Humanizing Business in the Age of Artificial Intelligence

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Abstract

In this chapter, we address the problem of humanizing business when we must interact with intelligent robots and other AI systems, rather than real people, on a daily basis. There is a strong tendency to anthropomorphize pets and other animals that carries over to smart machines, leading us to replace human relationships with something less sophisticated and subtle. As a result, we argue, humanized machines actually dehumanize the workplace. We take an anthropological approach to this phenomenon that teaches three important lessons. One is that Western cultures have a particularly strong tendency to anthropomorphize machines, due to what Max Weber called the disenchantment of nature. Another is that humans have long interacted with intelligent nonhuman beings, such as domesticated work animals, without anthropomorphizing them. Finally, we can take a cue from these interactions to create analogous relationships with robots by neither humanizing nor objectifying them, but by relating to them in a manner that suits their capabilities. In particular, we can avoid anthropomorphism by involving workers in the training of AI systems, much as our ancestors trained domesticated animals, and by introducing ritual activities involving robots that clarify their ethical status and guide our interaction with them.

Introduction

A humanized business views customers and employees as more than a means to productivity and profit. It cares about customers for their own sake and allows workers to express their full humanity while creating economic value. The age of artificial intelligence, however, is adding new complications to the challenge of achieving humanization. Intelligent non-human agents are replacing fellow workers, and sophisticated chatbots are taking over customer relations. This is more than automation. It is an expectation that workers and customers will increasingly collaborate and converse with smart machines rather than real people. What will this do to our humanity? Will it only add to the dehumanizing tendencies of a workplace dedicated to greater profitability and shareholder value?

Ironically, a primary concern expressed in both popular and scholarly media is that workers and customers will *humanize the robots* (Lin 2016, Kwon et al. 2016). To meet their need for social relationships, they will anthropomorphize the machines. They will endow their robot companions with intellectual sophistication, ethical autonomy, or emotional depth that the underlying algorithms cannot deliver. Because machines are inevitably deficient in human subtlety and unpredictability, those who habitually interact with them may become similarly deficient. Their faculty for interpersonal relations, and ability to see themselves as others see them, may atrophy. The workplace may become less humanized because workers are a little less human themselves. Nicholas Christakis (2019) writes,

> As AI permeates our lives, we must confront the possibility that it will stunt our emotions and inhibit deep human connections, leaving our relationships with one another less reciprocal, or shallower, or more narcissistic.

We therefore advance the thesis that humanized machines dehumanize the workplace, especially when the machines are endowed with gratuitous humanlike traits that are inessential to their core function. This is not only due to the subhuman capabilities of even very smart machines, but to our strong tendency to anthropomorphize inanimate objects and nonhuman animals.

We suggest relating to intelligent machines by neither humanizing nor objectifying them, but by interacting with them in a way that suits their particular capabilities. We base this on an anthropological perspective. Traditional societies have domesticated work animals for centuries, a process that generated unique relationships between humans and animals. Likewise, humans can, and likely will, create similar relationships with robots, particularly if we avoid a Western tendency to anthropomorphize that is rooted in a Weberian disenchantment of nature. The future of business with robots can be a new kind of ranch life. We then move to the central role of ritual in human society and its implications for the ethical status of nonhuman beings. Just as humans have a *prima facie* moral duty to treat work animals in a reasonably decent manner, tamed robots will likely have a similar status. However, as work animals' moral status does not measure up to that of humans, the moral status of robots, if any, should not be equated to that of humans. By introducing ritual activities involving robots, we can clarify their ethical status and provide guidance as to how their human companions should relate to them.

Humanizing Machines

Examples abound of our tendency to humanize robots and AI systems. One of the most striking, and most frequently cited in popular media, is the honor bestowed on Boomer the battlefield robot (Carpenter 2016, Garber 2013). Boomer was deployed in Iraq to seek out and disarm explosives, saving life and limb. When Boomer met its destruction on the battlefield, its grateful soldier companions arranged an elaborate funeral, including a 21-gun salute and posthumous awarding of a Purple Heart and Bronze Star—even though Boomer was a relatively unsophisticated robot that did not interact with the soldiers in any humanlike fashion.

Such relationships may be more likely to form in the context of stress and danger in a war zone, but similar behavior can be found in everyday workplaces. Workers at the Canadian Broadcasting Corporation threw a retirement party for five mail robots that had been roaming the hallways for 25 years (Gorvett 2018). The festivities included cake, balloons, a farewell video, and a good-bye card containing affectionate comments from employees. Workers can also form attachments with "cobots," which are collaborative robots designed to work alongside humans in a shared space. At least one study claims that an emotional attachment with one's cobot leads to greater productivity (You and Robert 2018).

