CHAPTER 19

What Is a Person?

Linda MacDonald Glenn, J.D., LL.M.
Faculty, School of Natural Sciences
California State University Monterey Bay, Seaside

What does it mean to be a person? The designation of personhood is given to those entities who have moral and/or legal status, and the significance of the designation varies depending on whether one is contemplating metaphysical, moral, or legal personhood. In this era of exponential technological advances, our previous understandings and worldviews are challenged; we are witness to the creation of new life-forms and the interconnectedness of current life-forms. The lines between persons and property are becoming increasingly blurry. There are at least three major areas in which technology is challenging and even forcing us to reconsider traditional notions of personhood: fetal personhood, animal rights, and human-machine mergers.

The notion of personhood is not static; it is the result of dynamic, evolving processes. In a manner akin to the "extended mind" philosophy, the notion of personhood is part of a complex system, and as such, fixing absolute boundaries is an exercise in futility. An expanded legal notion of personhood is therefore warranted—there ought to be established, by law, a baseline level of moral and legal status, expanding to be more inclusive, always uplifting and elevating, and never diminishing.

HISTORY AND BACKGROUND

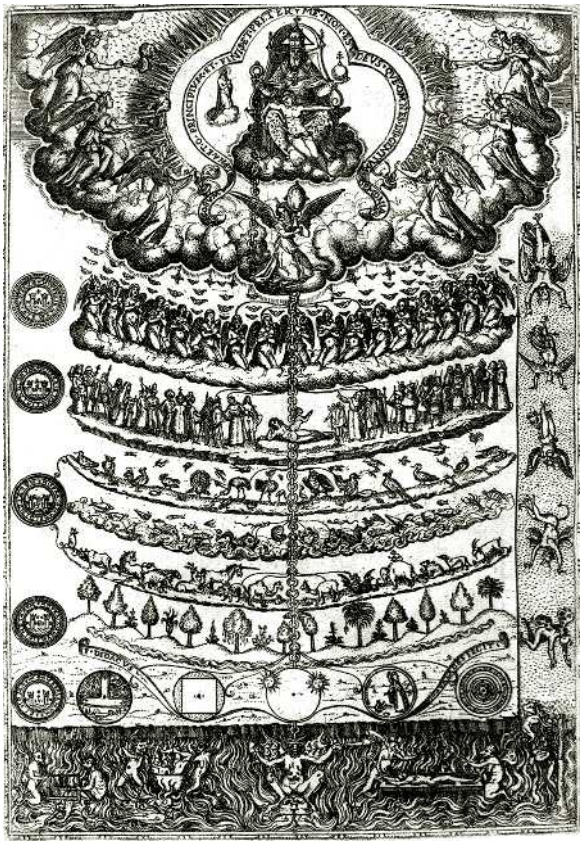
To have moral status is to be worthy of moral consideration; that is, if an entity has moral status, then we are obligated to consider its well-being, needs, and interests. The determination of whether or not something is worthy of moral consideration depends on the worldview or framework, as explored below.

THE GREAT CHAIN OF BEING

The great chain of being (or *scala naturae*, meaning "ladder of being") is a medieval worldview where everything in the universe had a divinely preordained place in a hierarchical order, depicted as a series of links. One of the basic tenets of the Judeo-Christian faith is that "man" is special because he alone is made in the image of God: "above all creatures, he is the object of God's love and attention; the other creatures … were given for man's use" (Rachels 1990, 87).

This hierarchical, anthropocentric worldview has been the justification for holding *only* human life as special and sacred and also for the idea that other creatures may be used

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210



The Great Chain of Being, *by Diego de Valadés, 1533–1582.* The Great Chain of Being *is a visual representation of the Ptolemaic theory, a divinely inspired hierarchical ranking of all life-forms; humans were represented by the male alone. Before the revelations of Nicolaus Copernicus and Galileo Galilei, Earth was believed to be the absolute center of the universe; the sun, moon, stars, and everything else that existed revolved around it and humankind.* **PICTORIAL PRESS LTD/ALAMY STOCK PHOTO.**

to suit humanity's purposes. This view has led to the rationalized exploitation, abuse, buying, selling, or decimation of all that is not "human" (Glenn 2003; see also Marino 2014).

NOT DOMINION, BUT RESPONSIBILITY AND STEWARDSHIP

Other scholars de-emphasize the domination and subjugation of entities other than humans. These authors write in terms of stewardship, responsibilities and duties of persons as God's moral agents (Ramsey [1950] 1993; Kass 1985; Macer 1999; McCormick 1981).

TRADITIONAL SECULAR PHILOSOPHY

Traditional metaphysical approaches attempt to set forth necessary and sufficient conditions of personhood, such that if an entity meets these conditions, it is a person; if the entity does not meet these conditions, then it is not a person. This section serves as a brief overview of different traditional approaches; for the sake of brevity, a number of sources have been omitted.

Kantian, Rights-Based Approach. Immanuel Kant (1724–1804) was a German philosopher of the Age of Enlightenment, whose work was influenced by ancient Greek philosophers Aristotle and Plato and French philosopher René Descartes (1596–1650). Man's intrinsic worth or dignity, Kant believed, derives from man's ability to be autonomous—a rational agent, capable of making his own decisions, setting his own goals. At the time of Kant's writings, this approach was seen as having laid the groundwork for universal respect for all men—that is, the notion that "all men are created equal." His approach, intended to be inclusive and egalitarian, was considered radical during a time when only men of wealth and property had power.

However, Kant's emphasis on the rational, autonomous being of white men and his silence on the moral status of children, the irrational, or the severely physically or mentally challenged suggests that he did not consider them worthy of human dignity or moral status. In context, Kant was not acting alone but was reflecting part of a worldview that systematically ignored the rights of others or even the thought of rights for others. He wrote during a time when the prevailing worldview was shaped by the great chain of being, as explained above; that worldview reinforced the idea that slaves, women, and children were considered property, not rational persons, and therefore, not worthy of moral status.

The Kantian approach ultimately breaks down because it fails to acknowledge the moral status of (or offer respect for) vulnerable populations—those who cannot speak for

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

themselves. Human dignity, according to this approach, is applicable only to those who can exercise rational, autonomous choices.

The Utilitarian Approach. Classic utilitarian theory, originally proposed by Scottish philosopher David Hume (1711–1776), was developed more fully by English philosophers Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873). Utilitarian theory seeks to maximize societal utility—that is, to create "the greatest happiness for the greatest number of people." Classic utilitarian theory carefully considers the treatment of nonhumans and argues for moral concern and regard; Bentham asserts, "The question is not, Can they reason? nor, Can they talk? but, Can they suffer?" (quoted in Rachels 1999, 86). As technology progresses, the question of what constitutes pain and suffering needs to be explored not only from a physical basis but also from psychological, sociological, and spiritual bases.

