6

Wages of Life

Medical care is a part of lived experience addressed by Jains throughout antiquity up to the present. In chapter 4, we detailed evolving textual views of medicine, highlighting an early duty to care that became increasingly regulated and manifested in the changing attitudes toward medical treatment, growing medical knowledge among mendicants, and emerging guidelines for seeking medical care from laypeople. By the medieval period, Jain mendicants had created their own formal medical manuals that contributed to the wider literary traditions of Indian medicine.

How might the perspectives of modern Jains resonate with or diverge from these evolving textual accounts? And what, if any, Jain insights might inform an engagement with modern bioethical issues that emerge during the course of life? In this chapter, we examine key bioethical concepts in the physician-patient relationship, including nonmaleficence, beneficence, autonomy, and truth. We also explore contemporary Jain views on the causes of illness, and ethical attitudes toward vaccinations and antibiotic use, surgery and human dissection, and research trials and access to care.

Concurrent with these issues, we investigate how contemporary Jain medical professionals maintain their Jain identity alongside competing values of medicine, science, and society, and we pay special attention to Jain views on animals used for food and biomedical studies. We conclude with a list of seven provisional principles of application for considering ethical issues in standard medical care during one's lifetime.

THE PHYSICIAN-PATIENT RELATIONSHIP

As noted in chapter 3, Śvetāmbara texts on lay conduct from the sixteenth century onward generally refer to medicine (*vidyā*) as one of seven acceptable occupations (*upāya*) that can be practiced with lesser or greater degrees of purity (Williams

1963, 121–22).[1] But how do lay Jain medical professionals understand the vocation of medicine today? To start, we will examine Jain approaches to key bioethical terms that guide physician-patient relationships, such as *nonmaleficence, beneficence, autonomy*, and *truth*.

Considering Nonviolence and Compassion alongside Nonmaleficence and Beneficence

Survey respondents understood medicine to be a less violent career according to their tradition, but also a way to offer positive care. When asked to choose the influences on their decision to pursue a medical career, the strongest responses included "My personal desire to help people" (42%, $n = 36$), "The tradition of Jains taking careers that are not overtly violent" (36%), "My personal desire to help people, informed by Jain values" (36%), and "My Jain parents, grandparents, or elders because of their commitments to Jain values" (17%).

The tension between avoiding violence and positive acts of care is reflected in the contemporary bioethical terms *nonmaleficence* and *beneficence*. *Nonmaleficence* refers to not harming others, or inflicting the least harm possible. This principle acknowledges that we can make the lives of other beings worse, and so we should, as stated in later versions of the Hippocratic Oath, "first, do no harm (*primum non nocere*)." Beneficence is a positive action to promote the welfare of other beings, based on the recognition that we can sometimes make the lives of other beings better.

Although Jain texts do not use these same terms, in chapter 3 we examined the role of nonviolence in Jainism in relation to both restraining action and positive acts of compassion. The relation between these two approaches is complex. For instance, if "compassion" signifies passion-filled attachment to social relationships, its exercise could be at odds with the ultimate aims of mendicant life to restrain such bonds. If "compassion" describes a critical insight that each embodied being is vulnerable to pain, violence, and destruction, its exercise may be a positive sign of attaining the right worldview.

The fact that survey respondents identified helping others as a primary motivation for their occupational path, even above medicine's designation as a less violent occupation, suggests that Jain medical professionals understand compassion to be a positive virtue for laypeople. Likewise, when asked, "As a patient, which do you value more?," a slight majority of respondents chose "A doctor who emphasizes compassionate communication over medical expertise" (36%, $n = 36$) than chose the reverse answer, "A doctor who emphasizes medical expertise over compassionate communication" (31%). A small group were unsure (14%), and another portion chose "Other" (19%), all of whom described a desire for both qualities equally. The positive assessment of compassion in these responses may signify a modern medical disposition among Jains that privileges beneficence over nonmaleficence.

Entangled Autonomy

The term *autonomy* was established as one of four principles of biomedical ethics by Tom Beauchamp and James Childress in their 1979 landmark text, *Principles of Biomedica*, along with nonmaleficence, beneficence, and justice. In bioethics, autonomy is often defined as self-governance, or the decision-making capacity to exercise one's values and path of life, especially pertaining to healthcare privacy and informed consent to accept or reject certain treatments or procedures. In practice, however, autonomy is more complex.

Some bioethicists interpret autonomy merely as freedom from external interference, which can overlook the need to respect mutual autonomy on both sides of the physician-patient relationship (Stirrat and Gill 2005). Others instrumentalize autonomy as the tool by which one ensures one's own well-being, an interpretation that can overlook how one might make an autonomous choice seemingly against one's own well-being, such as refusing life-sustaining treatment (Varelius 2006). Childress refined his own concept of autonomy to an act of ensuring the "conditions of autonomous choice" (1990, 12) by facilitating four criteria of decision-making capacity whereby an individual (1) *understands* information; (2) *appreciates* the relevance of information, including risks or benefits, to their own situation; (3) *reasons* in light of their own values, free of internal and external constraints; and (4) *communicates* a choice (Palmer and Harmell 2016).

Confronted with this snapshot of debates over the meaning and application of autonomy in bioethical contexts, what, if anything, might Jainism contribute to the concept of self-governance? As a tradition that emphasizes the karmic consequences of bodily, verbal, and mental conduct of self-governing *jīva*s, Jainism places a high value on individual freedom within a matrix of causal relations. Although the specific term *autonomy* does not appear in traditional Jain texts, some modern Jains have attempted to explain the concept through a Jain lens. In the well-known diaspora book *Jain Way of Life* (2007), Yogendra Jain—a US-based engineer specializing in telecom and medical devices, and former vice president of JAINA—links autonomy to three core Jain principles. First, he states that the vow of nonviolence (*ahiṃsā*) "promotes the autonomy of life of every living being. If you understand and believe that every [*jīva*] is autonomous, you will never trample on its right to live" (2007, 3). Jain's interpretation here demonstrates that *ahiṃsā* extends social consideration to every being possessing a *jīva*. Second, Jain asserts that the doctrine of non-one-sidedness (*anekānta-vāda*) "strengthens the autonomy of thought of every individual," explaining, "If you perceive every being as a thinking individual, you will not trample on his or her thoughts and emotions" (3).[2] In this case, Jain seems to suggest that employing *anekantā-vāda* reveals others' autonomy as deserving of respect. Third, Jain claims that the vow of nonattachment (*aparigraha*) "supports the autonomy of self-control, of striving to balance our personal consumption of things by rationalizing between our needs and desires. If you

ultimately feel that you own nothing and no one, you will not trample the ecology on which our survival depends" (3). With this point, Jain equates *aparigraha* restraints toward goods and beings with a self-determining autonomy.

In another view, African-born Jain businessman Atul Shah, the CEO and founder of the British consulting firm Diverse Ethics, asserts that "over-valuing of independence and personal autonomy leads us to neglect interdependence—the essence of social cohesion" (Rankin and Shah 2008, 19). Rather than claim autonomy as compatible with Jainism, Shah rejects any isolated individualism implied in autonomy, opting for Jain ideals of "cooperation and common purpose" that place individuals in relations of responsiveness (35).

In the context of multireligious medicine, the Jain Society of Metropolitan Chicago, in conjunction with the Council for the World Parliament of Religions, identifies autonomy as a fundamental aspect of the Jain principle of nonviolence, even if the traditional language of Jainism does not explicitly articulate that term. Their jointly produced "Guidelines for Health Care Providers Interacting with Patients of the Jain Religion and Their Families" (2002) describes the principle of nonviolence as including the "preservation of life, sanctity of life, alleviation of suffering, which extends to respect of the patient's autonomy, while achieving best medical care without (harm) or with minimum harm; and always being honest and truthful in giving information" (3–4). In this view, autonomy becomes a mediating principle for non-Jain healthcare providers to understand nonviolence as both individual and relational.

These views present autonomy as a mode of self-governance possessed by all *jīva*s that is expressed, in part, by not harming other self-governing embodied beings. We might say that Jainism presents a form of "entangled autonomy" in which a *jīva*'s conduct toward self and others accrues numerous kinds of destructive and nondestructive karma that affect its own internal qualities and external circumstances (see chapter 2).

Truth as Subordinate to Nonviolence?

In modern bioethics, truth is closely related to autonomy, since self-governing individuals cannot make choices aligned with their values without understanding relevant facts. There are many historical examples of forgoing truth to reap the benefits of deception within the modern medical context. Egregious instances of deceiving patients for the sake of producing knowledge—such as the deadly Nazi medical experiments on prisoners without their permission during World War II, or the infamous forty-year Tuskegee syphilis study that withheld available treatments from African American subjects—led to ethics reforms worldwide. The Nuremberg Code (1948) and the Declaration of Helsinki (1964) delineated requirements for voluntary "informed consent" in which patients must be aware of risks, benefits, and the ability to stop participation at any time. These reforms further clarified the priority of medical care for research participants *as patients*

rather than merely as knowledge-producing subjects. After the violations of the Tuskegee study came to light in the United States, the 1974 National Research Act became law, creating a stricter standard for informed consent and requiring studies to be approved by institutional review boards to ensure that they meet ethical standards.

In ethics classes, a common thought experiment is often used to explore the morality of truth-telling between dominant accounts such as deontology and utilitarianism: If an individual with a lethal weapon comes to your house searching for a person whom you know to be inside, do you tell the visitor where to find them? Deontological advocates might stress that truth is a duty with no legitimate exception, while some utilitarian advocates might argue that lying in this case could preserve a life. Other theories, such as virtue ethics and feminist ethics of care, are often less suited to conceptual tests like this, since they explore moral decision making in alternative ways—for instance, imagining how a virtuous person might respond in this circumstance, or considering the relationship of the individuals involved, the social contexts of this threat, or if there were any third options. Most thought experiments, of course, do not invite this level of nuance, but merely illuminate a central question such as "Can deception ever be justified, and under what circumstances?"

As explained in chapter 3, truthfulness is one of the five vows in the Jain tradition, and as a vow it can be observed fully, as mendicants attempt to do, or partially, in the case of laity (TS 7.2). Truthfulness here refers to refraining from verbal activities that are informed by passions and therefore harm oneself, and from those that harm others. For laypeople, the vow of truthfulness is often described in relation to specific contexts in which they might be engaged, such as marriage and parental relations, business ownership, trade, and civic participation. Lay Jains are, thus, warned against providing wrong instruction, divulging secrets, forging documents, misusing entrusted funds, or sharing confidential thoughts of others (TS^{Dig} 7.26^{3}), as noted in chapter 3. Even verbally encouraging someone to cause harm, or insulting or embarrassing others, are seen as a violation of the vow (Williams 1963, 71–78).

Since the vow of truthfulness is subordinate to the primary vow of nonviolence, it does have flexibility in the textual tradition, as noted in chapter 3. If truth is bound to cause harm, it should not be revealed. While staying silent is preferable for mendicants, laity may even utter falsehoods in order to prevent violence. Certain texts also make concessions for violating the vow of truthfulness in order to secure the strength of the Jain mendicant community, as indicated in chapter 4.

As we will show below in relation to modern Jain attitudes toward clinical research trials, the Jain medical professionals in our survey seem to place a high value on truth-telling in medicine, advocating informed consent. However, some respondents were prepared to accept placebo deception within randomized clinical research trials for the sake of future benefits of research.