A particularly poignant type of emotional attachment has been reported in nursing homes and other healthcare facilities. The therapeutic robot Paro, developed by the Japanese firm AIST to look like a baby seal, has been used in nursing homes since 2003 (Vitelli 2018). In one facility, "a number of residents expressed affection for the robot,

stating, 'I love you Paro,' stroking its back, kissing the robot, and generally speaking to it as one would a pet" (Taggart et al. 2005). A more recently developed humanoid robot, Zora, can speak to patients. At a nursing home in France, where residents have dementia and other conditions that require round-the-clock care, "many patients developed an emotional attachment [to Zora], treating it like a baby, holding and cooing, giving it kisses on the head" (Satariano et al. 2018).

These robots are fairly rudimentary, and Zora's words actually originate from a human operator who types them into a console elsewhere in the building. Yet more sophisticated devices that converse with humans, sense emotional states, and anticipate human behaviors are under development (Görür et al. 2017). Early versions of such cobots are already on the market and, at the time of this writing, include IBM's Soul Machines and Qihan Technology's Sanbots. Soul Machines are "digital humans" with the "ability to sense, learn and adapt" (Soul Machines 2019). They are marketed for both customer care and workplace functions, the latter including personal and wellness coaching, onboarding, and various types of employee training. Sanbots are humanoid robots equipped with voice and facial recognition, video chat, speech recognition in 26 languages, and other AI capabilities powered by IBM Watson (Sanbot 2019).

Workers can also find robotic relationships after hours, if so inclined. A variety of robotic pets are on the market, ranging from Sony's Albo to Zoetic's Kiki. Hard-working Japanese citizens can head home to cuddly "Lovots" whose "only job is to roam around the house, beg you for hugs and generally act as an adorable pet that helps you unwind after a long day" (Alpeyev 2018). Even robotic vacuum cleaners ("robovacs") provide companionship. According to a spokesperson for iRobot, maker of a robovac named

Roomba, "People get attached to them and think of them as part of their family. It's almost a pet. It makes them feel like they're not alone" (Kahney 2003). Companionship is available from androids as well. The multilingual robot Pepper, introduced in 2015 by the Japanese firm Softbank, resides in thousands of Japanese homes and is attracting attention in Europe as well. It can serve as a surrogate grandchild in a country where one's children tend to marry late or not at all (Cornish 2018). Pepper can reportedly detect emotions by analyzing facial expressions and voice tones. The robot takes on workplace roles as well, including office receptionist, restaurant server, and customer guide or assistant.

That brings us to the customer's experience. If customers currently find it hard to reach a human being at a company, they will only see it become harder as AI-powered chatbots take over customer relations. Chatbots have become so sophisticated that California recently passed a law requiring that chatbots identify themselves as nonhuman (Kunthara 2018). Yet customers may soon have their revenge, as they increasingly insulate themselves with their own personal chatbots (Thibodeaux 2018).

An Anthropological Perspective

Anthropologists remind us that there is nothing new about collaboration between humans and nonhuman intelligent agents (Gladden 2019). Intelligent beings of various kinds have long played an integral role in traditional societies, ranging from hunting dogs and beasts of burden to spirits and departed ancestors. It was only in the last two centuries or so that machines replaced beasts, and belief in spiritual forces faded, and even then only in certain parts of the world. From this perspective, the age of AI only returns us to the

status quo. We should therefore have some cultural experience with relating to nonhuman intelligent beings.

Yet it appears that we have forgotten the art. Traditional peoples understand that various kinds of relationship with animals and other beings are possible, depending on their capabilities. By contrast, industrial and postindustrial peoples, particularly in Western cultures, tend to see these relationships as either/or, as a choice between humanizing or objectifying.

The phenomenon of pets illustrates this tendency. The modern conception of a pet seems to have originated in 19th century England, perhaps as an outgrowth of the Industrial Revolution and the rise of a middle class. A pet in this sense is an animal kept around the house that one scolds, praises, loves, and shares intimacies with, almost as though it were a human child. Pets serve as surrogate children in many households. The death or illness of a pet occasions intense grief or emotional distress. The owner may go to great expense to obtain a cure or arrange a proper burial, as pet hospitals and cemeteries abound. Most other animals, in the meantime, are objectified. Persons who recoil at the idea of eating roast cat or dog for dinner give nary a thought to eating beef or pork, despite the fact that pigs are more intelligent than dogs. The same perspective explains why dog regularly appears on restaurant menus in some Asian countries where canines are not kept as pets.