A SUBCLASS OF SERVANTS

In a 1972 article, Episcopalian theologian and bioethicist Joseph Fletcher argued for a list of fifteen "positive propositions" of personhood. These attributes were:

- minimum intelligence
- self-awareness
- self-control
- a sense of time
- a sense of futurity
- a sense of the past
- the capability of relating to others
- concern for others
- communication
- control of existence
- curiosity
- change and changeability
- balance of rationality and feeling
- idiosyncrasy
- neocortical functioning

This extensive list suggests that most individuals, at one time or another, are not persons. Fletcher's comments that a severely cognitively disabled Down syndrome child was not a person and his proposal that chimeras and cyborgs be created to do humanity's distasteful or dangerous work led to severe criticism from his peers and the public (Glenn 2003a).

Fletcher's arguments do not address the issue of suffering, physical or mental, and the excessive stress on rationality and intelligence is arbitrary and degrading to those who are cognitively disabled and senile. This list of characteristics has been seen as a recipe for the creation of a slave race. However, Fletcher's list of traits may be useful if personhood is viewed as a continuum or dynamic process, rather than as a definitive, fixed state—a model that has been proposed philosophically but not yet applied in legal theory or practice.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

BUILDING BRIDGES: A NEW WAY FORWARD

The conflict between Kantianism and utilitarianism bled over into an "ideological denial of the relevance of ethics to science" (Rollin 2011, 164), but attitudes have slowly started to evolve, particularly since the 1960s.

AHIMSA: REVERENCE FOR LIFE

Ahimsa is a vow of noninjury to any living thing—especially to animals (Gandhi 2013). In this belief system, adhering to the imperative to treat all living things with reverence increases one's karma and raises one's chance of a higher reincarnation (McClelland 2010).

A more Western view of ahimsa, described as "reverence for life," is found within the philosophy of Albert Schweitzer (1875–1965). During his work in Africa, Schweitzer came to better appreciate the animals there and all of nature's beauty. Schweitzer's words carry the responsibility of doing "as much good as we possibly can to all creatures," in direct contrast to a hierarchical perspective of dominion (Schweitzer 1936).

Schweitzer's philosophy has been interpreted as "radical biological egalitarianism," in which "essential human activities—such as cooking, cleaning, bathing, brushing one's teeth … are the moral equivalents of mass homicide" (Warren 1997, 37). However, Schweitzer's philosophy was intended to be provocative, not taken at literal face value, and to provide a unifying theory. His ethic was based partially on the works of German philosopher Arthur Schopenhauer (1788–1860), who articulated a worldview challenging the value of existence and argued that the world is, in essence, irrational. Schopenhauer contended that compassion was the key to finding meaning in an otherwise ultimately meaningless world of suffering. Schopenhauer believed that compassion could and would "facilitate an incrementally expanding ethical consciousness in humankind that improves all of society. He also believed that this would eventually bring non-human life into ethical consideration" (Goodin 2011, 54–55). Schweitzer pleaded for a more expansive notion of moral status, one not limited to only human beings.

A NEW SOCIAL ETHIC

Attitudes toward the moral status of animals are changing. A 2015 poll shows that 87 percent of Americans believe that animals have rights and are entitled to protection under the law (Lewis 2015).

Bernard E. Rollin (2011), who has devoted his life to improving the lives of animals, has proposed a new social ethic, based on the telos of animals—that is, their inherent nature, physically and psychologically expressed, which ought to determine how they live in their environments. For example, aside from being free of pain and suffering, chickens and other animals should not be kept in cramped little cages for the purposes of economic efficiency.

DECLARING CONSCIOUSNESS

In July 2012 a prominent international group of cognitive neuroscientists, neuropharmacologists, neurophysiologists, neuroanatomists, and computational neuroscientists gathered at the University of Cambridge to make the following declaration:

> Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

> evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates. (Low et al. 2012)

Simply put, nonhuman animals experience consciousness in the same manner as any human animal does. Of course, many renowned scientists, philosophers, and bioethicists had reached the same conclusion years ago (Bekoff 2012). Nevertheless, some believe that the Cambridge Declaration on Consciousness, though long overdue, provides the gravitas needed in the scientific community to make changes needed in such laws as the Animal Welfare Act of 1966 in the United States.

THE LEGAL ROOTS OF PERSONHOOD AND THE GROWING FAMILY TREE

Legal personhood, in contrast to metaphysical or moral personhood, is how relevant laws define what it means to be a person. Over the centuries, the law has evolved to recognize that all humans are persons, but not all persons are human; the law does not require that metaphysical or moral personhood be a condition of legal personhood.

PERSONS VERSUS PROPERTY

The evolution of the Western legal system over the last millennium generally followed the ideologies of the great chain of being and Kantianism. The law recognized a dichotomy: either you were designated as person or as property. If you were a person, you had rights; if you were property, you did not, and you could be bought, sold, discarded, and treated in whatever manner your owner deemed fit. Women, children, and slaves were considered property, rather than persons, starting with Plato and Aristotle.

Slavery. As laws became codified and incorporated in documents such as the Magna Carta, the status of women improved slightly. The plight of slaves started to change only in 1772 with the famous English slavery case of *Somerset v. Stewart*.

Change occurred more slowly in the colonies of the United States. In 1857, in the infamous case of *Dred Scott v. Sandford*, the US Supreme Court, referring to language in the Declaration of Independence that includes the phrase "all men are created equal," declared that "the enslaved African race were not intended to be included, and formed no part of the people who framed and adopted this declaration." The decision had the effect of equating a slave's legal status with that of domestic livestock; it propelled the United States, under the presidency of Abraham Lincoln, toward the Civil War (1861–1865). After the war, the Supreme Court ruling was rendered impotent by the passage of the Thirteenth and the Fourteenth Amendments to the US Constitution in 1865 and 1868, respectively. In these amendments, Congress abolished slavery and involuntary servitude; expressly granted males liberty, regardless of race or citizenship status; and sought to protect these males' civil rights. However, Congress did not extend the right to vote to black males until it adopted the Fifteenth Amendment in 1870 (see Table 19.1 for the relevant text from these amendments).

Women. The status of women did not start to change significantly until the mid- to late nineteenth century. The emergence of the women's movement was linked, temporally and ideologically, with the drive to end slavery (Rierson 1994). Under the laws of the time,

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Amendment	*Description*
Thirteenth Amendment (1865), Section 1	Neither slavery nor involuntary servitude, except as a punishment for crime, whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.
Fourteenth Amendment (1868), Section 1	All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.
Fifteenth Amendment (1870), Section 1	The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.
Nineteenth Amendment (1920)	The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.

Table 19.1. **Text from amendments to the US Constitution relevant to the definition of a person.**

neither slaves nor women could go to school or vote; neither could bring cases in court or testify against the master; neither could own property or control their own bodies (Post 1997). The Nineteenth Amendment finally gave women of the United States the right to vote in 1920 (see Table 19.1).

Children. The historical legal status of children has also been turbulent; well into the nineteenth century, a father could enroll his male children in the army and collect the enrollment bounty, betroth his minor female children to persons of his choice, and put his children to work as day laborers on farms or in factories and collect their wage packets. As recently as 1920, a parent who killed a child in administering punishment could claim a legal excuse for homicide in nine states. A father had the power to decide where and with whom his child would reside, as well as to transfer his children by testamentary disposition to someone other than their mother (Woodhouse 1998).