Competing Values among Jain Medical Professionals

Do Jain medical professionals depend more on Jain values or on the professional requirements of their medical training for their ethical decision making? Although one can identify points of compatibility between Jain philosophical concepts and biomedical principles such as nonmaleficence, beneficence, autonomy, and truth, the Jain context rests on the acceptance of particular beliefs, guidelines, and goals, developed over the past twenty-five hundred years. Modern medicine, on the other hand, has its own systemic expectations, aims, laws, and recommendations. Additionally, authoritative bodies continually review and create regulations relating to medicine at the institutional, state, federal, and global levels, straining to articulate universal values that will extend across regional, economic, and cultural differences.

The Jain medical professionals in our survey seem to balance a commitment to Jain values with other sources of knowledge and value such as clinical experience, legal and medical standards, and cultural sources. We assessed respondents' exposure to Jain values through several different questions. When asked how they "primarily learned about the ethical principles of Jainism," respondents could choose all applicable answers from a provided list. The greatest sources included (1) guest lectures by visiting Jain scholars (50%, $n = 36$), (2) family (47%), (3) *pāṭhaśālā* classes (42%), (4) reading Jain scriptures or historical Jain texts in translation (English, German, French, etc.) on my own (39%), (5) guest lectures by monks and nuns (33%), and (6) guest lectures by visiting Jain laypeople (31%), among ten other possible sources. Importantly, no respondent selected the option "I have never really learned about Jain ethical principles" (0%, $n = 36$).

While all respondents were exposed to Jain ethical values in some way, they varied in their degree of dedication to Jain ethical practices, beliefs, and ritual practices. More professionals considered themselves very dedicated (v) or somewhat dedicated (sw) to Jain ethical practices (v 71%, sw 21%, $n = 42$) than to Jain beliefs (v 57%, sw 31%, $n = 42$) or ritual practices (v 14%, sw 33%, $n = 42$). These commitments are not relegated merely to the private sphere, as many respondents also affirmed that Jain principles had influenced their opinions toward work-related biomedical issues, especially regarding (1) honesty in business practices, (2) dietary choices at work, (3) animal research, (4) animal testing, and (5) conflict resolution practices (figure 11).

What is important to note at present is the way that survey respondents attempt to hold their identity as Jains and medical professionals together. Over half of respondents felt it was very important (vi) or moderately important (mi) for *colleagues* to know they were Jain (vi 33%, mi 24%; $n = 42$), while fewer thought it was very or moderately important for their *patients* or *students* to know (vi 17%, mi 21%; $n = 42$).

Like many medical and healthcare professionals, the majority of survey respondents had encountered an ethical dilemma in the course of their work (67%,

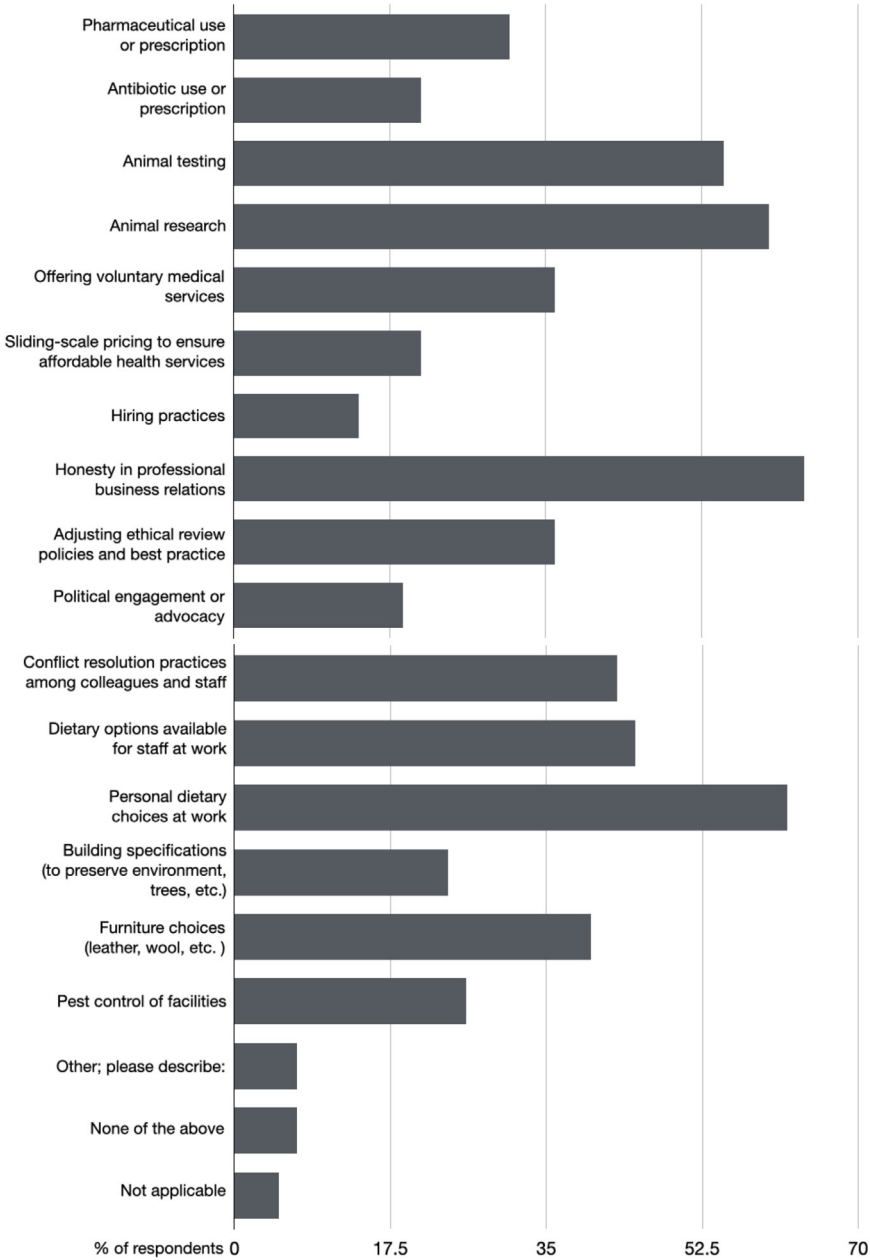

FIGURE 11. Responses of Jain medical professionals ($n = 42$) to the question "Has your commitment to Jain principles influenced your professional decision (in a work-related situation) regarding any of the following? Choose all that apply."

n = 42). Among the respondents who described those dilemmas, the list ranged from animal dissection to abortion services, counseling nonvegetarian patients, treating patients who lack decision-making capacity, and overprescription of medicines, among many other ethical issues. The majority of professionals answered affirmatively when asked if they had "ever considered Jain principles when trying to solve an ethical question in [their] work" (Yes 74%, No 14%, I don't know 12%; *n* = 42), with the most helpful principles being *ahiṃsā* (nonviolence) (33%, *n* = 42), *anekānta-vāda* (non-one-sided view) (31%), and *satya* (truthfulness) (19%). The specific vow of nonviolence also influenced many respondents in their professional decision making in a medical/healthcare context (81%, *n* = 36), and half of the professionals answered affirmatively when asked, "Do you feel that being a Jain gives you any advantages or insights in your professional field?" (Yes 52%, No 24%, Not considered before 24%; *n* = 42).

However, a commitment to one's identity as a Jain and as a medical professional did pose some conflicts. A significant percentage of respondents reported having "encountered a conflict between an aspect of the Jain tradition and modern scientific knowledge" (47%, *n* = 43), as well as "between an aspect of the Jain tradition and [their] clinical experience and/or medical/healthcare education" (53%, *n* = 39), with the following conflicts described:

- mythology and metaphysics (such as Jain geography, reincarnation, etc.) (5%, *n* = 37)
- giving medicines of animal origin (meat, fish, or gelatin; vaccines cultured in egg yolks) (16%)
- abortion and contraception (8%)
- aspects of Darwin's theory of evolution that are incompatible with the Jain tradition (8%)[4]
- Jain understanding of death (*saṃthāra/sallekhanā*) as it differs from end-of-life care available in modern medicine (11%)[5]
- inability of modern science to recognize the depths of Jain science (8%)
- addressing medical opinions that advocate eating nonvegetarian food, which undermines the holistic aspect of Jain health (3%)
- testing drugs or medical devices on animals (11%)
- testing drugs or medical devices on humans (3%)
- dissecting animals (16%)
- dissecting human cadavers (3%)
- euthanasia (3%)
- how to advise patients on whether to kill mosquitoes or not (3%)
- Jains are not well informed about being organ donors (3%)

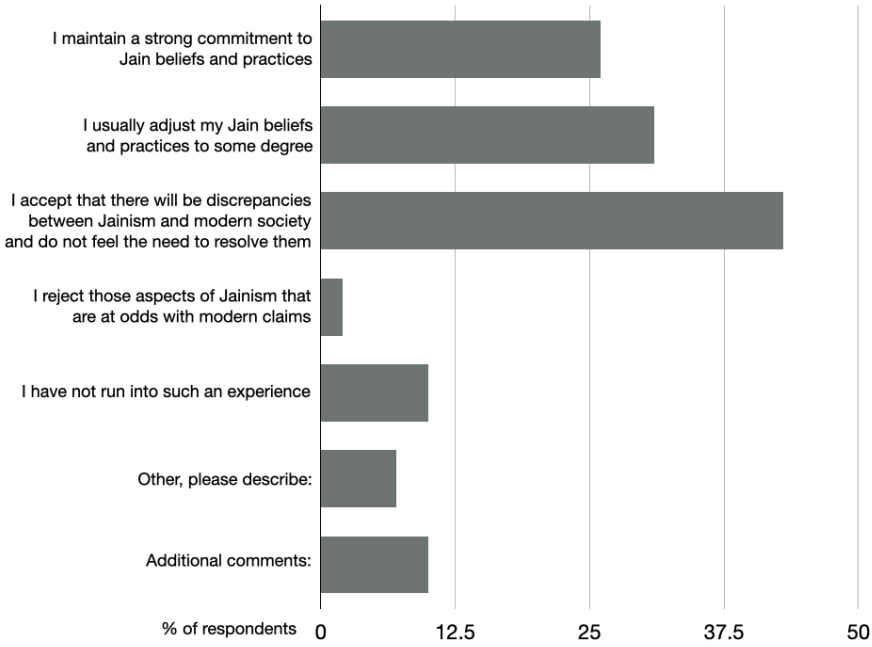

FIGURE 12. Responses of Jain medical professionals (n = 42) to the survey item "When an aspect of the Jain tradition is at odds with a claim in modern society . . . (Choose all that apply)."

While only one-tenth of respondents affirmed that "my commitment to Jain principles has put my professional career at risk at least one time" (10%, n = 42), a significant minority of Jain medical professionals had been chastised for their Jain beliefs or practices in a professional setting. These experiences ranged from rarely being teased or made fun of (29%, n = 42) to frequently being teased or made fun of (10%), and from rarely being assertively bullied (2%, n = 42) to frequently being assertively bullied (17%). Among those who described the incidents, they involved "having compassion for animals; viewing them as conscious entities," "vegetarian diet and avoiding alcohol," "being told I was short [in stature] because I did not eat meat," and failing "an Advanced Trauma Life Support class [offered by the American College of Surgeons] when I refused to use animals." Four additional responses referred to Jain diet or vegetarianism.

Additionally, a small percentage of professionals answered positively the question "When someone asks you about your religious tradition, have you ever told them you were a more prominent Indian tradition (Hindu or Buddhist, for example), for the sake of ease?" (14%, n = 42), suggesting some lack of familiarity with Jainism among non-Jain peers.[6]

Jain medical professionals appear to have developed several strategies to navigate between Jain beliefs and medical knowledge. Presented the statement "When

an aspect of the Jain tradition is at odds with a claim in modern society (choose all that apply)," many professionals accepted the presence of some discrepancy (43%, $n = 42$), while significant minorities either *adjusted* their Jain belief and practices to some degree (31%) or *maintained* a strong commitment to Jain beliefs and practices even amid such tensions (26%) (figure 12).