Max Weber's (1919) concept of the disenchantment of nature may shed some light on why Westerners—particularly those with cultural roots in Britain and certain other European countries—tend to be the most enthusiastic pet owners and are perhaps prone to developing a particular type of relationship with robots. Most traditional peoples have

seen nature as inhabited by spirits, as "enchanted," whence their efforts to control nature by invoking and appeasing those spirits. Western civilization, on the other hand, tends to see nature as a mechanism that can be manipulated by technology, with consciousness appearing as an emergent phenomenon in humans and perhaps a few other beings. This conception may derive from the Abrahamic religions, which recognize a single transcendent godhead rather than spirits that are immanent in nature, thus giving humans permission to control natural phenomena by their own devices. The possibility of technology is reinforced by the rationalistic Greek heritage, which gave rise to the sciences and provides the intellectual wherewithal to understand phenomena well enough to control them. This is not to say that other civilizations lack technology, as many inventions key to European development, such as gunpowder, the compass, and the printing press, were pioneered in China. Yet it led Western civilization to rely more heavily on the manipulation of nature as a coping strategy.

If nature is disenchanted, then human beings are lonely outposts of consciousness in an unfeeling and perhaps meaningless universe of photons, quarks, and force fields. Historically, disenchantment (as well as individualism) led to the romantic movement and a search for the sublime in nature, a sentiment that persists in the form of wilderness values and environmentalism. More germane to our topic is the almost desperate search for companionship in a lonely universe. Aside from the anthropomorphism of pets already discussed, we see an intense interest in wildlife films and ecotourism, as well as perennial scientific attempts (so far unsuccessful) to show that we humans are not alone, perhaps by demonstrating that chimpanzees or dolphins are intelligent enough to use language creatively, or by discovering extraterrestrial intelligence.

Western individualism, already briefly mentioned as a factor in the romantic movement, likewise supports the technological manipulation of nature and search for companionship. An individualist culture is one in which the unit of human existence is the lone individual, and one's primary obligation is to oneself. It can be contrasted with collectivist cultures, where the unit of human existence is a collective such as the extended family or the village, and one's primary obligation is to this collective (Hofstede 2010, Hooker 2003). Young people in individualist cultures are generally expected to declare independence of the family and strike out on their own, while those in collectivist cultures maintain organic ties with the family or village throughout life and can scarcely conceive of existence without them. While inhabitants of a collectivist society rely on family support for a sense of security, individualists often have weak family ties and must rely on the assumption that a technical fix will be available when misfortune strikes. Loneliness is almost impossible by definition in a properly functioning collectivist society, while it is a constant risk in individualist societies, and people may reach out for companionship wherever they can find it. Based on decades of surveys and other empirical investigations, the anthropological literature finds the most thoroughly individualistic societies in northern Europe (particularly the United Kingdom) and its cultural offspring (particularly Australia and the United States) (Hofstede 1983, House et al. 2004). One might see this as a result of industrialization in these countries, but one might also see their industrialization as a result of a pre-existing individualism and disenchantment of nature.

One might object that people have long formed attachments to nonhuman animals worldwide, not just in the West. Yet it is typically not a pet-like attachment. A traditional practice in China, for example, was to keep crickets in a small cage to provide "company,"

but there was no relationship as with a pet. One of the most storied and remarkable cases of animal attachment in a non-Western culture is the life-long relationship between a mahout and his elephant, yet even this is not what Westerners often romanticize it to be. A mahout may reveal that he talks to his animal and say that the elephant "loves" him. Yet he will admit in the same breath that the elephant would escape into the woods and abandon its master forever if allowed to do so (Hart 2005). There have been occasions when elephants have been honored with a funeral, but these were not elephants with which mahouts had a particularly affectionate relationship. Rather, they were elephants that were seen as particularly noble due to their size and power. In fact, mahouts may treat elephants in a seemingly cruel manner that would never be appropriate for a pet, for example by prodding the animal with sharp instruments as part of the training process. The treatment is particularly severe during a male elephant's *musth*, when the animal becomes uncontrollable and may attack or kill humans around him, including the mahout.

Lessons for AI

The mahout and his elephant offer a clue to why pet-like relationships were unusual even in the West until industrialization, and perhaps how we can avoid inappropriate relationships in the age of AI. The mahout is, after all, a trainer, and the elephant is a work animal. The experience of training an animal makes it hard to anthropomorphize, because it is so radically different from training a human child. Children learn language and other sophisticated behaviors almost effortlessly (toilet training excepted!), while the brute stupidity of an animal becomes obvious as one tries to condition simple behaviors with reward and punishment. Domesticated animals nearly always had a practical function

before industrialization, and they were therefore typically trained to do something. The advent of machines obviated the necessity of training animals, and it became easier to anthropomorphize them.

This leads us to two suggestions for promoting appropriate relationships with robots, particularly among Westerners. One is to involve workers in the training of robots. As with animals, this can quickly reveal their limitations. While there seems to be a popular perception that multilayer neural networks perform some kind of magic, they are nothing more than frameworks for parameter estimation, similar to that done in statistical regression, and moreover, they overfit to the data. As a result, the accuracy of deep learning can be remarkably fragile when one moves even slightly beyond the training set. Changing a few pixels in an image can cause a neural network to misclassify a school bus as an ostrich (Szegedy 2013). Workers may find it even harder to humanize such a system than an animal in training.