The resistance to accepting children as persons with rights of their own has been illustrated in historic moments, such as the movement to limit child labor. When legislation to protect children from exploitation was proposed, it was greeted by alarmist opposition as an attack on the fundamental rights of parents to control their children.

While parents generally still have broad authority to speak and act on children's behalf, the status and protection of children has improved. Another step in clarifying the status of children is the Convention on the Rights of the Child, a United Nations treaty that came into force in 1990. This convention ensures that courts worldwide look at the "best interests" of the child first, rather than parental rights. The United States, however, has still not ratified the convention. Some of the reasons for this refusal are that ratification would endorse a right to health care, including pre- and postnatal health care for women, a right to education, and paid parental leave—none of which is currently recognized as legal rights under the US Constitution (Attiah 2014; see also Lauria 2015).

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

HUMANS VERSUS PERSONS (NATURAL AND UNNATURAL ENTITIES)

Traditionally, under the law, all humans are persons, but not all persons are human. Until this point in the chapter, the terms *human* and *person* have been used interchangeably, but the law has actually created two categories of persons: "unnatural" and "natural."

"Unnatural" persons are "juridical" persons—that is, persons who have been created through what is known as a "legal fiction" (Fagundes 2001), a construct used to create rights for convenience and to serve the ends of justice. Juridical persons include such entities as corporations, labor unions, nursing homes, municipalities, government units, and even ships. With regard to the US Supreme Court, the legal fiction construct has typically been used under the guise of the court's interpretation of statutory language. For example, in the 1886 case of *Santa Clara County v. Southern Pacific Railroad Co.*, the US Supreme Court, for the first time—and rather abruptly and without much explanation or analysis—declared that a corporation is protected by the same rights as natural persons for the purposes of the Fourteenth Amendment's equal protection clause.

Currently, according to legal statutes in the United States, "natural" persons are biological beings, limited only to humans, and humans are defined as "member[s] of the species homo sapiens" (1 US Code § 8). But what constitutes the definition of *Homo sapiens*? The definition of species is a hotly debated and contentious issue among scientists, producing reams of publications (Wilson 1999). English naturalist Charles Darwin (1809–1882) argued that "species" are not "real" entities in nature (Mishler 2009; Wilkins 2009). Species concepts range from typological to morphological to phylogenetic; which is the proper definition for the purposes of statutory law? Species boundaries are permeable and not fixed, and there is no persuasive distinction that proves *Homo sapiens* exclusively encompasses the entirety of the human experience.

Between genetic analysis and paleoarchaeological observations, scientists now realize that Neanderthals were our ancestors, too. About 1 to 5 percent of current human DNA can be traced back to the DNA of Neanderthals; *Homo sapiens* is thus part Neanderthal (Dreifus 2017).

EMBRYOS AND FETUSES

The status of the unborn is unclear:

> The US Supreme Court's legalization of abortion in 1973 was based in part on the unborn's never having been recognized in law as a full legal person. At the same time, fetuses have been considered as persons for the purposes of insurance coverage, wrongful-death suits, and vehicular homicide statutes. The legal status of the unborn thus appears to vary from jurisdiction to jurisdiction, from context to context, according to varying purposes. (Steinbock 2011, xiii)

According to the minimalist view, which illustrates the appendage metaphor, the nonviable fetus is little more than a form of the pregnant woman's bodily tissue; it is part of the woman without having a separate identity or status. This view de-emphasizes the importance of the fetus's separate genetic identity and recognizes no moral status; fetal remains are discarded in the same manner as other by-products of surgery—simply thrown away. The metaphor of fetus as property entails quasi-property rights, giving family members the right to dispose of the fetal tissue but not the right to sell or profit from it.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

As mentioned earlier, advancements in technology are sure to lead to earlier viability status, particularly if the plans for an artificial womb come to fruition (Abecassis 2016; see also Partridge et al. 2017). The balancing of maternal and fetal interests is currently unavoidable but will be irrelevant once the technology of artificial or exogenic wombs develops further. *Roe v. Wade* (1973) is about control over one's own body and applies only to the right not to be a *gestational* parent. Thus, with regard to the unborn, the courts and/or legislatures will need to revisit the issue of what constitutes a "person."

HUMANITY'S ANIMAL KIN

As mentioned in a previous section, a new social ethic is unfolding. This new social ethic stems partly from the realization of the need for environmental sustainability (as a result of the works of Albert Schweitzer, Aldo Leopold, Rachel Carson, and Bernard E. Rollin) and partly from what some believe is humanity's evolving moral and spiritual character.

Cognitive scientist Steven Pinker, author of *The Better Angels of Our Nature* (2011), argues and provides evidence that human nature has evolved to become less violent. In the section of his book on the "rights revolutions," Pinker writes of

> the growing conviction that animals should not be subjected to unjustifiable pain, injury, and death.... The recognition of animal interests was taken forward by human advocates on their behalf, who were moved by empathy, reason, and the inspiration of the other Rights Revolutions.... The trends are real, and they are touching every aspect of our relationship with our fellow animals. (1034)

Fellow Inhabitants of the Planet. Since the mid-1980s, support for the recognition of the moral status of animals with which humans share the biosphere has grown far and wide. Switzerland, Germany, and Austria have amended their civil codes to declare that animals are not objects and ought not be treated as such under the law. New Zealand banned research on nonhuman hominins (Fitzgerald 2015); India declared dolphins to be "non-human" persons (Hackman 2013). As of the end of 2016, twenty-two jurisdictions had enacted legislation replacing the term *pet owner* with *guardian*, hoping to increase the recognition of animals as individual beings with wants and needs of their own, like a member of one's family or community, as opposed to a "thing" that can be disposed of if it is inconvenient (Guardian Campaign 2017). A professor at Emory University, using MRI scans, gathered neurobiological evidence that dogs experience mental states indistinguishable from humans, inferring that "dogs are people, too" (Berns 2013).

The Health of Earth: Rising Vegetarianism and Laboratory-Grown Meat. Vegetarianism is on the increase. Even among those who do not identify as vegetarians, the consumption of meat is down. This trend partly reflects a growing concern about animal welfare; other motives for reducing or eliminating meat consumption include health, taste, environmental concern, religion, and rebellion against tradition and/or parental authority. Nonetheless, the majority of people support legal measures that would solve the problem of unsustainable and inhumane meat production, by approving laws that force farmers and meatpackers to treat animals more humanely (Pinker 2011). In addition to the treatment of animals, guidelines from the United Nations, the US Department of Agriculture, and the US Department of Health and Human Services indicate that a switch to nonanimal-based proteins is necessary for survival of the planet (Carus 2010; McDaniel 2011).

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Market trends reflect these changing sensibilities and attitudes. Between 2011 and 2015, the number of new meat substitute products increased at an annual rate of 24 percent (*Refrigerated and Frozen Foods* 2016). Plant-based protein products aimed at "meat-reducing flexitarians" have become very popular, and the market is rapidly expanding (Michail 2016; Koba 2015). Despite issues of sustainability and these market trends, as Earth's population continues to grow, the global demand for meat continues to rise (Thornton 2010).