When Jain medical professionals sought an "authoritative opinion on an issue of Jain belief or practice," they most commonly consulted their parents (42%, $n = 36$), a Jain monk or nun (36%), a visiting Jain scholar (31%), or a *pāṭhaśālā* teacher (25%). Likewise, when Jain medical professionals sought to reconcile conflicting beliefs between the Jain tradition and modernity, respondents chose a variety of actions, the most significant being (1) reason it out in my own mind (50%, $n = 42$), (2) discuss it with friends (43%), (3) read a specific Jain historical text (33%), (4) consult a Jain elder in my family or community (33%), (5) consult a monk/nun (31%), (6) discuss it with parents (24%), discuss it with sibling(s) (24%), and explore texts by contemporary Jain authors (24%), among other, less selected options such as discussing it with a non-Jain medical/healthcare colleague (19%). Relatively few respondents reported "a professional experience or encounter that forced [them] to abandon a specific Jain belief or practice" (Yes 13%, No 78%, Not considered before 10%; $n = 40$).

The use of individual reason in negotiating conflicting systems of meaning is highly valued by Jain medical professionals. Respondents believed it is "very important to use independent reasoning and critical thought to evaluate" both the claims of modern science (93%, $n = 42$) and the claims of Jainism (81%, $n = 42$). Many respondents claimed to be considerably more informed by clinical experience than by Jain sources, and to be equally or more informed by non-Jain legal and cultural sources than by Jain sources (figure 13).

Additionally, when asked to describe their current ethical framework or the principles they use when evaluating dilemmas in their professional life, participants who responded (47%, $n = 36$) described diverse concepts. Many principles stemmed from within the Jain tradition, such as nonviolence, non-one-sidedness, pursuing positive karma, truthfulness, non-stealing, and right thought, speech, and bodily conduct (60%, $n = 20$), but several participants referenced clinical sources such as medical training on ethics, responsibility, and autonomy (25%), or one's own individual reasoning (15%). A strong majority of respondents agreed that "medical/healthcare students and clinicians need more training in practical ethics to anticipate situations that arise in a clinical context" (78%, $n = 36$).

In summary, while the Jain medical professionals in our survey were very committed to Jain beliefs and practices, they were also adept at balancing clinical, medical, legal, and cultural sources of input into their reasoning. Jain principles provide guidance in ethical dilemmas, even as they also contribute to ethical dilemmas, which are then adjudicated by adjusting, maintaining, or (rarely) rejecting Jain

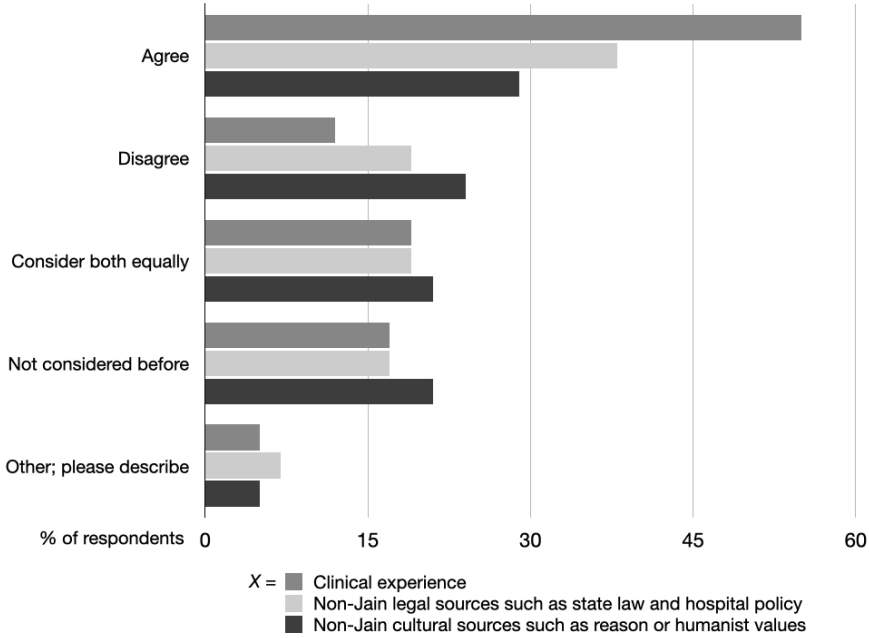

FIGURE 13. Responses of Jain medical professionals (n = 42) to "X informs my understanding of medicine/healthcare more than Jain sources." This graph is a composite of responses to three statements: (1) "Clinical experience informs my understanding of medicine/healthcare more than Jain sources"; (2) "Non-Jain legal sources such as state law and hospital policy inform my understanding of medicine/healthcare more than Jain sources"; and (3) "Non-Jain cultural sources such as reason or humanist values inform my understanding of medicine/healthcare more than Jain sources."

values, or by tolerating dissonance. Many respondents turned to their own reason, personal relationships, or specific texts for insight when such conflicts arose.

CLINICAL CONSIDERATIONS AMONG JAIN MEDICAL PROFESSIONALS

The earliest portions of the Śvetāmbara canon had strong prohibitions against mendicants using medicines and various treatments that would either (1) harm other beings or (2) generate damaging attachments to one's body or comfort (see chapter 4). However, a duty to care for ill fellow mendicants soon emerged, gradually becoming a regulated expectation that resulted in the eventual acceptance of medical care from lay Jains if needed. In this section, we look at contemporary Jain views on the causes of illness and consider Jain views on vaccinations and antibiotics, surgery and human dissection, clinical research trials, and treating mendicants.

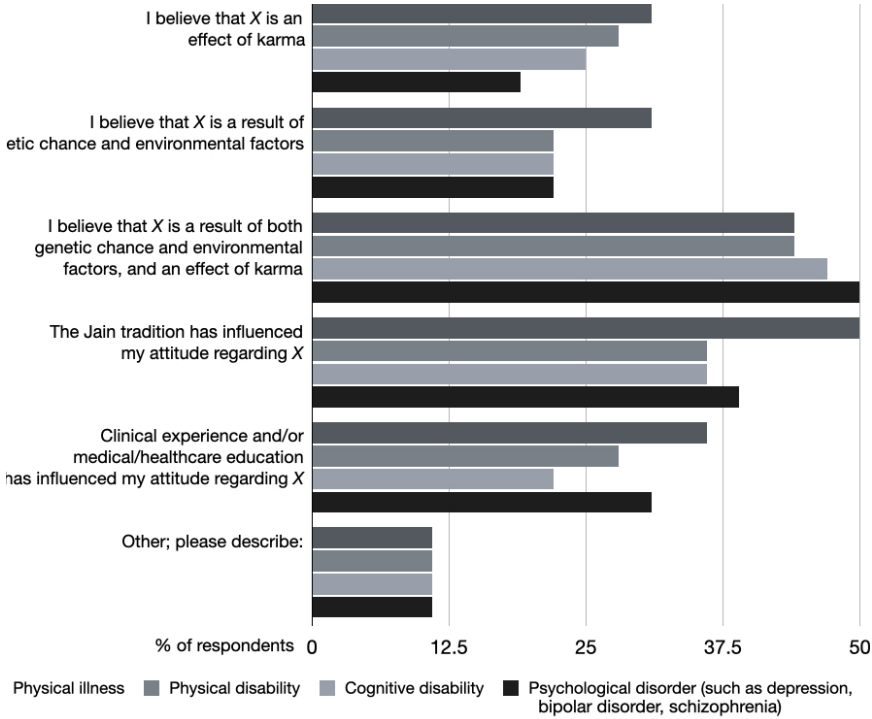

FIGURE 14. Responses of Jain medical professionals ($n = 36$) to four questions: (1) "When you encounter someone with a physical illness, how do you understand that? Choose all that apply"; (2) "When you encounter someone with a physical disability, how do you understand that? Choose all that apply"; (3) "When you encounter someone with a mental/cognitive disability, how do you understand that? Choose all that apply"; and (4) "When you encounter someone with a psychological disorder (such as depression, bipolar disorder, schizophrenia, etc.), how do you understand that? Choose all that apply."

Causes of Illness

As stated in chapter 4, Jain texts attribute physical illnesses to several causes, including various kinds of nondestructive karma, bodily disturbances related to the three humors, lifestyle and behavioral choices, external factors like malevolent powers and curses, and the decline in physical vitality associated with old age. Mental illnesses are related to lifestyle and behavioral choices, imbalances in the three humors, possession by a *yakṣa*, and deluding karma.

The Jain medical professionals in our survey also attribute illness, disability, and psychological disorders to diverse causes. For instance, a greater number of respondents attributed physical illness to *joint causation* between genetic variation, environmental factors, and karma (50%, $n = 36$) than to either environmental

factors alone (44%) or karma alone (31%) (figure 14). At the same time, a greater number attributed physical disability (pd) and cognitive disability (cd) to environmental factors alone (pd 44%; cd 47%) than to karma alone (pd 22%; cd 22%) or to a mix of genes, environment, and karma (pd 36%; cd 36%).

While our survey did not delineate cognitive disability from mental illness, this would be a rich area of future research as there seems to be variation as to how contemporary Jains approach mental illness. Some attribute mental illnesses, such as depression, to careless action, evil thoughts, or wrong worldview (Baya 2006, 124; Jain 2003, 66). Ācārya Tulsī, in his analysis of Jain Prekṣā meditation for health, offers the general claim that "the chief cause of bodily and mental illness is the wrong working of the parts of the physical organism," which can be rebalanced through Jain meditative postures (*āsana*) of standing, sitting, and lying motionless, along with Prekṣā breathing (1994, 128). "It is said that a healthy mind can live only in a healthy body," Tulsī writes. "Even if this be a partial truth, it is an established fact that, with the regular practice of [Jain meditative postures], changes occur both in the body and the mind" (130).

Several Jains writing in the Young Jains of America (YJA) publication *Young Minds* reject or bypass these causal explanations, seeing them as a barrier for South Asian youths that prevents individuals from seeking help. Amit Shah writes: "Many of our elders and their generation believe in the idea that, 'Therapy is meant for those who are crazy, and you are not crazy' and, 'What happens in life, will make you stronger'. In other situations, the unspoken belief is, 'Don't ask, Don't tell, and Don't Share' because this brings shame on us" (2017). In an article pointedly titled "What to Do When Your Parents Don't Understand Your Mental Health," Sachin Doshi—a YJA member and Mental Health America staffer—provides numerous mental health resources, noting that "unfortunately, seeking professional help—while never a sign of weakness—isn't always an option when you grow up in a South Asian household" (2018). Dhvani Mehta, writing for both YJA and Mann Mukti—a nonprofit organization fostering stigma-free conversations on mental health for South Asian youth—explains that Jainism provides her tools of "serenity, discipline, and knowledge" that help her live with depression and encourage her to "let other young Jains know that they are not alone in their battle against mental illness" (2018).

In our survey, a considerable number of respondents felt that clinical experience and medical education had influenced their attitude toward the causes of illness and disability, but a significantly greater number claimed that the Jain tradition had influenced their view (figure 14).

Modern Jain medical professionals retain a belief that karma plays a role in illness, not on its own, but in combination with genetic inheritance and environmental factors. Physical and cognitive disabilities, however, are attributed more to environmental factors than to either karmic or genetic influences.

