more heavily affected by the AIDS epidemic, where visibility and activism around same-sex relationship issues were more pronounced, experienced greater shifts in beliefs and attitudes toward homosexuality.

Trust in health care utilization and subsequent outcomes is also influenced by social networks and social capital. Auer and Kunz (2025) find significant improvements in child health at birth among refugees in Switzerland who are randomly assigned to regions with dominant languages that share their origin language – an effect driven by health-related information sharing. Stronger social connectivity has been associated with a range of health-promoting outcomes, including higher rates of participation in public health measures like immunizations, more partnerships for population health, and even lower mortality rates during the COVID-19 pandemic (Office of the Surgeon General 2023).

VI.6 Gender Norms and Women's Health

Gender norms, and specifically the subordinate role of women across many cultures, are common and have received considerable scholarly attention. According to Surowiec, Snyder and Creanza (2019), out of 1291 populations in the *Ethnographic Atlas*, there are 590 patrilineal populations compared to 160 matrilineal populations; the remaining are some form of mixture, bilateral, or difficult to fully characterize. Thus, societies are mostly patrilineal, meaning that inheritance is from father to son, and patriarchal, meaning that men retain most of the power in society vis-à-vis decision-making.[10]

What does the current kinship and power structure mean for gender gaps in health and well-being? Although men today typically have shorter lives than women on average, women experience higher morbidity.[11] Reynolds et al. (2020) sought to understand the effect of gender norms on morbidity, focusing on the effect of kinship networks. To do so, the authors studied Mosuo families in the Yunnan Province in China. Although the Mosuo identify as a single ethnic group, they included both matrilineal and patrilineal families, where the former organize and transmit resources among maternal kin and allow for greater female authority in decision-making. The researchers compared inflammatory markers and blood pressure of men and women in both types of kin systems and found reduced probabilities of both chronic inflammation (as measured by C-reactive protein) and high blood pressure for women in matrilineal versus patrilineal families, with no significant differences for men.

Today it's common to refer to patrilineal lineage and patriarchy as "traditional" and contrast this with "progressive" gender norms that afford women equal power to men in society.[12] Traditional gender roles, particularly those tied to agriculture, have shaped fertility behavior. In an examination of the hypothesis laid out by Boserup (1970), research by Alesina, Giuliano and Nunn (2013) finds that societies that historically relied on plow agriculture, which required upper-body strength, developed more rigid gender roles and today have lower female labor force participation. These gender norms also contribute to lower fertility rates, as plow agriculture required intense physical labor and eliminated the need for weeding, reducing the usefulness of children for working the field (Alesina, Giuliano and Nunn 2011). Carranza (2012) also found that rural districts in India with a larger fraction of loamy (and hence plowable) soil to clayey soil had higher male-biased infant sex ratios.

In locations where the plow was difficult to adopt due to unfavorable conditions – for example rocky

[10] Of course, there is scholarship suggesting this was not always the dominant structure – prior to the agricultural revolution, prehistoric societies and hunter-gatherers likely had a much more equal division of power with archaeological evidence showing worship of mother goddesses (Saini 2023; Melis 2003).

[11] This sex difference in mortality (SDIM) appears to have emerged for high income countries around the turn of the last century, according to Cullen et al. (2015), and was coupled with maternal mortality declines. Goldin and Lleras-Muney (2019), using detailed historical vital statistics from Massachusetts, note that the decline of infectious disease among young females also could have played a prominent role in the female life expectancy advantage.

[12] We acknowledge this convention ignores prehistory as cited earlier. We use the phrase "gender norms" to refer to role of women in society and "masculinity norms," described below, to describe the role of men.

soil texture, labor supply constraints (*e.g.*, due to kidnappings associated with the trans-Atlantic slave trade) and/or lack of complementary inputs (*e.g.*, fewer draft animals due to the TseTse fly) – matrilineal kinship structure was more common (Alsan 2015; Lowes and Nunn 2024). Lowes (2022), using data from over 50 Demographic and Health surveys across 14 Sub-Saharan countries representing 400,000 female respondents, employed a geographic regression discontinuity – comparing women from neighboring ethnic groups who differ in kinship structure. A consistent set of results emerges whereby matrilineal women were 23% less likely to experience domestic violence and daughters of matrilineal women were less likely to be stunted.