In response to this growing demand, several start-up companies have taken up the challenge of providing meat and animal proteins (such as eggs, milk, and cheese) without the cruelty to animals and without the damaging environmental impact (Glenn and D'Agostino 2012). By using the new field of cellular agriculture, these new companies, such as New Harvest, SuperMeat, and Perfect Day Foods, hold the promise of feeding a protein-hungry world and setting new moral standards for the way humans interact with their fellow creatures.

CONTROVERSIAL CHIMERAS AND TRANSGENIC CREATURES

Chimeras are created by artificially combining genetic material from two organisms into a single species; a transgenic organism is created when the genes of one or more species have been transplanted to and incorporated into another species through technological methods (Glenn 2003b, 2013). Chimeras and transgenic organisms represent a significant aspect of current biotechnology research, ranging from developmental biology and disease modeling to regenerative medicine (Dolgin 2016).

The entirety of regulation on biomedical research has been based on the premise of the human-animal dichotomy. Yet, scientists, researchers, ethicists, lawyers, and policymakers are coming to the consensus that the boundaries between humans and animals are not clear-cut and that life is a continuum. This raises the question of why proposed research guidelines, law reviews, and regulations demarcating boundaries between humans and other animals are proliferating (Hinterberger 2016).

Considering the conclusion of the aforementioned Cambridge Declaration on Consciousness, should we not be very careful about assuming that humans are unique in possessing any given trait? Neuroscientific evidence refutes any real distinction between the human species and other animals and repudiates the idea that humans are superior to other animals on the basis of their self-awareness, rationality, capacity for communicating through the use of language, and complexity of being. Any notion of human exceptionalism is more likely driven by cognitive bias (Benvenuti 2016).

ARTIFICIAL INTELLIGENCE AND HUMAN-MACHINE MERGERS

The merger of biological (living) and nonbiological (nonliving) has been heralded as the next stage of evolution (Max 2017). As a by-product of the emergence and acceptance of exponential technologies, evolution is no longer a matter of random chance but indubitably self-directed.

Artificial Intelligence. The Kantian notion of basing personhood on moral status, mentioned in a previous section, is perfectly suited for artificial intelligence (AI); but would AI be capable of sentience? Inventor Ray Kurzweil (2012) argues that there is no sharp distinction between mammalian thought and machine thought and that by 2040 machine intelligence will exceed human intelligence and will have incorporated characteristics of sentience, making AI indistinguishable from the human counterpart. He is not alone in envisioning such a future; affective computing is proceeding rapidly (Kaplan 2017).

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Awareness of this inevitability is seeping into the public consciousness via entertainment media. *Westworld*, the HBO television series about artificial consciousness that debuted in the fall of 2016, explores the intersection of sentience, sapience, and free will. Alex Garland's 2014 film *Ex Machina* envisions AI that may be sentient but has no conscience.

Arguably, a justifiable reason to deny personhood to AI is "the desire to reduce or eliminate a threat to the dominance of the human species" (Hubbard 2011, 429). In response to this existential threat, a group of AI researchers, industry leaders, and academics gathered in January 2017 at an Asilomar conference in Pacific Grove, California, and came up with twenty-three principles intended to guide the safe development of AI, including but not limited to safety, privacy, and liberty concerns, as well as shared benefits and prosperity (Future of Life Institute 2017).

Perhaps not surprisingly, the principles did not include a call for transparency of purpose and means, as such transparency would weaken intellectual property rights and undermine economic advantage between competitors. However, because economic inequality is currently a major global ethical challenge, transparency of purpose and means would go a long way toward ensuring the ethical use of AI and that the aforementioned proposed principles would be followed (Tarnoff 2017; Hibbard et al. 2016). Additionally, the lack of transparency of purpose and means also ensures that any AI retains the status of property, rendering it ineligible for consideration of personhood.

Human-Machine Symbiosis (Cyborgs).

> *We and our technological creations are poised to embark on*
> *what is sure to*
> *be a strange and deeply commingled evolutionary path*
>
> —Prabhakar (2017)

While some researchers and scholars have concerned themselves with the implications of AI, others have noted that it is far more likely that human-machine mergers will present more immediate challenges, both morally and legally (Hughes 2004; Barfield 2015). Meanwhile, the progression from hardware to software to wetware has been swift. Examples of this progress since the middle of the first decade of the twenty-first century include brain implants for Parkinson's, obsessive-compulsive disorder, depression, post-traumatic stress disorder, traumatic brain injury, and Alzheimer's and other forms of memory loss (Piore 2015; Price 2017). Kevin Warwick, the self-proclaimed "world's first human cyborg," has called for upgrading humans for a future in space and the creation of robots with biological brains (Warwick et al. 2017).

The examples of the progress that has been made in this area could take up volumes; all these advances call forth questions that humanity will have to consider: How many technological changes does it take to result in an entity that is no longer human? At some point, perhaps because of the nature and extent of the modifications and/or replacements, might this entity be viewed as posthuman rather than human? And if you are no longer "human," are you still a legal person? Is there a point at which you have replaced so much of yourself that you are no longer the same person and should have a different legal identity?

These new technologies are blurring the bodily boundaries of humans. Distinctions between "natural" and "artificial," "alive" and "not alive," or "animate" and "inanimate" are ones that are becoming increasingly difficult to determine. Other areas, which are not yet in

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

the public eye, such as synthetic or non-DNA-based life, extraterrestrial life, noncorporeal entities, and mind uploading, will also offer philosophical and legal quandaries but are outside the scope of this chapter. What is clear, though, is that the traditional dichotomy of persons versus property no longer works; the legal system needs a new paradigm.

EVOLVING LEGAL PARADIGMS

The law, like language, perpetually evolves to meet a society's needs and norms. It not only serves to resolve conflicts or to provide a code of acceptable conduct but also serves as an aspirational lodestone (Glenn 2003a).

PERSONHOOD AND PROPERTY: IDEOGRAPHIC MODELS

The bulk of the scholarly articles and treatises considering the challenges presented by technology advocate for an approach to moral and legal status by degrees, while calling for varying degrees of consideration (Hinterberger 2016; Hubbard 2011; Favre 2010; Berg 2007; Bennett 2006; Glenn 2003a). That is, rather than pure dichotomy, where a thing either has moral and legal status or not, such status is determined by interest and obligations. This approach raises another question: did those interests and obligations of sentient beings merit equal consideration or unequal consideration? Regardless of where one stands on this issue, scientific evidence is accumulating that refutes the persistent, outdated, and obdurate presumption that moral status is all or nothing (DeGrazia 2008).

Points on a Continuum. If one views the concept of personhood on a legal continuum, at one end of the spectrum would be property, such as inanimate objects, land, and those things that cannot suffer; at the other end of the spectrum, rational autonomous yet sentient beings (see Figure 19.1). With the granting of rights to rational autonomous beings comes the burden of responsibility. As "creators," like parents, humans have attendant responsibilities as moral agents—in particular, the extraordinary responsibility of determining the impact of these creations on the community, human and nonhuman, on the biosphere, and potentially beyond, as humanity expands into space.