Vaccinations and Antibiotics

Vaccines and antibiotics seem to present two unique challenges for Jains. The first is a conflict of interest between different kinds of living beings. The second is an evolving philosophical tension as to whether karma is accrued by any physical action at all or only by those acts motivated by a mental intent to harm. We will attend to both of these challenges as they apply to each of the forthcoming clinical concerns.

Vaccines contain a weakened or partial strain of the virus they aim to treat. When injected into the body, a vaccine produces antibodies that build immunity. Modern vaccine production includes the growth and harvesting of the virus, or a portion thereof, in cell cultures from bacteria, yeast, or animal-based cell lines. Additional animal-derived ingredients can be used in growth mediums or as vaccine preservatives (e.g., gelatin, enzymes, muscle tissue, blood), and vaccines are typically tested on animals prior to approval ("How Vaccines Work").

The term *antibiotic* was coined in 1941 by the microbiologist Selman Waksman to describe any molecule that destroys bacteria or inhibits their growth (Clardy et al. 2009). Early antibiotic discoveries, such as penicillin and streptomycin, were produced naturally by fungi and soil bacteria, respectively, which are today produced en masse as a growth medium. Antibiotics are also tested on animals. Accordingly, using a Jain account of one- through five-sensed living beings, both vaccines and antibiotics (1) utilize living beings in the substance itself; (2) require testing on living beings; and (3) when effective, destroy minute living beings deemed harmful to a patient's well-being.

The consideration of even minute life-forms was a unique and central aspect of early Jain manuals of mendicant conduct and remains a significant consideration for modern Jain mendicants and laity. The canonical *Daśavaikālika-sūtra* uniquely describes eight subtle (*sūkṣma*)[7] living entities that mendicants should be aware of, including moisture (*sneha*), subtle blossoms (*puṣpa-sūkṣma*), (subtle) life-forms (*prāṇa*),[8] insects (*uttiṅga*),[9] mould (*panaka*),[10] seeds (*bīja*), (minute) plants (*harita*),[11] and subtle eggs (*aṇḍa-sūkṣma*), to all of which mendicants should extend compassion (*dayā*) (DVS 8.13–15). Mendicant texts also recognized that certain medical treatments and settings could inflict less harm upon minute kinds of beings than others. Granoff examines a case in the *Bṛhatkalpa-bhāṣya* in which monks consider whether to take an ill fellow mendicant to see a doctor (2014, 240). One factor in their decision making is that if the patient dies at the doctor's home, innumerable living beings will be killed when the physician's space is cleaned, a karmic harm that would be caused or approved of by the mendicants; the mendicants' lodging, on the other hand, could at least be washed with water filtered of living beings (*prāsuka*), demonstrating an attempt to act with the lowest overall loss of life.

Modern Jains also attempt to account for minute forms of life. We will here focus on the modern interpretations of viruses and bacteria, since these are the

minute beings harmed by vaccinations and antibiotics. Drawing upon Jain canonical and postcanonical accounts of living beings, J.C. Sikdar classifies both viruses and bacteria as *nigoda*s (1964, 354–55; 1974, 39, 88–89, 94–95, 98, 263; 1975, 12, 14; see chapter 2). Bacteria, along with some fungi, according to Sikdar, are like other plants and animals in that they are made of cells (*arbuda*)[12] and function through metabolic processes; they are distinguished from other living beings by their heterotrophic quality, meaning their inability to produce food through carbon fixation, and derive nutrition instead from the "sap" or "humours" of other beings, or from decaying matter (1975, 13–14). Surendra Bothra, in his manual for modern Jains titled *Ahimsa: The Science of Peace*, locates bacteria and viruses in the category of immobile beings (*sthāvara*), claiming that "in modern terminology the [*sthāvara*] category of life-forms would probably be termed as mono-cellular organisms . . . [such as] bacteria and virus[es]" (2004, 17). He assigns Jain terms to bacteria based on the stage of evolution in which they developed, where they live, and what they feed on. For example, bacteria nourished by carbon compounds formed from condensed vapors might be considered air-bodied beings, photosynthesizing bacteria that rely on the sun may be fire-bodied beings, and bacteria that grow in colonies are like plant beings (19–21). He further notes that viruses "share plant characteristics" (21).

As explored in chapter 3, mendicants and lay Jains have different levels of responsibilities toward different life-forms, with mendicants avoiding *sūkṣma-hiṃsā*, or "subtle violence," even toward one-sensed beings that may be difficult to perceive, and laypeople avoiding *sthūla-hiṃsā*, or "gross violence," toward mobile beings with two or more senses that are easier to detect (Williams 1963, 65–66).

The respondents in our survey consisted of lay Jains rather than mendicants. The majority of Jain medical professionals seemed to have little discomfort when considering vaccination. Most felt that mandatory vaccination presented little or no violation of Jain principles (73%, $n = 37$), though some did not know (16%). Those who selected "Other" (8%) raised concerns about vaccines being tested on animals and containing animal ingredients, or affirmed their value as "a preventative measure necessary for well-being," akin to beneficence-based obligations. In sum, the primary concern of Jain medical professionals regarding vaccinations was their possible negative effect on animals who would be used for research or harmed to procure ingredients for the vaccine.

Respondents' views on antibiotics were more mixed and frequently centered on the tension between physical harm and mental intent. When presented the statement "I consider antibiotics that may kill one-sensed organisms a form of violence," one-third of respondents agreed (30%, $n = 36$), though a larger portion disagreed (42%). A small contingent did not know (6%), had not considered the question before (11%), or selected "Other" (8%), with comments including (1) that the sacrifice of one-sensed beings is done to benefit five-sensed beings, (2) that the goal of healing neutralizes violation, and (3) that there is debate as to

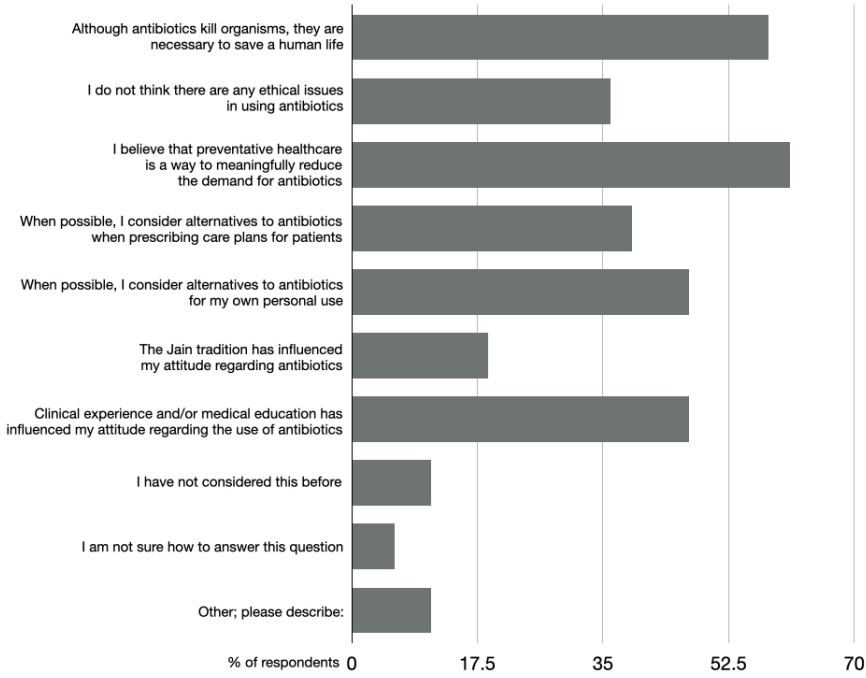

FIGURE 15. Responses of Jain medical professionals ($n = 36$) to the question "Which of the following statements [regarding antibiotics] is/are most true for you? Choose all that apply."

what constitutes a one-sensed being. When asked to elaborate upon their position regarding antibiotics, respondents emphasized preventative care to reduce the demand for antibiotics (61%, $n = 36$) and acknowledged that antibiotics—while killing one-sensed beings—were sometimes necessary to save human life (58%) (figure 15).

Considering the intended benefit of an act reflects a key development in Jain attitudes toward harm generally and medical harm specifically (see chapters 3 and 4, respectively). The above answers suggest that a majority of respondents are aware that antibiotic use can be detrimental to other living beings. However, desires such as healing or preserving human life may justify their use.

At the same time, many respondents saw personal and professional value in preventative care to avoid antibiotics altogether, or to consider alternative treatments when possible. For instance, while a sizable minority did not see any ethical issues in using antibiotics (36%, $n = 36$), a greater number of participants considered alternatives to antibiotics when prescribing patient care (39%), as well as in their personal healthcare (47%) (figure 15). As we will address in the next chapter's examination of death and dying, the Jain medical professionals we surveyed stated that they would accept antibiotics (36%, $n = 36$) as a form of life-sustaining

treatment above all other listed interventions, such as blood transfusion (31%), dialysis (28%), and CPR (25%), although these data suggest that more than 60 percent of respondents may not accept antibiotics.

The issue of antibiotics is also debated among Jains themselves in various social forums. One Jain blogger creatively described antibiotics as a form of v iolence done in self-defense (*virodhī-hiṃsā*), but stated that the best defense is keeping oneself as healthy as possible (Sanglikar 2016).[13] In an online discussion thread titled "Does Jainism Allow the Usage of Antibiotics?," Jains were in disagreement. One respondent commented that Jainism neither allows nor disallows their use, but left it to individuals to discern the best way to reduce harm in their daily life: "Though [harm] of one-sense living-beings . . . is permissible for household[er]s," the blogger writes, "they are supposed to exercise due caution to minimize their *hiṃsā*" (Jain 2016). Another blog response claimed that antibiotic use by mendicants differs by sect (Dhanki 2017), while others asserted that monks can never take such medications (Jain 2017). Jain physician Manibhai Mehta, in an interview with the *Los Angeles Times*, describes the "fine line" of antibiotic use between "whether you want to save the patient . . . or the small creatures. You have to choose between the two" (Loar 1996), suggesting that there is a choice to consider between two harms. Monks, however, face no such dilemma, he asserts: "Monks won't take antibiotics. They will let the sickness go away by itself . . . [or] [t]hey just let their lives go by, because they would not want to harm those bacteria" (Loar 1996). In spite of this stated ideal, the textual tradition mapped in chapter 4 shows that mendicants have varied historically in their approach to medicine, and as we will demonstrate shortly, many contemporary mendicants do seek medical care.

When a Jain physician decides to use antibiotics, according to Mehta, "then you [the physician] should repent for it" (Loar 1996). Likewise, in a document titled "Caring for the Jain Patient," utilized by the UK-based Ashford and St. Peter's healthcare system, Jain attitudes toward medicine were noted, including views on antibiotics. "Some [Jains] may prefer not to take antibiotics because of the prohibition against harming any form of life," the document advises, but "if antibiotics are essential they would probably be accepted, but with regret" ("Caring" n.d.). Among contemporary practitioners, a significant minority of survey respondents affirmed that they had "practiced *pratikramaṇa* (the ritual of repentance or seeking forgiveness) after [they had] engaged in a medical procedure or practice for which [they] had ethical uncertainty" (22%, $n = 36$).[14]

On one hand, accepting harm "with regret," or conducting a ritual of repentance, may seem like a token gesture for humans who are ultimately going to use whatever resources they deem essential. On the other hand, regret signifies the Jain tradition's unique acknowledgment of living beings, including minute one-sensed beings, whose destruction constitutes a karmic harm, and whose pain and demise can often be prevented.