Indeed, even as societies have industrialized, gender norms continue to influence women's health from conception to grave. Female infants are more likely to be aborted, girl children are more likely to be malnourished and once menarche occurs, girls are often married at young ages and targeted by sexual and physical violence (Alsan et al. 2016).[13] Female genital mutilation, a practice which gained traction during the Red Sea slave trade – ostensibly to ensure chastity of those sold as concubines in the Middle East – continues to be practiced today exposing women to the risk of bleeding, infection and death (Corno, La Ferrara and Voena 2020). Female adolescents in Indonesia and Ghana report never changing menstrual products due to the absence of suitable disposal or sanitary options and fear that others would know that they were menstruating, since menstruating women are often considered unclean (UNICEF Indonesia 2015; Mohammed and Larsen-Reindorf 2020).

Fernández and Fogli (2009) explore how gender norms are transmitted across generations using immigrants to the United States. Individuals whose origin countries had one standard deviation higher total fertility rate tended to have 0.4 more children on average and lower female labor force participation. Glaeser and Ma (2014) provide insight into how gender-biased attitudes are transmitted across generations. The authors model how stronger parental desire for grandchildren increases their underinvestment in their daughter's education. Daughters are also often socialized to prefer traditional gender roles, which align with higher fertility and thus prioritize the continuation of the family line.

Literature shows that gender norms can evolve in response to policy. Research by Doepke and Kindermann (2019) using longitudinal data from 19 high-income countries show that in countries where the burden of childcare is viewed primarily as the responsibility of women, fertility rates tend to be lower.[14] This is observed particularly in low-fertility countries where traditional gender roles persist. In contrast, countries like France, Belgium, and Norway, where public policies actively promote shared childcare responsibilities, witness higher fertility rates (these countries also have more balanced fertility preferences between women and men).

The 1877 Bradlaugh-Besant trial in the UK provides another example of law shaping society. In the high-profile trial, Annie Besant and Charles Bradlaugh were tried for violating the Obscene Publications Act 1857 by republishing Charles Knowlton's *Fruits of Philosophy*, a pamphlet on birth control. The duo were convicted, but the decision was later overturned (Banks and Banks 1954). The case is credited with provoking a fertility decline; as economic historians Beach and Hanlon document, culturally British households living outside of Britain – in Canada, the U.S., and South Africa – experienced large, synchronized reductions in fertility relative to their non-British peers (Beach and Hanlon 2023).[15]

[13] Especially within the context of conflict, Guarnieri and Tur-Prats (2023) find that male-dominant armed actors are more likely to be perpetrators of sexual violence. The researchers also find that sexual violence is driven by a specific clash of conceptions on the appropriate role of men and women in society: sexual violence increases when the perpetrator is more male-dominant than the victim.

[14] According to Doepke and Kindermann (2019), babies are most likely to be born when both partners agree to it, but when they disagree, the female perspective is most important and related to the amount of childcare duties she bears.

[15] Even in the absence of formal policy or legal mandates, symbolic and moral authority can shape attitudes and

Other countervailing forces for high fertility are through economic development. Vogl (2016) finds a positive fertility-wage elasticity for much of his sample of 48 developing countries that flipped at some point over the last 50 years of the twentieth century. The primary factor driving this change was parental education. Such findings are consistent with the model of Galor and Moav (2002), who endogenize the quantity-quality trade-off: the fertility of the poor is constrained by subsistence but then demand for skilled labor pushes out the technological frontier, leading wealthier families to prefer fewer, more educated children. Interestingly, this literature does not necessarily imply changing gender roles since this heavier investment in fewer children could imply a similar time cost of child-rearing for women.

As mentioned in the Section VI.3 on obesity, changes to technology may change productivity or relative prices with far-reaching consequences for health and culture. Research from Bailey, Hershbein and Miller (2012) demonstrate that access to oral contraceptive pills (OCPs) allowed women to stay in the labor force in the critical experience-earning years of their early twenties and obtain more education. Leveraging state-by-birth-cohort variation in laws allowing for OCPs, the authors estimate that the pill accounted for 10% of the convergence in the gender gap in the 1980s and 30% in the 1990s. Albanesi and Olivetti (2016) also find that medical progress in reducing maternal morbidity and infant bottle feeding accounted for approximately 50% of the increase in both married women's labor force participation and fertility between 1930 and 1960 (see Anderson (2024) in this Handbook and citations therein).