One of the advantages to applying the property-personhood continuum and a balanced approach would be in the flexibility offered to courts in considering the issues. What facts are relevant? What liberty and/or property interests are at stake? Another advantage that courts would have is the ability to administer a remedy that is proportionate to the rights and interests of those who lack full autonomy. For example, a court can recognize a minimum negative right or liberty interest to maintain bodily integrity and thus be free from enslavement or vivisection, without extending any other positive rights or liberties.

On the flip side, the flexibility of this approach could cause difficulty in that it can be used to justify a cultural relativist approach, strip existing rights from the weak or disabled, and rationalize racism, bigotry, or other hierarchical bias. This is the dark side of the continuum model. The danger of the cultural relativist approach is it could be used to argue that the slave trade was morally acceptable because of the time and norms, that the killing doctors of the Nazi concentration camps did nothing wrong, and that the Tuskegee syphilis researchers were justified in their approach because the victims were less than human.

To prevent such travesties of justice from recurring, the adoption and endorsement of statutory language would be necessary. The specific example here is the language in the United Nations General Assembly's World Charter for Nature (1982), which declares that

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

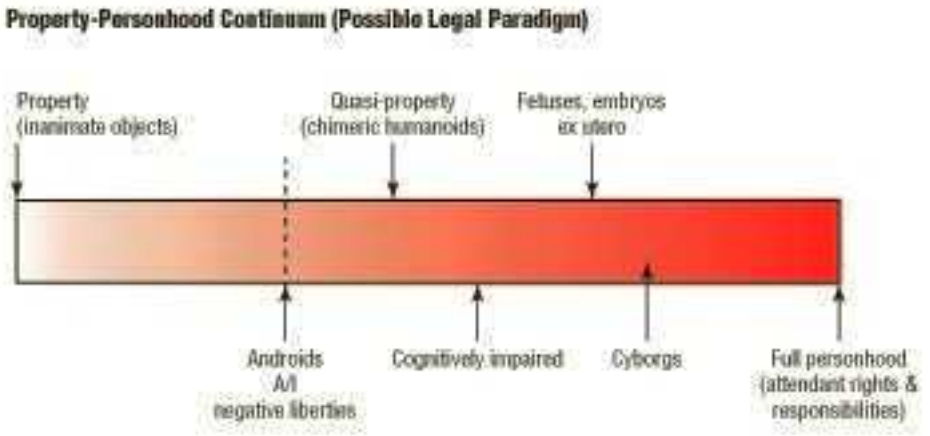


Figure 19.1. *This figure is for illustrative and discussion purposes, not to denote or advocate a particular status for a specific entity.* **LINDA GLENN.**

"every form of life is unique, warranting respect regardless of its worth to man, and, to accord other organisms such recognition, man must be guided by a moral code of action."

In a manner akin to Albert Schweitzer's ethic centering on an expansion of humanity's moral universe, this language would serve to recognize fundamental interests, such as the liberty, dignity, and worth of each life, "regardless of its worth to man." This ethic is based on a model of an *interdependent whole system*, incorporating incontrovertible principles of justice, fundamental fairness, and reasonableness.

Pyramid of Interdependence. A similar model, hierarchical, but somewhat more reflective of the interdependent nature of the relationships, might serve as a useful ideograph or illustrational construct. This model has much of the flexibility of the continuum model, but the hierarchal characteristic of the pyramid recognizes the fundamental origin of life and underscores the interdependent nature of the evolutionary process and how relationships and rights are built on top of one another. The pyramid model represents a new way of visualizing the law; instead of the law being based on the great chain of being, it is built from the ground up, layer by layer (see Figure 19.2).

EXTENDED PERSONHOOD: A DYNAMIC EVOLVING MODEL OF THE LAW

The above models might be helpful in thinking about relationships and rights, but they have the disadvantage of being somewhat static. Our knowledge and understanding of the world and the universe is ever changing, and nowhere is this more evident than in the field of neuroscience, particularly in notions of the extended mind.

The extended mind thesis holds that an agent's mind and associated cognitive processes are not exclusively in the head of the cognizer, nor even exclusively within the body, but extend into the agent's surroundings or environment. As two well-known philosophers of mind, Andy Clark and David Chalmers, see it: "Where does the mind stop and the rest of the world begin? … We propose to pursue … an *active externalism*, based on the active role of the environment in driving cognitive processes" (1998, 7). Though initially counterintuitive, this idea makes sense when

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

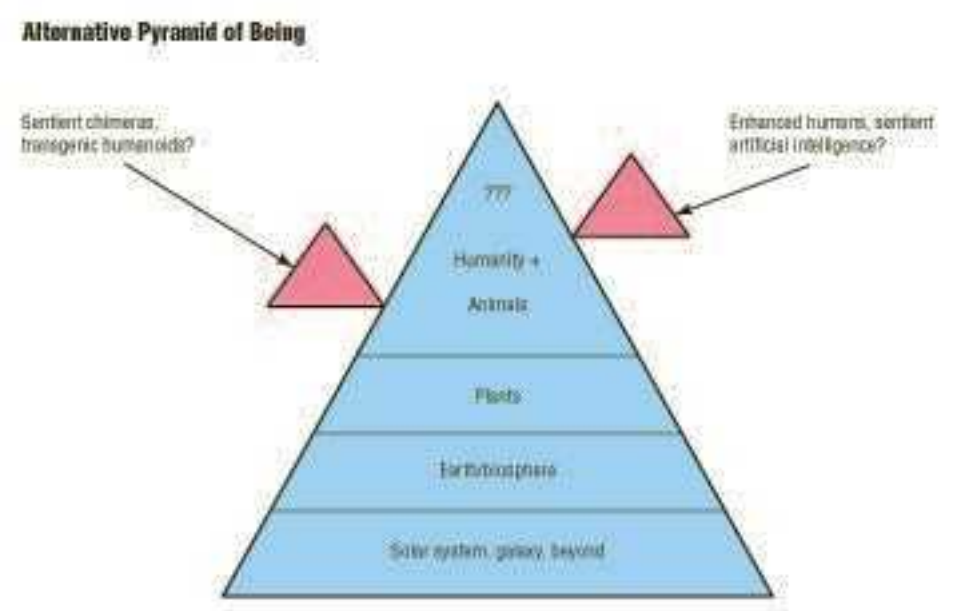


Figure 19.2. *This figure is a visual metaphor for the cumulative, interconnected nature of life-forms on Earth and in the universe.* **LINDA GLENN.**

one considers how humans have offloaded some of their cognitive load into external technological props, such as smartphones and laptops. The theory that personhood extends beyond the individual and can be applied to external interactive prosthetics has already been applied in one civil case scenario and has served as the motivation and inspiration for the Cyborg Foundation (Glenn 2012; Cyborg Foundation 2017).