The various contemporary responses detailed above—both from medical professionals and within the broader lay Jain community—emerge from a view that the universe is permeated with numerous life-forms whom one must acknowledge if there is any chance of dialing back the use and injury of those beings. Utilizing antibiotics is not forbidden, but the practice is viewed through calculations of karmic cost, medical benefit, and preventative healthcare. How mendicants and lay Jains view their responsibility toward one-sensed beings often differs, and one's context and stage of life might also factor into decision making.

Human Surgery and Dissection

In Jain texts on lay conduct, vocations that rely on mutilation (*nirlañchana*)—such as gelding of bulls and other animals, branding, tail docking, cutting off of ears and dewlaps, and nose piercing of livestock—are discouraged (Williams 1963, 120; YŚ 3.111). Apart from harming the living beings, whose skin is pierced, cutting into their flesh can also harm groups of *nigoda*s that inhabit the flesh of animals and humans in particularly high concentrations, as noted in chapter 2. On the other hand, medicine (*vidyā*), which includes surgery, is classified as an acceptable occupation for laity (see chapters 3 and 4). Texts for laity attempt to articulate and justify these accommodations—for example, that one can slice into skin if this is done with due care (*sāpekṣa*)—that is, without the mental intention to harm, and/or with the positive mental intention to heal. Williams discusses various attitudes toward cutting of flesh (*chavi-ccheda*) in Jain texts,[15] for example that lancing a boil or a swelling for the purpose of relieving suffering is acceptable, though cutting for the purpose of mutilating prisoners, enemies, animals, trees, or other one-sensed beings is still a violation (1963, 68). Padmanabh Jaini notes that occupational violence, such as that done by surgery, falls under the category of the so-called *ārambhajā-hiṃsā*, since it occurs as a result of practicing an occupation that is considered acceptable by the tradition (2001/1979, 170–71).

The overwhelming majority of Jain professionals in our survey did not consider "cutting into the human body for minor or major surgery a violation of Jain principles" (83%, $n = 35$). Additional comments describe a notable distinction, asserting that (group *a*) surgical harm is regrettable, but it results in a meaningful benefit for a five-sensed being (40%, $n = 5$); or (group *b*) surgical harm is no harm at all because the intention is to heal (and, according to one comment, heal with the least damage to other beings as possible) (60%, $n = 5$). Put another way, group *a* still factors the *physical* harms to other beings into their calculation, whereas group *b* seems to give precedence to the *mental* state. These distinctions certainly require more research, but they reflect persistent tensions over the violence of physical harm and mental intention that continually inform Jain ethical attitudes among mendicants and laity.

Only a small portion of respondents felt that *human* dissection—meaning cutting into skin posthumously for educational and/or research purposes—violates

Jain principles (11%, $n = 35$). The majority felt that postmortem human dissection poses no violation (71%).[16] Likewise, Jain respondents do not appear to share a view articulated by certain interpretations of Islam, Christianity, and Judaism that dissection violates a divinely gifted body (Aramesh 2009; Notzer et al. 2006). It is unclear precisely why Jain medical professionals accept human dissection, as we did not ask them that question specifically. Yet one could infer that, like surgery, cutting into flesh for the purposes of human dissection is acceptable with regret, or merely accepted, if the mental intent is to benefit five-sensed beings.

Clinical Research Trials and Access to Care

Jain attitudes toward human research—namely studies with higher risk such as clinical trials or experimental treatments—offer insight into the challenges of entangled autonomy and competing values of truthfulness alongside the value of nonviolence. When presented the statement "I consider randomized controlled clinical trials (RCTs; where certain vulnerable/terminal patients receive placebos, standard medication, or no intervention) a violation of Jain principles," respondents diverged in their opinions. Nearly half of respondents disagreed that RCTs violate Jain principles (47%, $n = 36$), while a small minority agreed that RCTs constitute a violation (14%). A significant percentage either did not know (22%) or had not considered the issue before (11%). Additional comments included "Patients have a right to know," "You cannot torment somebody to save someone else in the future," and "If the patient is fully aware of the principles of the trial and agrees, I think it is okay to take part in RCT; there is no one 'playing god' in this situation."

One of the ongoing ethical challenges in clinical trials is determining the priority between *therapeutic* and *nontherapeutic* research. Therapeutic research aims to produce generalizable medical knowledge with an expectation that the subject-patient will also medically benefit from the drugs or procedures being investigated, contrasted with nontherapeutic research aimed to produce generalizable knowledge alone.

Ethical guidelines and medical codes weigh the production of new knowledge against an absolute requirement that research subjects benefit from their participation (Glantz et al. 2010). Some research, for instance, may only have the *possibility* of benefit but take too long to aid a patient with a terminal illness; likewise, some research subjects—especially in remote, underserved, or poor communities nationally or abroad—may not be able to access or afford treatment when a trial is complete, raising questions as to what constitutes a fair benefit. Is access to a drug the only value gained by clinical trials, or might communities benefit from infrastructure, training, or being paid for research ("Fair Benefits" 2002)? Must an individual receive a benefit in the present moment, or could future generations of a specific community—as in disease research among indigenous tribes—count as community benefit (Fitzpatrick et al. 2016)? Justice-related concerns of coercion quickly emerge when vulnerable individuals are offered a nonmedical benefit—

such as a payment, a future benefit, or a communal benefit—for participation that carries risk of any kind (Brody 2010). Even the common procedure of paying donors for blood plasma donation in the United States generates ongoing debates alongside evidence that paid donations exploit poor communities where individuals need quick cash (Farrugia et al. 2015; Shaefer and Ochoa 2018).

Jain medical professionals were not necessarily averse to research risk in general, as the majority disagreed (56%, $n = 36$) that "the high risk of experimental treatments in general is a violation of Jain principles," though a minority agreed (11%), did not know (22%), or had not considered the issue before (8%). Interestingly, two additional comments note that a patient's longevity-determining karma (*āyu-karman*) plays a role in illness outcome (see chapters 2 and 7); another states that karma, combined with informed consent, removes any ethical question.

Regarding the ethics of clinical human research trials, most respondents placed a relatively high value on medical benefit for participants. When asked to identify their positions on RCTs (when subjects may receive placebos, standard medication, or no intervention), survey respondents could choose multiple positions from a provided list. One-third of participants believed that RCTs can be justified only "if all vulnerable/terminal patients are eventually given free access and transit to any treatment deemed successful" (33%, $n = 36$). At the same time, a quarter of respondents felt that trials can be justified "because of future patients who will hopefully benefit from the sacrifice of these vulnerable/terminal research subjects" (22%), and a significant minority felt that RCTs cannot be justified "because it involves a form of deception to vulnerable/terminal patients" (19%).

Respondents reported that their attitudes on RCTs were more highly influenced by clinical experience and medical education (33%, $n = 36$) than by the Jain tradition (14%). These various attitudes suggest that a minority of Jain medical professionals place their ethical obligation of truth above possible benefit in human research; but a larger portion of respondents feel that medical benefit to the individual, or even to future generations, may justify deception (such as placebo) so long as participants are aware of and consent to the study design.

Jain medical professionals also valued universal access to healthcare. When asked to elaborate their view on the topic, a majority affirmed that "all people should have equal access to all of their healthcare needs" (57%, $n = 37$). Among competing economic models regarding access (Sreenivasan 2007), the Jains in our survey favored a "basic decent minimum" of care provided to all people, with individual patients given the option to pay for specialty services above that threshold (35%, $n = 37$), considerably more than they endorsed the "libertarian" model in which patients receive only those services they can pay for (5%). More respondents felt that it is the government's responsibility to provide healthcare for the most vulnerable members of society by utilizing taxes (43%, $n = 37$) than considered this the responsibility of private organizations (11%).

These views on healthcare access were only slightly more informed by the Jain tradition (24%, $n = 37$) than by clinical experience or medical education (22%). The vast majority of healthcare professionals we surveyed (75%, $n = 36$) had offered free medical services as a nurse, doctor, administrator, or assistant either for people (63%, $n = 27$), for animals (4%), or for both people and animals (30%). Several respondents reported that their commitment to Jain principles had influenced their professional decision to offer free medical services (36%, $n = 42$) or sliding-scale pricing (21%) to ensure affordable health services.

Treating Medicants

Jainism has rarely been dramatized in film. However, the critically acclaimed movie *Ship of Theseus* (2012) depicts a fictionalized Jain monk who, after spending years fighting against animal testing, is confronted with accepting medications tested on animals in order to receive a liver transplant. The film invites viewers into the monk's decision making in a personal way. Should he accept the medication?

Even as mendicant attitudes in textual sources gradually reflect a more favorable view of medicine as necessary to maintain the community and one's body for austerities (see chapter 4), an indifference to bodily care and pain, and the refusal of treatment, is still seen as having merit among contemporary Jain mendicants. In N. Shāntā's study of female mendicants (*sādhvī*) in India, one nun suggested that a more experienced mendicant may offer guidance on whether to seek or eschew medical care:

> [O]n the one hand, one must avoid for oneself and for others anything that is violent or causes suffering, and neglect[ing] an illness or a wound may be a form of *hiṃsā*; on the other hand, is it not necessary [for a mendicant] to proceed to *kāyotsarga* [and] the abandonment of the body? At this point the wisdom and spirit of discernment and long experience of the *ācārya* or *guruṇi* or the senior *sādhvī*s have a decisive importance . . . [regarding] the advisability or not of following some treatment or consulting a doctor. (1997, 562)

Shāntā notes that nuns in India at the beginning of the twentieth century were "inclined to put up with suffering and illness without paying much heed to it and to walk in a heroic manner to the end, without complaint . . . [as] part of the process of purification"; yet contemporary nuns "are not only cared for and visit the doctor, but they may also enter hospital, follow a course of treatment there and even undergo an operation" (1997, 563).[17] If a nun falls ill, this may affect group wandering. According to Shāntā, if illness is short lived, the whole group may pause their wandering to stay with the sick nun; otherwise, only a few other nuns might stay with her. It may also be possible for a nun to stay with a layperson during her illness. A nun who cannot lead a wandering lifestyle because of an illness may further transgress this obligation, and "if she is unable to walk, then,

when the time comes to move on, she is transported in a sedan-chair or palanquin" (564). Still, Shāntā makes it clear that accepting any of these treatments, as well as accepting special care from fellow nuns or transgressing obligations—such as being carried or waited upon—requires the sick nun to perform atonements (*prāyaścitta*) for all the violations of *ahiṃsā* that have occurred (563–64).[18]

The case of mendicant demon (*bhūta*) possession, and associated mental disturbances, provides another example of mendicants seeking treatment. As described in chapter 4, mental illness, including possession, is not always seen as a failing of the mendicant, but rather can be attributed to outside forces affecting that individual to which the wider mendicant community may need to respond. Vallely asserts that "when [mendicants] fall sick, they usually do take medicine. . . . And when *bhūta*s strike [in possession], they seek the help of ritual exorcists," alongside other modes of healing (2011, 71). In Vallely's research with Terāpanthī nuns, possession treatments included examining the afflicted woman's past lives, engaging in acts of austerity such as fasting and prayer, and, in the case of one nun-in-training, fasting to death by *sallekhanā* (2002a, 72–74; see chapter 7).[19] Vallely describes another nun suffering from possession who was not spared responsibility for her affliction; after being sent back to her family, she was instructed that she could return to the order only if she undertook the vow of fasting unto death to demonstrate a maturing spirituality—which she was not prepared to do (130).

In a tangible example of medicant attitudes to dental care, a 2007 study of the oral hygiene of 180 Śvetāmbara Terāpanthī Jain monks in India revealed signs of periodontal disease in nearly every mendicant, due to malnourishment as well as to the fact that most did not brush their teeth in keeping with mendicant rules, nor visit a dentist for checkups or treatment (Jain et al. 2009).