VI.7 Masculinity Norms and Men's Health

Masculinity norms also vary across societies and over time with serious consequences for health, but have only recently drawn interest from economists. One of the earliest papers related to the subject was by Grosjean (2014), who sought to test the hypothesis put forward by Nisbett and Cohen (1996): that the Southern U.S. culture of honor – which relies on male honor and aggression – derives in part from historical migrant flows of Scots-Irish herders, who used violence to defend their cattle in their ancestral homeland. The article was motivated by the observation that the Deep South continues to be an outlier in terms of violence in the U.S. (Bryant et al. 2023), and builds on prior scholarship associating high contemporary levels of violence to the historical institution of slavery (see Section VI.2 on firearms). Grosjean finds that a 30% increase in the share of Scots-Irish settlement in the late eighteenth century was associated with a 25% higher homicide rate by White offenders in the early 2000s. Consistent with the finding on homicides, Cao et al. (2021) find that the tradition of herding is associated with higher prevalence and intensity of both localized conflict and larger-scale conflicts. They also show such violence is driven by the psychological motivation of revenge-taking.

Reverberations of violence have been investigated in studies of the Emergency period in India. During the late 1970s, emergency powers were declared by President Fakhruddin Ali Ahmed, allowing then Prime Minister Indira Gandhi to rule by decree – censoring the press and jailing dissidents. During that time, and with funding from international organizations, over 6 million men, most of them of lower socioeconomic status, were forcibly sterilized by the government (Green 2018). Singh and Vincent (2024) find that exposure to the mass sterilization program increased violent crime rates by 7% in an average district, with the effect driven by rape which increased by 22%. The authors document that rape was often committed by younger

behaviors related to gender norms. Bassi and Rasul (2017) examine the effects of non-informative persuasive communication on fertility-related beliefs and behavior using the 1991 Papal visit to Brazil, which coincided with the timing of the Brazil Demographic and Health Survey (DHS). The authors exploit this overlap to show that exposure to the Papal visit led to a significant reduction (over 40%) in intentions to use contraception, 30% increase in unprotected sex, and 1.6% increase in births nine months later, indicating a clear short-term fertility effect.

cohorts of men: *i.e.*, those not directly affected by the forced vasectomies. Moreover, the effect on violence in heavily exposed districts remained significant until 2013. The authors interpret their findings as evidence of the cultural transmission of violence against women.

A handful of studies have investigated the causes and consequences of masculinity for men's *own* health. Baranov, De Haas and Grosjean (2023) exploit a historical experiment – convict transportation to historical Australia – to study the long-term impact of male-biased sex ratios on masculinity norms. They find that regions with a historical surplus of men are today characterized by higher rates of violence and suicide.

De Haas et al. (2024) studied masculinity norms using survey data from 43 countries in Europe, Asia and the Middle East. Questions on "dominance masculinity" – defined as "modes of behavior that reinforce male dominance in society and the perceived inferior status of women as well as men who do not conform to these norms" – were added to the Life in Transition Survey (LiTS). The survey covered five core dimensions of masculinity: importance of winning, violence, help avoidance, control over women, and disdain for homosexuality. The research team found Western countries were less progressive on masculinity norms than they were for the role of women – falling somewhere between Middle Eastern and former Soviet bloc countries. Dominance masculinity was positively correlated with GDP per capita and income inequality, suggesting that economic development may not uniformly erode such norms. Moving from the 10th to 90th percentile in dominance masculinity at the country-level was associated with a 21% increase in the gender gap in mortality and a 50% increase in the gender gap in suicide.

VII Media, Culture, and Health

Media and advertising also seek to influence or tap into deeply-held cultural norms – thus influencing consumption and ultimately feeding back into culture itself. In advertising, masculinity is frequently invoked to persuade men to purchase products that align with traditional male roles, thereby encouraging often risky health-related behaviors (see also Mullainathan, Schwartzstein and Shleifer (2008)).[16] For example, in many cultures it is generally more acceptable for men to drink late into the evening and in public settings, with a high tolerance (*i.e.*, being able to "hold your liquor" is considered a masculine trait) (Hall and Kappel 2018). Messner and Montez de Oca (2005) provide a comprehensive analysis of beer and liquor advertisements aired during major sporting events, such as the Super Bowl, and in publications like *Sports Illustrated* swimsuit issue, documenting their reliance on masculinity motifs. They find the ads tap into broader anxieties related to the declining economic status of men relative to women in the post-industrial era. By promoting a version of masculinity rooted in consumption, the advertisements suggest men can reclaim their dominance by purchasing alcohol, a dynamic that has significant public health implications given the relationship between alcohol, chronic disease, violence and accidents.[17]