The law is a powerful tool and often serves as a repository for expressions of anxiety about divisive social issues. It can actually shape behavior by creating social norms that people use to measure the morality and worth of their actions: "legal rituals [can] make and unmake persons" (Dayan 2011). The law can also be used as a weapon for creating divisions, marginalizing those who are different and depriving individuals of personhood, such as prisoners tortured in the US-run detention camp in Guantánamo, Cuba, or as exemplified by the so-called bathroom bills, which restrict access to restrooms, locker rooms, and other sex-segregated facilities on the basis of a definition of sex or gender consistent with sex assigned at birth or "biological sex." When the law is used in such a destructive manner, persons who are judged outside the law's protection will resort to an alternative understanding of the law, reinforcing further schisms in the community. The law can also be used constructively and restoratively, to encourage harmony, social justice, and healing; in this regard, the emergence of therapeutic jurisprudence is promising.

Therapeutic jurisprudence is "the study of the law as a therapeutic agent" (Stolle, Wexler, and Winick 2000). It focuses on the impact of the law and the legal process on emotional life and psychological well-being. Therapeutic jurisprudence envisions lawyers practicing with an ethic of care and heightened interpersonal skills, who value the psychological well-being of their clients, as well as their legal rights and interests, and who actively

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

seek to prevent legal problems through creative drafting and problem-solving approaches (Stolle, Wexler, and Winick 2000).

Therapeutic jurisprudence holds out hope for infusing into the legal system a milieu that takes into consideration the emotions, behaviors, and mental health of persons and supports an ethics of care, collaboration, and recognition of humans' interdependence. It is within this framework, raising certain questions that might otherwise go unaddressed, that the evolving notions of legal personhood might be able to find a home. These are the new frontiers of justice (Nussbaum 2006).

Summary

In addition to asking, what does it mean to be a person? an equally important question is what kind of persons do we want to be? What kind of future do we want to create, and what do we want to leave as our legacy for our children, grandchildren, and other future inhabitants of this planet and beyond? What value do we place on sentient life versus owning property, if that property is sentient? Do we emphasize the Golden Rule or "he who has the gold rules"?

Despite the turn of political events in the United States and other parts of the world, some observers are optimistic that our morality is evolving and that we will continue to expand our moral and legal universe to include sentient beings. Humanity has made moral progress; in an inspirational essay, Michael Shermer contends that

> over time, the idea that individual sentient beings have natural rights has outcompeted other ideas that place the group, tribe, nation, race, gender, or religion above the rights of the individual. These rights have expanded around the globe because individual sentient beings want them, and they want them because it is part of their nature to want them—it is instinctive—and a proper scientific understanding of human nature has revealed this fact. (Shermer 2016, 61–62)

To gain a further scientific, objective understanding and to gather evidence about the thoughts, minds, and lives of those sentient creatures with whom we share the biosphere, several people have proposed that we create a global, open-source, and transparent interdisciplinary study of interspecies and bio-inspired communications, which would include advancing artificial intelligence (Bekoff 2012; Benvenuti 2016; Favre 2010; Fitzgerald 2015; Herzing 2013; Nussbaum 2006; Rollin 2011; Shermer 2016; Shyam 2015; Wise 2000). This would amass support for a moral starting point for cultivating the survival and flourishing of sentient beings.

Albert Schweitzer and Arthur Schopenhauer, among others, believed that compassion is key to the moral and spiritual growth of humanity and humanity plus, that the way we treat ourselves and others is a reflection of the way we treat the universe, that what we give out is what we get back, and that the law should express our most noble aspirations. These values and aspirations continue to gather strength from modern philosophers, lawyers, bioethicists, theologians, and the general citizenry, all of whom can and should provide input to prudent changes in the legal system. Until such legal changes are made, we can expect intense cross-disciplinary debate and discussion as new sentient life-forms are created through science and medicine and recognized legally, morally, and ethically.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Bibliography

Abecassis, Marion. "Artificial Wombs: 'The Third Era of Human Reproduction' and the Likely Impact on French and US Law." *Hastings Women's Law Journal* 27 (2016): 3–109.

Attiah, Karen. "Why Won't the U.S. Ratify the U.N.'s Child Rights Treaty?" *Washington Post*, November 21, 2014. https://www.washingtonpost.com/blogs/post-partisan/wp/2014/11/21/why-wont-the-u-s-ratify-the-u-n-s-child-rights-treaty/.

Barfield, Woodrow. *Cyber-Humans: Our Future with Machines*. New York: Springer, 2015.

Bekoff, Marc. "Welcome to Our World." *New Scientist* 215, no. 2883 (2012): 24–25.

Bennett, D. Scott. "Chimera and the Continuum of Humanity: Erasing the Line of Constitutional Personhood." *Emory Law Journal* 55, no. 2 (2006): 347–387.

Benvenuti, Anne. "Evolutionary Continuity and Personhood: Legal and Therapeutic Implications of Animal Consciousness and Human Unconsciousness." *International Journal of Law and Psychiatry* 48 (2016): 43–49.

Berg, Jessica. "Elephants and Embryos: A Proposed Framework for Legal Personhood." *Hastings Law Journal* 59 (2007): 369–406.

Berns, Gregory. "Dogs Are People, Too." *New York Times*, October 5, 2013. http://www.nytimes.com/2013/10/06/opinion/sunday/dogs-are-people-too.html.

Carus, Felicity. "UN Urges Global Move to Meat and Dairy-Free Diet." *Guardian* (London), June 2, 2010. https://www.theguardian.com/environment/2010/jun/02/un-report-meat-free-diet.

Chandler-Garcia, Lynne Marie. "Who Is a Person and Why? A Study of Personhood in Theory and the Law." PhD diss., University of Maryland, College Park, 2012. http://drum.lib.umd.edu/handle/1903/12617.

Clark, Andy, and David Chalmers. "The Extended Mind." *Analysis* 58, no. 1 (1998): 7–19. doi:10.1093/analys/58.1.7.

Convention on the Rights of the Child. November 20, 1989. *United Nations Treaty Series* 1577 (1990): 3–177. https://reaties.un.org/doc/Publication/UNTS/Volume%201577/v1577.pdf.

Cowell, Alan. "After 350 years, Vatican Says Galileo Was Right: It Moves." *New York Times*, October 31, 1992. http://www.nytimes.com/1992/10/31/world/after-350-years-vatican-says-galileo-was-right-it-moves.html.

Cyborg Foundation. "About Neil Harbisson; About Moon Ribas." Accessed May 12, 2017. http://www.cyborgfoundation.com/about.

Dayan, Colin. *The Law Is a White Dog: How Legal Rituals Make and Unmake Persons*. Princeton, NJ: Princeton University Press, 2011.

DeGrazia, David. "Moral Status as a Matter of Degree?" *Southern Journal of Philosophy* 46, no. 2 (2008): 181–198.

Dolgin, Elie. "Chimeras Keep Courting Controversy." *Proceedings of the National Academy of Sciences of the United States of America* 113, no. 43 (2016): 11984–11985.

Dred Scott v. Sandford, 60 US 393 (1857).

Dreifus, Claudia. "What Did Neanderthals Leave to Modern Humans? Some Surprises." *New York Times*, January 20, 2017. https://www.nytimes.com/2017/01/20/science/john-anthony-capra-neanderthals-dna-humans.html.