Prevention remains a key medical model for mendicants, as we saw above in lay attitudes toward antibiotics. In his book *Lord Mahavira's Scripture of Health* (2001), Ācārya Mahāprajña rarely acknowledges medicine at all, but instead mines Jain texts that address activities supporting well-being, such as diet, breath exercises, adequate sleep, fasting, and yogic exercises, along with textual references to psychological dispositions, emotions, and the restraint of passions that shape one's lifestyle. The specific details of medication are sidestepped in favor of prevention.

The majority of Jain medical professionals in our survey reported serving relatively few lay Jain patients in their practice overall. Most claimed that only 0–5% of their patients were Jain (60%, $n = 42$), though a few served larger populations of 5–20% (14%) or 40–60% (2%). Some were not aware of how many patients were Jain (10%) or chose Not applicable (12%) or Other (2%).[20]

However, a portion of respondents treated Jain mendicants—including fully ordained mendicants (in India) or intermediate mendicants (*samaṇs/samaṇī*s)—by offering medical treatment (17%, $n = 42$) or prescribing medication (14%). These

physicians were also asked if there were "any special considerations or changes to your care that you had to implement to treat or prescribe medication for a Jain mendicant." A third of respondents reported no change in care (36%, $n = 14$), while the rest (64%) noted various changes, such as checking labels for animal-derived ingredients in medicines, avoiding over-the-counter medicines known to contain animal products, offering natural remedies, or prescribing once-daily medication that is not taken at night (since mendicants take no food or water after sunset).

One respondent noted that Digambara monks in India will not take medicine, while another said that some, but not all, mendicants will accept medicinal treatment. One physician described chronic health issues among mendicants related to poor diet for which more education was needed among monks and nuns, and another described their experience treating Jain mendicants for acute conditions such as coma, surgery after traumatic brain injury, and coronary angioplasty, which suggests that certain mendicants will accept intensive and emergency care when needed.

As we will explore in the next chapter, the ideal way for a mendicant to die in the Jain tradition is to forgo medical care, as well as food and fluids, when the body is no longer able to maintain the vows appropriately. The act of fasting unto death, though practiced by relatively few mendicants and even fewer lay Jains, is highly valorized as a preeminent expression of nonviolence; this ultimate disregard for medicine and the body when it can no longer serve the goals of one's *jīva* is an act of great karmic merit. Nevertheless, many Jains—both lay and mendicant—accept the benefits provided by clinical medicine during the regular course of life, while navigating unique Jain concerns such as conflicts of interest between living beings, and the karmic impact of medicine based on physical consequences and mental intentions.

THE ETHICS OF ANIMAL USE

Jainism is distinctive among world philosophical and religious traditions for its sustained ethical commitment toward animals. This commitment is doubly intriguing because it exists alongside the unapologetic Jain affirmation that being human is a privileged birth-form separate from animals and plants (Vallely 2014, 29). At the same time, Anne Vallely explains, "the animal in Jainism, though ontologically distinct, is on the same existential trajectory as the human, and its claims to life are no less valid than those of any other sentient being" (39). Although, in the Jain worldview, only humans can attain liberation, this transcendent capacity is dependent on one's right worldview, knowledge, and conduct toward other living beings. As Vallely puts it, "human exceptionalism *resides singularly in its demonstration*, through ethical behavior and practices of bodily detachment" that take other beings into account (2020, 563; emphasis added; see also chapter 3).

Consequently, "the exceptionalism [that Jainism] claims for humans is weak and conditional, and its ethic of reverence for life is strong and absolute" (564).

This complex ethical sensibility between humans and animals is found within the Jain texts since the earliest canonical sources, in part as a response to dominant practices of the time, including Vedic rituals of animal sacrifice (Doniger 2009, 192; Kapadia 2010/1933; Williams 1963, 54). While the early Jain mendicant texts declare all violations of living beings, including nonhuman kinds, to result in karma, the degree of karmic burden is eventually established in the tradition as being based on two primary calculations: first, that the greater the degree of passions motivating an activity, the more karma is acquired; and second, as indicated above, that the higher the number of senses a violated being possesses—from one to five—the greater the karma that accrues to the one causing injury (see chapters 2 and 3).

The Special Significance of Five-Sensed Animals

Although all one- through five-sensed beings are, as Naomi Appleton describes, "fellow travelers in the cycle of rebirth and redeath" (2014, 24), injuring five-sensed beings incurs the greatest karmic burden. Humans and some five-sensed animals born in a womb are endowed with mind (*manas*), enabling them to actively reflect on merits and demerits of their actions. As Dundas states, animals can practice austerities, develop compassion, observe the principle of nonviolence, and progress on the spiritual path (2002a, 106–7). While Jain narratives often depict humans being reborn in animal form as a consequence of violent or foolish actions, animals are also moral exemplars. A popular tale found in the *Jñātṛdharma-kathā* (Pkt. *Nāyādhamma-kahāo*)[21] describes a lay Jain disciple of Mahāvīra who becomes so fixated on building a pool outside his home that when he dies he becomes a frog within it. Yet, as a frog, he recalls his past material obsessions, and takes up his lay vows again. When he is later crushed by a horse while attempting to hear a sermon by Mahāvīra, the frog attains rebirth as a heavenly being and, eventually, liberation (JK 1.13; Appleton 2014, 26).

Moreover, remembering one's past embodiments as various animals is described as a powerful deterrent to violence and an encouragement to enter the path of renunciation. In the *Uttarādhyayana-sūtra*, Prince Mṛgāputra provides a dramatic account of the violence he experienced in his previous lives in animal forms: he was bound and killed as an antelope, caught by hooks and nets, scraped, and killed as a fish, and trapped and killed as a bird (US 19.63–65).

Beyond such cautionary tales, Mahāvīra's own virtues are likened to the qualities of animals (KS 5.118), and the great assembly (*samavasaraṇa*) said to occur when a Jina achieves perfect knowledge (*kevala-jñāna*) includes five-sensed animals with a mind who can also understand the teachings of the Jina (Wiley 2006b, 250; see also Balbir 1994a; Caillat and Kumar 1981, 44–47; Deshpande 2011, 186; Dundas 1996, 141).

Euthanasia and Five-Sensed Animals

Jains have historically avoided keeping pets, seeing it as an endorsement of animal use that also restricts the freedom of a living being. This uneasiness with pet culture is just one of many ways, according to Christopher Chapple, that Jainism "avoids sentimentalizing animals" (2006, 248). Though some diaspora Jains do live with companion animals today, it remains a point of creative debate among Jains as to how to reduce the violence inherent in domestication—by reflecting on one's motivation for living with an animal, adopting rather than supporting breeders, feeding plant-based diets, and increasing a pet's freedom whenever possible ("Jainism View" 2019).

In the Jain view, every living being is entitled to work through its karmic burden in its own way, and to receive the fruits of dying well. In Jain-run animal shelters, or *pañjrapol*s, Jains are not to euthanize animals, since doing so injures both the person who commits or approves of the act and the animal itself. In his *Puruṣārtha-siddhyupaya*, Amṛtacandrasūri clearly states that killing, even out of compassion (*anukampā*), is an error. In this context, Amṛtacandrasūri is arguing against a rival view that one could kill living beings who naturally kill many others (*bahu-sattva-ghātin*) in order to save the lives of those preyed upon; likewise one cannot kill an animal to prevent its own great suffering (*bahu-duḥkha*) (PSU 83–85; Granoff 1992a, 29; Williams 1963, 65). Amṛtacandrasūri specifically rejects the claim that killing a living being will relieve that being from suffering (*duḥkha-vicchitti*) (PSU 85). In his commentary on this passage, Ajit Prasada explains: "The pain and suffering which a living being has to endure and go through is inevitable. . . . It must be undergone now, or hereafter, in this life or the next" (1933a, 42).[22] But that does not mean that one does nothing. Prasada writes:

> One may help the distressed by nursing or helping otherwise. Veterinary hospitals should take as much care of [animals] as other hospitals do for humanity. . . . There should be no fee charged for medicine, attendance, or surgical operation. This is the primary duty of individual citizens, municipal corporations, and of the State. (42)

At Jain-run hospitals, animals who can be treated and released are; those who cannot be released will stay in the hospital, receiving treatment or palliative care, in order to work through their karmic burden. It is not uncommon to see an animal with a custom-made prosthesis or bird-size cast in these hospitals, nor is it unusual to see an animal disfigured or enduring terminal injury near the end of life.

Jainism presents a cosmos "where all creaturely life has agency [and] Jains do not claim an unequivocal right to decide on another body's behalf, especially regarding death" (Donaldson 2015, 56). Although there are valuable criticisms of *pañjrapol* institutions that are overcrowded and in need of greater oversight (Evans 2013), Jains do have a long tradition of medical treatment and comfort care for animals, charitable giving to animal causes (*jīva-dāya*), and compulsory vegetarianism.[23]

Contemporary Animal Use and Welfare

In 2018, approximately 335 million tons of animal meat were produced worldwide—from an estimated seventy-four billion cows, pigs, chickens, goats, and sheep ("Livestock Slaughter" 2018). In the United States, food animals make up the overwhelming majority of the ten billion animals slaughtered each year, a figure that does not include the estimated fifty billion fish and shellfish killed each year for consumption; nor does it count horses, rabbits, or the 150 million industry-documented animals who die each year before making it to slaughter ("Farm Animal"). The estimated one million animals used for research each year constitutes 0.0001 percent of that ten billion total, though mice—who make up the majority of vivisection subjects—are not counted in these totals ("USDA" n.d.).

Very few governmental protections exist for animals worldwide. These legal precedents provide an important starting point for considering the ethics of animal use, since these laws determine what actions are legally permissible. The United States has some of the weakest protection laws for animals among high-income nations. The 1966 Animal Welfare Act (AWA), amended most recently in 2013, excludes all farmed animals as well as mice, who make up the majority of animal research subjects. The AWA offers no regulations on how research animals can be used but only industry-established standards for basic housing, care, and transport (Cardon et al. 2012). The Humane Methods of Livestock Slaughter Act, originally passed in 1958, states that animals be rendered unconscious before slaughter, but excludes birds, rabbits, and fish, who represent the majority of animals consumed in the United States. The Twenty-Eight Hour Law, enacted in 1873 and revised in 1994, requires only that animals transported for slaughter be let out for food, water, and exercise every twenty-eight hours. The law does not address overcrowding or transport in extreme temperatures, and it does not apply to birds. In early 2017, the US Department of Agriculture further obscured animal deaths by removing public access to tens of thousands of reports that document the numbers of animals kept by nearly eight thousand research labs, companies, zoos, circuses, and animal transporters—and whether those animals are being treated humanely under existing laws.

A few select countries have significantly increased their animal welfare standards since 2000. According to World Animal Protection's current index, Austria, Switzerland, the United Kingdom, Germany, Sweden, and the Netherlands rate highest for improved animal welfare ("Animal Protection Index" n.d.). Austria, for instance, banned wild animals in circuses, primates in research, and fur farming. The United Kingdom has introduced harsher fines and penalties for violations of animal welfare, and the Netherlands has prohibited all great ape testing and extended "duty of care" provisions to farmed animals. The European Union has prohibited some of the worst practices of industrial farming, such as veal crates, battery cages for hens, and gestation crates for sows after the first four weeks, though it is important to note that none of these countries has seriously questioned the use of animals for mass food production.

Jainism, Animals, and Food

Jain texts are particularly attuned to the reality of using animals for food, medicine, and labor, and we primarily address the first two categories in this and the next section.