The association of products with masculinity is common among products that carry substantial health risk. For instance, an advertisement for the .223-caliber semiautomatic Bushmaster rifle featured the provocative statement, "Consider Your Man Card Reissued," linking ownership with reclaiming a type of male

[16] Sex disparities are also observed in mortality rates associated with deaths of despair – deaths resulting from alcohol, drugs, or suicide. Across 183 countries from 2000 to 2019, a global analysis by Shirzad et al. (2024) find a 3.3-fold higher rate of deaths of despair among men than women.

[17] Godoy, Karlan and Zinman (2021) highlight how conflicting attitudes regarding alcohol, motivated by social capital and religious or moral norms, can coexist. Alcohol is often consumed socially and openly among Tsimané, a remote society of Indigenous People in the Bolivian Amazon, and especially among men – which may explain why respondents reported their drinking without hesitation. However, due to long-standing stigma from Protestant missionary influence, respondents were less likely to report saving for alcohol.

identity (Gray 2012). The rebranding of Marlboro cigarettes in the mid-twentieth century offers yet another example. Originally marketed to a female audience with slogans like “Mild as May” and “Ivory Tips to protect the lips,” Marlboro transformed into a brand synonymous with rugged masculinity through the introduction of the Marlboro Man campaign in 1954 (Burnett 1958) (returning to Figure 5, and now focusing on the tagline "Where there’s a Man there’s a Marlboro").

Alsan and Neberai (2024) examine how political advertising influenced the development of the U.S. health care system. During the Truman administration, the American Medical Association (AMA) launched the National Education Campaign (NEC) to oppose the establishment of a national health insurance program. To spearhead this effort, the AMA enlisted the public relations firm Whitaker and Baxter, who orchestrated an expansive campaign combining mass advertising with grassroots mobilization. Their messaging framed national health insurance as fundamentally un-American, while portraying private insurance as a symbol of individual liberty and the “American way.” The campaign deliberately appealed to prevailing cultural values to shape public opinion and galvanize civic resistance to the Truman plan.

While multiple factors contributed to the establishment of the NHS in the United Kingdom, historians have emphasized widespread public support for universal access to health care as a key factor. This support may have been shaped by the collective experience of World War II (Shapiro 2010), including the temporary relocation of impoverished urban children to rural households during the London bombings. Another influential factor may have been the popular novel *The Citadel* by Dr. A.J. Cronin, along with its film adaptations, which portrayed the medical profession as both greedy and inept, thereby diminishing its authority in national health policy debates (Dux 2012).

Television, particularly shows targeting young adults, also plays a significant role in shaping cultural norms. Kearney and Levine (2015) found that the MTV show "16 and Pregnant," contributed to a 4.3% reduction in teen births, accounting for approximately 24% of the overall decline in the U.S. teen birth rate between 2009 and 2010. The show aimed to highlight the challenges and consequences of teen motherhood. A parallel example is found in Nigeria with the show "MTV Shuga." Banerjee, La Ferrara and Orozco-Olvera (2019) demonstrate that exposure to the MTV show significantly improved knowledge about HIV, increased the likelihood of HIV testing by 3.1 percentage points, and led to a 55% reduction in Chlamydia infections among women, indicating a decrease in risky sexual behavior.

VIII Concluding Comments

This chapter has emphasized the nuanced and complex role of culture in relation to human health. We explored how culturally grounded “disease theory systems” influence beliefs about the origins and meaning of illness, responses to suffering, and the appropriate role of the state in allocating care. We showed that cultural norms help define what counts as health or illness and mediate attitudes toward pain, death, and health-related behaviors, such as smoking, reproduction, and firearm ownership.

Importantly, culture is not only inherited or adaptive; it is constructed and mobilized. We reviewed how firms, governments, and civil society harness cultural narratives to influence behavior, frame health policy debates, and shape public opinion. By measuring and analyzing the bidirectional relationship between culture and health, economists can gain deeper insight into the roots of health inequality. Furthermore, recognizing culture as both adaptive and constructed suggests that interventions which either align with prevailing cultural values, or strategically reshape them, are more likely to succeed in safeguarding population health.

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