Fagundes, David. "What We Talk about When We Talk about Persons: The Language of a Legal Fiction." *Harvard Law Review* 114, no. 6 (2001): 1745–1768.

Favre, David. "Living Property: A New Status for Animals within the Legal System." *Marquette Law Review* 93, no. 3 (2010): 1021–1070.

Fitzgerald, Emily A. "[Ape]rsonhood." *Review of Litigation* 34, no. 2 (2015): 337–378.

Fletcher, Anthony. "Women and Religion." In *Gender, Sex, and Subordination in England, 1500–1800*, 347–363. New Haven, CT: Yale University Press, 1995.

Fletcher, Joseph. "Indicators of Humanhood: A Tentative Profile of Man." *Hastings Center Report* 2, no. 5 (1972): 1–4.

Future of Life Institute. "Asilomar AI Principles." 2017. https://futureoflife.org/ai-principles/.

Gandhi, Sohan Lal Jain. "The Jain Principle of *Ahimsa* (Nonviolence) and Ecology." *Journal of Oriental Studies* (Tokyo) 23 (2013): 166–177. http://www.iop.or.jp/Documents/1323/Sohan%20Lal%20Jain%20Gandhi.pdf.

Glenn, Linda MacDonald. "Biotechnology at the Margins of Personhood: An Evolving Legal Paradigm." *Journal of Evolution and Technology* 13 (2003a). http://jetpress.org/volume13/glenn.html.

Glenn, Linda MacDonald. "Case Study: Ethical and Legal Issues in Human Machine Mergers (or the Cyborgs Cometh)." *Annals of Health Law* 21, no. 1 (2012): 175–179.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Glenn, Linda MacDonald. "Ethical Issues in Genetic Engineering and Transgenics." *ActionBioscience*, November 2013. http://www.actionbioscience.org/biotechnology/glenn.html.

Glenn, Linda MacDonald. "When Pigs Fly? Legal and Ethical Issues in Transgenics and the Creation of Chimeras." *Physiologist* 46, no. 5 (2003b): 251, 253–255.

Glenn, Linda MacDonald, and Lisa D'Agostino. "The Moveable Feast: Legal, Ethical, and Social Implications of Converging Technologies on Our Dinner Tables." *Northeastern University Law Journal* 4, no. 1 (2012): 111–133.

Goodin, David K. "Albert Schweitzer's Reverence for Life Ethic in Relation to Arthur Schopenhauer and Friedrich Nietzsche." PhD diss., McGill University, Montreal, 2011. http://digitool.library.mcgill.ca/thesisfile103600.pdf.

Gregg, Justin. "You Had Me at 'Cybernetic Dolphins.'" *Future Tense* (blog), *Slate*, November 26, 2013. http://www.slate.com/blogs/future_tense/2013/11/26/google_cybernetic_dolphins_can_technology_create_human_dolphin_communication.html.

Guardian Campaign. "Do You Live in a Guardian Community?" Accessed March 3, 2017. http://guardiancampaign.org/guardiancity.html.

Hackman, Jason. "India Declares Dolphins 'Non-human Persons,' Dolphin Shows Banned." *Daily Kos* (blog), July 30, 2013. http://www.dailykos.com/story/2013/7/30/1226634/-India-Declares-Dolphins-Non-Human-Persons-Dolphin-shows-BANNED.

Herzing, Denise. "Could We Speak the Language of Dolphins?" Filmed February 2013. TED Video, 14:38. Posted June 6, 2013. https://www.ted.com/talks/denise_herzing_could_we_speak_the_language_of_dolphins.

Hibbard, Bill. "The Asilomar AI Principles Should Include Transparency about the Purpose and Means of Advanced AI Systems." *H+ Magazine*, February 2, 2017. http://hplusmagazine.com/2017/02/02/asilomar-ai-principles-include-transparency-purpose-means-advanced-ai-systems/.

Hibbard, Bill, Nick Baladis, Ben Goertzel, et al. "Humans for Transparency in Artificial Intelligence." *H+ Magazine*, March 11, 2016. http://hplusmagazine.com/2016/03/11/transparent-ai/.

Hinterberger, Amy. "Regulating Estrangement: Human–Animal Chimeras in Postgenomic Biology." *Science, Technology, and Human Values*. Published electronically December 26, 2016. doi:10.1177/0162243916685160.

Hubbard, F. Patrick. "'Do Androids Dream?': Personhood and Intelligent Artifacts." *Temple Law Review* 83, no. 2 (2011): 405–474.

Hughes, James. *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*. Cambridge, MA: Westview Press, 2004.

Kaplan, Jerry. "Artificial Intelligence: Think Again." *Communications of the ACM* 60, no. 1 (2017): 36–38. doi:10.1145/2950039.

Kass, Leon R. *Toward a More Natural Science: Biology and Human Affairs*. New York: Free Press, 1985.

Koba, Mark. "Fake Meat Sales Are Growing, but Is It Really Better for You?" *Fortune*, May 11, 2015. http://fortune.com/2015/05/11/meatless-meat-sales/.

Kurzweil, Ray. *How to Create a Mind: The Secret of Human Thought Revealed*. New York: Viking, 2012.

Lauria, Joe. "Why Won't the US Ratify the UN's Children's Rights Convention?" *Huffington Post*, January 25, 2015. http://www.huffingtonpost.com/joe-lauria/why-wont-the-us-ratify-th_b_6195594.html.

Lewis, Tanya. "Many Americans Support Equal Rights for Animals." Live Science. May 22, 2015. http://www.livescience.com/50889-animal-rights-poll.html.

Lovejoy, Arthur O. *The Great Chain of Being: A Study of the History of an Idea*. Cambridge, MA: Harvard University Press, 1936.

Low, Philip, Jaak Panksepp, Diana Reiss, et al. "The Cambridge Declaration on Consciousness." Presented at the Francis Crick Memorial Conference on Consciousness in Human and Non-human Animals, Churchill College, University of Cambridge, July 2012. http://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf.

Macer, Darryl R. J. "Bioethics and Sustainable Development." In *World Development: Aid and Foreign Direct Investment 1999/2000,* edited by A. J. Fairclough, 112–114. London: Kensington, 1999.

Madrigal, Alexis C. "Is Google's Secretive Research Lab Working on Human-Dolphin Communication?" *Atlantic*, November 21, 2013. https://www.theatlantic.com/technology/archive/2013/11/is-googles-secretive-research-lab-working-on-human-dolphin-communication/281701/.

Marino, Lori. "The Scala Naturae Is Alive and Well in Modern Times." *Huffington Post*, April 6, 2014. http://www.huffingtonpost.com/lori-marino-phd/the-scala-naturae-is-aliv_b_4719171.html.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

Max, D. T. "How Humans Are Shaping Our Own Evolution." *National Geographic*, April 2017. http://www.nationalgeographic.com/magazine/2017/04/evolution-genetics-medicine-brain-technology-cyborg/.

McClelland, Norman C. *Encyclopedia of Reincarnation and Karma*. Jefferson, NC: McFarland, 2010.