The Jain attitude toward animals-as-meat must be understood in relation to the more general assertion that food requires violence, and that craving for it leads to the three other instincts of fear, reproduction, and accumulation of goods for future use, all of which constitute the roots of violence (*hiṃsā*) (GJK 134–38; Jaini 2010e, 284; see chapter 3). As Paul Dundas puts it, eating is "a dangerous activity which can determine the sort of person an individual is and becomes" (2000, 112).

Mendicant prohibitions against eating garlic, onions, carrots, potatoes, honey, butter, and even high-seed vegetables such as eggplants are due to the great number of *nigoda*s related to those foods (BhS 7.3§299b–300a; YŚ 3.34–46; Williams 1963, 52–55; see chapters 2 and 3). Likewise, eating meat not only destroys a two- to five-sensed being, but also kills innumerable one-sensed beings that live in flesh through cutting, cooking, and consumption, described by Hemacandra "like provisions on the road leading to hell" (YŚ 3.33, trans. Qvarnström).

Scholars identify rare examples of Jains consuming meat in unique circumstances, such as when it was provided as alms to a mendicant (and the animal had not been killed specifically for that purpose), or when a layperson was sick, or during famine (Dundas 2000, 101; 2002a, 177; Ohira 1994, 18–19). In these cases, meat eating may have been accepted but not permitted per se, since its consumption would still equate to great karmic cost, though Jains have refuted these historical examples (Kapadia 2010/1933).

The first rigid prohibition of mendicants eating meat in all circumstances may have originated with Pūjyapāda (Ohira 1994, 18–19), and the first systematic defense of Jain vegetarianism was likely made by Haribhadra in the *Aṣṭaka-prakaraṇa* (eighth century CE), to be developed in greater detail about a thousand years later in the *Dvātriṃśad-dvātriṃśikā* by Yaśovijaya (seventeenth century CE) (Dundas 2000, 102). Hemacandra expresses particular disdain for meat eating and animal sacrifice justified in the Hindu law book *Manu-smṛti*,[24] which he renames the *"hiṃsā-śāstra"* for its perceived erosion of compassion (Williams 1963, 70; YŚ 2.33–49, 3.20–31).

Today Jainism is frequently considered an ancient vegetarian tradition. Chapple describes vegetarianism as the "Ethical Non-Negotiable" for Jains (2013, 83), while Laidlaw asserts, "As it is presented for external consumption, Jainism is more or less a campaign for vegetarianism" (1995, 99). Still, it is not sufficient to equate early Jain food ethics with modern vegetarianism, since Jain ethics emphasizes the karmic burden of ingesting *any* living being, not just animals, with some *nigoda*-laden root vegetables exacting a higher karmic cost than other plants. Food cravings are terminated only in the twelfth *guṇa-sthāna* when all deluding (*mohanīya*) karmas are destroyed, attesting to the ingrained quality of this instinct and its persistent role in activity (Jaini 2010e, 292; see chapter 3). When lay Jains practice

voluntary forms of fasting (Jaini 2001/1979, 217–21), they acknowledge the self-control of Mahāvīra, whose mendicant diet consisted only of rice, pounded jujube, and legumes, and those eaten only rarely (ĀS 1.8.4.4–7). Food, it is emphasized, should be eaten to sustain life rather than for its pleasant taste (US 35.17).[25]

In light of this food philosophy, mendicants are limited in their regular food intake; Digambaras typically take one meal per day, while Śvetāmbaras may collect food two or three times daily (Jaini 2001/1979, 40–41). The food is meant to come from lay Jains who, at least according to mendicant texts, had merely been preparing a meal for themselves when mendicants came in search of their daily sustenance. The provided food should not contain any of the prohibited foods listed above (Jaini 2010e, 284–85).

Modern lay Jains also avoid meat, though their diet is not as restrictive as mendicants'. In India, where there is greater familiarity with and access to "Jain food," many will avoid roots, eggs, and honey as well; in diaspora countries, many Jains abstain from these additional items at home or during holidays.

Today, a growing segment of modern Jains—primarily in diaspora countries—advocate a vegan diet—avoiding use and consumption of dairy, as well as meat, eggs, leather, or fur—as a contemporary expression of nonviolence. Groups such as US-based Vegan Jains and UK-based Jain Vegans host events to educate Jains about the cruelty of modern dairy in terms of forced impregnation, removal of female calves, and killing of male calves, as well as the effects on workers and the environment. As of 2018, Young Jains of America serve only vegan meals at their biennial conference and the large Jain Center of Southern California also announced that it would serve only vegan meals in its temple kitchen. The 2019 "Jain Declaration on the Climate Crisis," issued by JAINA, acknowledges that care of animals is closely tied to climate issues, calling for an end to government subsidies of industrial agriculture, protection of species from deforestation and exploitation, and requesting that Jain communities take specific actions that jointly impact climate and animals in their personal and temple practices ("Jain Declaration"). These efforts reflect the unique Jain view that food has impacts beyond nutrition. Ācārya Mahāprajña describes food as one of the six vitalities, or *paryāptis*,[26] on which well-being depends, a "basic foundation of life" that, if maintained properly, will enable one to "overcome the obstructions in the way of our health" (2001, 44–45), both personally and socially.

All the Jain medical professionals in our survey practiced a Jain diet of some kind, the majority being lacto vegetarian (eating dairy products but no meat or eggs) (61%, $n = 36$) and smaller percentages being ovo-lacto vegetarian (eating eggs and dairy products) (19%), vegan (abstaining from meat, dairy products, eggs, leather, and fur) (17%), or Jain vegetarian (no meat, eggs, garlic, onion, or root vegetables) (6%). No respondents selected pescatarian (eats fish) or omnivore (eats meat, dairy, and vegetables). When asked, "Does the Jain tradition influence the kind of diet or dietary needs you prescribe to your patients (in light of medical

trends that suggest meat, milk for vitamin D, eggs for protein, certain vegetables or supplements)?," participants answered Yes (59%, $n = 37$), No (32%), I have not considered this before (8%), Not applicable (8%), or Other (16%). Some gave specific examples of their dietary prescriptions:

> "I will not prescribe meat, eggs, etc. [but will prescribe] vegetables, fruits."
>
> "I advocate a plant-based diet and let [patients] make their own decision."
>
> "I do not prescribe meat or eggs for protein, and I encourage eating less [food overall] based on Jain methods of partial fasting."
>
> "[I] emphasize vegetables, fruits and lentils as sources of protein."
>
> "I would not advise intake of meat, eggs, fish, etc.; for cancer patients I strongly recommend they discontinue meat."
>
> "I usually highlight vegetarian options."
>
> "I will rarely mention meat but always suggest vegetarian choices to increase food intake."
>
> "[S]ubstitute red meat with vegetarian source of protein."
>
> "I am more aware of nutritional deficiencies in vegetarian and vegan diets and try to address those."
>
> "[The Jain tradition] was an influence for my study of the medical science of a vegan diet."
>
> "I never recommend anything as a diet that I don't practice; I explain the reason that it is something I do not believe in. I have had [occasions] where my patients are surprised and intrigued and admire it."

Recall that most survey respondents claimed that only 0–5 percent of their patients were Jain (60%, $n = 42$). Presented the question "Are there any special considerations or changes to your care that you had to implement to treat or prescribe medication to a lay Jain patient?," those who described the changes (62%, $n = 42$) emphasized diet-related issues (38%)—such as offering specific Jain-friendly foods to deal with a vitamin deficiency, or adjusting prescription timing for periods of fasting or pre-sunset—while the remainder (62%) described attempts to seek Jain-friendly medication that involves less harm to living beings, such as natural remedies, treatments that avoid animal-tested pharmaceuticals, tablets rather than capsules made from gelatin or shellfish, and alternatives to fish oil supplements. Relatedly, a significant minority of survey respondents reported that they presently incorporated alternative, āyurvedic medicine into their healthcare practice (28%, $n = 36$) or would like to do so in the future (14%).

Jainism, Animals, and Medicine

Animal research is a contested issue in contemporary biomedical ethics, often framed as either pro-animal or pro-science, with little space between. Ethicist

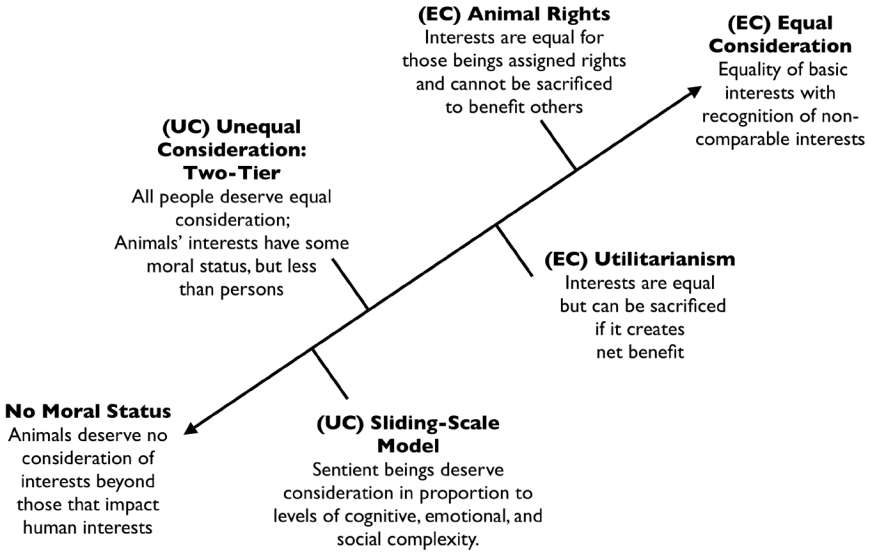

FIGURE 16. A diagram of selected bioethical positions regarding moral consideration due to animals. Credit: B. Donaldson (adapted from DeGrazia et al. 2010).

David DeGrazia offers a continuum of views (figure 16)—applicable for vertebrate mammals—that exceeds this binary snapshot (2011, 305–13). On one end of the contemporary spectrum is the "no-status" view, meaning that animals' interests have no moral significance unless their injury affects human interests. On the other end of the spectrum is "equal consideration," meaning that all "sentient beings have equal moral status at the level of basic consideration" regardless of species, though individual groups may also have "noncomparable interests" (DeGrazia 2010, 308). An example of this in a biomedical context is that one may extend equal consideration to a mouse for basic interests of pain, fear, suffering, kinship, and autonomy, but also accept that death, when it comes to a mouse, is less traumatic, and hence noncomparable to that of a human (Yeates 2010; Carbone 2004).

Degrazia describes two different standards of equal consideration. (1) Utilitarian views consider the interests of sentient beings equally, but may sacrifice the pleasure/pain interests of some of these beings when doing so benefits the pleasure/pain interests of the majority. For example, capturing and killing ten primates for Ebola research might be justified if it will save a certain number of other animals and people; likewise, a utilitarian view might justify removing a community of people inhabiting a vulnerable ecosystem if doing so would preserve numerous plants, animals, and microorganisms. (2) Animal rights positions strive to assign and protect specific rights to certain living beings, usually those who are most like humans or most entangled in human life. Recent efforts to assign legal rights to nonhuman primates are an example of these efforts. Ideally, these legal rights could not be sacrificed even when it might benefit the majority.

Another point on the continuum is "unequal consideration," in which animals' interests have some moral status, but less than those of persons; this may be a "two-tier theory," in which persons deserve full and equal consideration while other sentient beings require meaningful, but less-than-equal, consideration, or a "sliding-scale model" in which sentient beings deserve consideration in relation to their cognitive, emotional, and social sensitivities (DeGrazia 2011, 308).

DeGrazia asserts that any serious engagement with bioethics must reject the "no status" view, arguing that no real ethical judgments can be made if a target population has already been deemed fundamentally usable and killable without relevant justification. However, the "equal consideration" and "unequal consideration" views offer valid ethical options, according to DeGrazia, that can clarify what is ethically at stake. For instance, those who endorse an animal rights approach of equal consideration might accept observation-based forms of animal research such as Jane Goodall's work with the primates of Tanzania, or might accept medical research that had *direct benefit* to the animal subjects themselves, such as in a veterinary hospital. Conversely, those who advocate unequal consideration may support varying levels of restrictions on animal use. For example, testing on animals for cosmetics and personal products may be deemed unacceptable, as is now the case in the European Union, Norway, Israel, and India, while medical testing is still accepted. Additionally, people who land on different spots of this continuum may find overlapping consensus on increased regulatory and financial support for complete or partial replacement models, such as computer-based models; organs on chips; synthetic skin; or use of animals "down the phylogenetic scale," as in replacing a chimpanzee with a guinea pig or fish (Marks 2012). As DeGrazia cautions, "we must remember that particular benefits from animal studies are only *possible and hoped for*; whereas the harms to animals are typically immediate and certain," and multiple studies have produced no benefit while exacting great harm (2011, 309; original emphasis).

Jain medical professionals in our survey had considerable agreement on their discomfort with animals used in medicine. The majority of respondents agreed that *animal testing* is a form of violence (81%, $n = 36$), while small minorities disagreed (8%), did not know (3%), had not considered it before (3%), or selected "Other" (6%). Likewise, a majority considered *animal dissection* for educational and/or research purposes a form of violence (61%)—versus only 11% who felt that human dissection constitutes a form of harm—while a slightly more significant minority disagreed (17%), did not know (11%), had not considered it before (6%), or chose "Other" (6%).

Although only one-quarter of respondents had participated in animal testing as part of their medical/healthcare training (25%, $n = 36$), a larger percentage had either "declined to test on animals, advocated against testing on animals, or suggested alternatives to animal testing in [their] medical/healthcare training or work" (39%, $n = 36$). In spite of opposition to dissection, nearly three-quarters of respondents had dissected an animal as part their medical training (72%, $n = 36$).

Jain views will not map easily onto DeGrazia's continuum, especially considering the differences between mendicant and lay perspectives. However, it can still be fruitful to consider resonances, differences, or gaps between these bioethical positions and Jain perspectives. When it comes to animals as *food*, Jains seem to inhabit an equal consideration view more akin to an animal rights position, insofar as they reject the sacrifice of animals even when their flesh might satisfy a human need or desire. Jain lay philosophy actually extends moral consideration further than most "rights" frameworks to include all two- through five-sensed beings regardless of their similarity or difference to humans. As discussed above, Jains diverge in their views on using animals for dairy production, and in practice many lay Jains living in diaspora make some exceptions for honey and eggs.

What about animals in research? Respondents to our survey might land between equal and unequal consideration on DeGrazia's continuum. When asked to elaborate their views on animal testing, introduced above, the greatest number of participants affirmed that animal testing can never be justified (39%, $n = 36$). But many also felt that it may be justified when the results benefit animals themselves (31%) or when the results contribute to the medical advancement of humans (31%). Few felt that animals can ethically be used for safety tests on household products or cosmetics (6%). A greater number of respondents claimed that their view on animal research was more influenced by the Jain tradition (36%) than by their clinical experience or medical education (25%). A minority affirmed that though they personally disagreed with animal testing, it was a necessary part of their occupational training or responsibilities (22%) (figure 17).

Some might argue that the Jain understanding of living beings is so unique that it cannot be translated into bioethical discourse with others who do not share the same worldview. One could also reason that the Jain history of renunciation may justify a retreat from these ethical dilemmas rather than an active exploration of them. However, the medical professionals in our survey already bring their values into ethical dilemmas encountered in their personal and professional lives. When presented the statement "I feel that the Jain framework of one- to five-sensed beings is a meaningful framework to make practical ethical decisions in my *personal* (as opposed to my professional) day-to-day life," the vast majority agreed (83% [strongly agree 36%/agree 47%], $n = 36$) and no participants disagreed. A slightly lower percentage, but still a majority, agreed when asked if the framework of one- to five-sensed living beings "is a meaningful framework to make practical ethical decisions in my *professional* (as opposed to my personal) day-to-day life" (61% [strongly agree 21%/agree 40%], $n = 35$), with others selecting I don't know (6%), I somewhat disagree (11%), I have not considered before (16%), or Other (6%). Likewise, the majority of respondents affirmed that "the Jain vow of nonviolence has influenced my professional decision making in a medical/healthcare context" (80% [strongly agree 36%/agree 44%], $n = 35$).

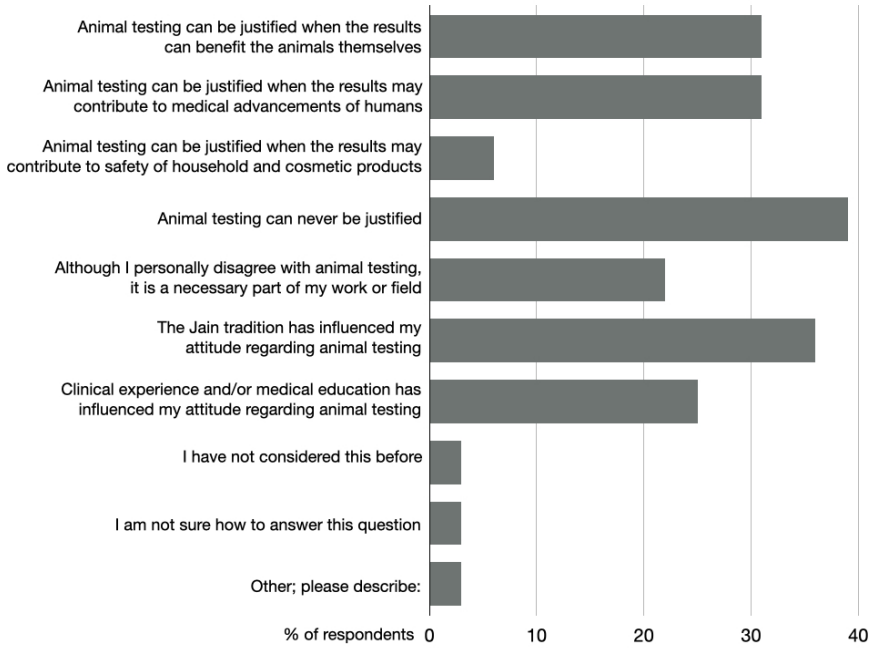

FIGURE 17. Responses of Jain medical professionals (n = 36) to the question "Which of the following statements [regarding animal testing] is/are most true for you? Choose all that apply."

We return to Vallely's description at the start of this section of human privilege as characterized by right conduct and restraint toward other living beings. The Jain view of animals in research seems to sit between a pro-animal view that takes the suffering of other beings very seriously and a pro-science view that privileges human endeavors and well-being based on the large number of healthcare professionals within the global Jain community. With a foot in both of these worlds, Jains may be able to uniquely contribute to ethical conversations regarding animal use in medicine, science, and society.[27]

JAIN PRINCIPLES OF APPLICATION FOR STANDARD MEDICAL CARE

What provisional Jain principles of application can we deduce from this chapter's analysis of Jain philosophy, medical history, and contemporary attitudes in relation to vaccinations and antibiotics, surgery and human dissection, clinical research trials, and animal ethics?

First, the physician-patient relationship in Jainism places a strong emphasis on beneficence-based obligations, entangled autonomy, and contextual truthfulness. Jain medical professionals in our survey privileged the duty to improve the welfare

of others more than an absolute refusal to harm. The Jain vow of nonviolence parallels the bioethical imperative of nonmaleficence but extends beyond humans to include all one- through five-sensed beings. Although Jain texts do not reference "autonomy" specifically, there is a clear understanding of relational self-determination of the *jīva* as it is affected by activities of body, speech, and mind, of oneself and others. The Jain worldview appears to be compatible with the bioethical concept of autonomy, but Jains typically define it in light of karmic responsibilities. Truthfulness is one of the five vows of Jain ethics but is philosophically subordinate to nonviolence. In theory, this means that a particular deception might be accepted, not for one's self interest, but if there were a harm to be prevented or great enough benefit to be gained. Informed consent is one way that Jain medical professionals reconcile truth-telling with deceptions such as placebo.

Second, contemporary Jain medical professionals attribute disabilities and diseases to multiple causes, including genetics and environment, which may, to a lesser extent, also be shaped by karma. Diseases and disabilities are amenable to treatment regardless of cause.

Third, lay Jain professionals place a strong emphasis on healthy habits and preventative care, and members of both mendicant and lay Jain communities will accept medical care. Although some Jains perceive that contemporary mendicants eschew medicine in all forms, there are several contemporary examples of at least some mendicants receiving treatment for acute, chronic, or emergency healthcare needs. When lay Jain medical professionals treat mendicants, some describe special considerations such as prescribing nonanimal medications, or medications that do not interfere with periods of fasting.

Fourth, when there is a conflict of interest between one- through five-sensed beings—such as in vaccinations, antibiotics, or surgery—Jain medical professionals will typically privilege the being with the higher number of senses. However, this may not be the case in every situation—such as the end of life—or with every Jain—such as the distinction between mendicants and lay Jains. Regardless, personally forgoing medical care that injures other beings is a meaningful karmic virtue. When the interests of five-sensed beings collide, Jains are more resistant to accepting that harm. The majority of respondents were aware of the background violence endured by one- through five-sensed beings in pharmaceutical ingredients, animal testing, and research trials, and a portion identified opportunities to decrease that harm on other one- through five-sensed beings in medicine.

Fifth, lay Jain medical professionals do consider mental intent in their calculations of harm, reflecting the textual developments whereby mental intent (and/or degree of motivating passion) impacts the karma accrued in a given action. For some, the cost is counted, accepted with regret, and repented for. For others, there may be no perceived harm at all if the intent was to heal.

Sixth, when viewed through a modern bioethical framework, Jain principles for animal ethics seem to parallel an equal consideration approach within the

mendicant ideal, including the rejection of sacrifice and the widespread practice of vegetarianism; Jain principles also overlap an unequal consideration approach in other ethical areas based on a sliding scale of one- through five-sensed beings. Although many Jain professionals accept some harms to five-sensed animals in medicine, refusing to harm animals personally, recommending a meat-reduced diet to patients, and prescribing animal-free or non-animal-tested medications are ways to lessen harm.

Finally, Jain medical professionals in our survey frequently consider Jain values alongside clinical, legal, and medical standards, with the majority accepting that tensions may persist between these sources that must be navigated through independent reasoning. Although not all Jains are equally dedicated to Jain ethical practices, beliefs, and ritual activities, the majority of medical professionals in our survey wanted their colleagues to know they were Jain. The Jain values that provided the most guidance for these professionals in clinical settings included nonviolence, non-one-sidedness, and truthfulness, respectively. Jain healthcare providers privileged clinical experience and non-Jain sources in their occupational knowledge, but sought guidance from Jains or Jain sources considerably more than from non-Jain colleagues during ethical dilemmas.

Overall, Jain medical professionals present a positive view of preserving the health and well-being of the body. Our survey reveals that Jain medical professionals retain a sense of Jain identity and ethical orientation in their work, opening the door for possible multicultural discourse and debates in bioethics among Jain studies scholars, practitioners, and clinicians.