McCormick, Richard A. *How Brave a New World? Dilemmas in Bioethics.* Garden City, NY: Doubleday, 1981.

McDaniel, Mac. "New USDA Guidelines Praise Vegetarian Diets." Care2. February 2, 2011. http://www.care2.com/causes/new-usda-guidelines-praise-vegetarian-diets.html.

Michail, Niamh. "Unilever to Add Vegetarian Logo to 500 Products." FoodNavigator.com. November 4, 2016. http://www.foodnavigator.com/Market-Trends/Unilever-to-add-vegetarian-logo-to-500-products.

Mishler, Brent D. "Species Are Not Uniquely Real Biological Entities." *Contemporary Debates in Philosophy of Biology*, edited by Francisco J. Ayala and Robert Arp, 110–122. Chichester, UK: Wiley-Blackwell, 2009.

New Harvest. http://www.new-harvest.org.

Nussbaum, Martha C. *Frontiers of Justice: Disability, Nationality, Species Membership*. Cambridge, MA: Belknap Press of Harvard University Press, 2006.

Partridge, Emily A., Marcus G. Davey, Matthew A. Hornick, et al. "An Extra-uterine System to Physiologically Support the Extreme Premature Lamb." *Nature Communications* 8, art. 15112 (2017). doi:10.1038/ncomms15112.

Perfect Day Foods. http://www.perfectdayfoods.com.

Pinker, Steven. *The Better Angels of Our Nature: Why Violence Has Declined*. New York: Viking, 2011.

Piore, Adam. "A Shocking Way to Fix the Brain." *MIT Technology Review*, October 8, 2015. https://www.technologyreview.com/s/542176/a-shocking-way-to-fix-the-brain.

Post, Dianne. "Why Marriage Should Be Abolished." *Women's Rights Law Reporter* 18, no. 3 (1997): 283–313.

Prabhakar, Arati. "The Merging of Humans and Machines Is Happening Now." *Wired*, January 27, 2017. http://www.wired.co.uk/article/darpa-arati-prabhakar-humans-machines.

Preece, Gordon, ed. *Rethinking Peter Singer: A Christian Critique*. Downers Grove, IL: InterVarsity Press, 2002.

Price, Jack. "Mending Minds." *New Scientist* 233, no. 3109 (2017): 36–39.

Rachels, James. *Created from Animals: The Moral Implications of Darwinism*. Oxford: Oxford University Press, 1990.

Rachels, James. *The Elements of Moral Philosophy*. 3rd ed. Boston: McGraw-Hill College, 1999.

Ramsey, Paul. *Basic Christian Ethics*. Louisville, KY: Westminster/John Knox Press, 1993. First published 1950 by Scribner.

Refrigerated and Frozen Foods. "Data Shows Rise in Vegetarian Claims." July 8, 2016. http://www.refrigeratedfrozenfood.com/articles/91183-data-shows-rise-in-vegetarian-claims.

Rierson, Sandra L. "Race and Gender Discrimination: A Historical Case for Equal Treatment under the Fourteenth Amendment." *Duke Journal of Gender Law and Policy* 1 (1994): 89–117.

Roe v. Wade, 410 US 113 (1973).

Rollin, Bernard E. *The Frankenstein Syndrome: Ethical and Social Issues in the Genetic Engineering of Animals*. Cambridge: Cambridge University Press, 1995.

Rollin, Bernard E. *Putting the Horse before Descartes: My Life's Work on Behalf of Animals*. Philadelphia: Temple University Press, 2011.

Santa Clara County v. Southern Pacific Railroad Co., 118 US 394 (1886).

Schopenhauer, Arthur. *On the Basis of Morality*. Translated by E. F. J. Payne. Indianapolis, IN: Bobbs-Merrill, 1965.

Schweitzer, Albert. "The Ethics of Reverence for Life." *Christendom* 1, no. 2 (1936): 225–239. http://www.animal-rights-library.com/texts-c/schweitzer01.pdf.

Shermer, Michael. "Morality Is Real, Objective, and Natural." *Annals of the New York Academy of Sciences* 1384 (2016): 57–62.

Shyam, Geeta. "The Legal Status of Animals: The World Rethinks Its Position." *Alternative Law Journal* 40, no. 4 (2015): 266–270.

Somerset v. Stewart, Lofft 1–18; 11 Harg. State Trials 339; 20 Howell's State Trials 1, 79–82; 98 Eng Rep 499–510 (King's Bench, June 22, 1772).

Steinbock, Bonnie. *Life before Birth: The Moral and Legal Status of Embryos and Fetuses*. 2nd ed. Oxford: Oxford University Press, 2011.

Stolle, Dennis P., David B. Wexler, and Bruce J. Winick, eds. *Practicing Therapeutic Jurisprudence: Law as a Helping Profession*. Durham, NC: Carolina Academic Press, 2000.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210

SuperMeat. http://www.supermeat.com.

Tarnoff, Ben. "Robots Won't Just Take Our Jobs—They'll Make the Rich Even Richer." *Guardian* (London), March 2, 2017. https://www.theguardian.com/technology/2017/mar/02/robot-tax-job-elimination-livable-wage.

Thornton, Philip K. "Livestock Production: Recent Trends, Future Prospects." *Philosophical Transactions of the Royal Society* B 365, no. 1554 (2010): 2853–2867.

United Nations General Assembly. Resolution 37/7, "World Charter for Nature." October 28, 1982. http://www.un.org/documents/ga/res/37/a37r007.htm.

Warren, Mary Anne. *Moral Status: Obligations to Persons and Other Living Things*. Oxford: Clarendon Press, 1997.

Warwick, Kevin. "The Cyborg Experiments" (video). Humanoid Productions. 2015. http://www.humanoid.uk/news/the-cyborg-experiments/.

Warwick, Kevin, Arne Hendriks, Rachel Armstrong, and Sarah Jane Pell. "Space Bodies." In *Star Ark: A Living, Self-Sustaining Spaceship*, edited by Rachel Armstrong, 341–382. New York: Springer, 2017.

Wilkins, John S. *Species: A History of the Idea*. Berkeley: University of California Press, 2009.

Wilson, Robert A., ed. *Species: New Interdisciplinary Essays*. Cambridge, MA: MIT Press, 1999.

Wise, Steven M. *Rattling the Cage: Toward Legal Rights for Animals*. Cambridge, MA: Perseus Books, 2000.

Woodhouse, Barbara Bennett. "From Property to Personhood: A Child-Centered Perspective on Parents' Rights." *Georgetown Journal on Fighting Poverty* 5, no. 2 (1998): 313–319.

Yamada, David C. "Therapeutic Jurisprudence and the Practice of Legal Scholarship." *University of Memphis Law Review* 41, no. 1 (2010): 121–156.

FILMS AND TELEVISION

Ex Machina. Dir. Alex Garland. 2014.

Westworld. Created by Jonathan Nolan and Lisa Joy. 2016–.

COPYRIGHT 2018 Macmillan Reference USA, a part of Gale, a Cengage Company WCN 02-200-210