A second and more general suggestion is that we should recognize that robots are, in essence, work animals. They should be built for a particular task, not to provide emotionally sensitive companionship to human workers. Chatbots that interact with customers should be designed as intelligent devices for product-related information exchange, without pretending to be human representatives. It should be clear to all concerned that these AI systems are nothing more than what they are intended to be. They should not be endowed with gratuitous humanlike traits, which may create media buzz in the short term but quickly become irrelevant and tiresome. Restaurants that employed the robot Pepper to wait tables found that the novelty of its humanlike traits quickly wore off, and its limited skill at its core task eventually required that it be removed from the job. A

robot that waits tables should be designed well for this particular purpose, and customers should treat it as nothing more than a smart machine that takes orders and answers questions about ingredients and cooking methods. Giving it a humanoid appearance is silly and a needless nod to old science fiction movies.

This is not to say that robots cannot or should not embody certain skills at levels approaching human proficiency, although this can require a good deal of discipline if humans are to relate to them appropriately. A robotic language instructor can be fully fluent in interpreting error-prone speakers and correcting mistakes when discussing a limited and predetermined topic. The system could be as effective as a human tutor, or more so, but the student must regard it as nothing more than a tutor, and in particular one that has no inclination or ability to form a relationship. A robotic psychologist could perhaps someday administer cognitive therapy as well as a human therapist, but like a human professional, it must remain emotionally detached and deflect any attempts to form a relationship, and the patient must respect this limited role. Robotic managers could perhaps someday be built with the ability to make decisions and rationally justify them, perhaps to the point of qualifying as an autonomous agent that has certain rights and obligations. This is a particularly challenging case for two reasons. Human coworkers must avoid any assumption that the robot possesses emotions, desires, or other mental states that normally accompany rights and duties in humans. At the same time, they must fully recognize that a machine with no feelings can be a genuine moral agent with rights and duties no less binding than for humans.

Companion robots present the most difficult challenge. The more humanlike they become, the greater the risk that they will exacerbate the individualistic tendency to

anthropomorphize. Empathetic robots in nursing homes, or even sex robots, may be suitable for carefully circumscribed therapeutic purposes, but any invitation to treat the machine as a companion should be avoided to the extent possible. When companionship is needed, other options can be sought. Animal therapy, already widely employed for the elderly and terminally ill, at least has the advantage that it does not add to humanizing tendencies that already exist. Yet no animal possesses the ability for interpretation, assessment, and pushback that are hallmarks of human relationships. This is, after all, one of the attractions of pets; they don't talk back as children do, or judge one's actions and motives as adults do. Of course, no animal (or machine) is capable of true empathy with the human predicament. There is no substitute in sight for human companionship, whether with family members or others. While family obligation may be less intensely felt in an individualistic society, there is at the same time a strong belief both in volunteer work (which follows from an emphasis on individual responsibility) and organized, systemic solutions to social problems (a form of technical fix). By leveraging and combining these two cultural traits, it is possible to design programs that solicit volunteers to provide human companionship to those who lack it. Many such programs already exist, operated by Elder Helpers, Senior Corps, Visiting Angels, Companions for Children, and countless other organizations. As for human companionship on the job, it is already declining due to social media and other factors that are unrelated to smart robots (Pfeffer 2006, Riordan and Griffith 1995). The trend can be reversed by addressing the causes and designing a workplace that allows human friendships to form (Dutton 2003).

The analysis presented so far may seem to overlook the glaring counterexample presented by Japan, a non-Western collectivist society. Japan pioneered and remains the

world's leader in relationships with robotic companions, and of course there are the famous cases of men "marrying" a video game avatar and a hologram (Lah 2009, Japan Times 2018). These are responses to a much-discussed problem of loneliness in Japan, most dramatically manifested by the *hikkikomori* phenomenon, in which people become hermits and avoid all social contact and employment for months or years at a time (Kato et al. 2018). Multiple causes have been identified, but one might see loneliness as fundamentally the result of a strongly collectivist society losing the basis for its collectivism due to rapid industrialization and economic restructuring. The West, whose underlying individualism already provided tools to deal with industrialization, had centuries to adjust, while collectivist Japan has had only a few decades. In addition, Japan is less completely family-oriented than most collectivist cultures, as it emphasizes loyalty to larger groups beyond the family, such as the company, the school, and even the nation. This allowed the extended family to give way more readily to the nuclear family as in the West, even while the changing economy was undermining company loyalty, leaving the nuclear family with a greater support burden than it could bear. Whatever the precise diagnosis, Japan is a truly unique society that may demand an approach different from that required in Western settings.

Ethical Status of Robots

If it is reasonable to recognize robots as if they are work animals, that recognition entails several normative lessons. First, as a legal matter, it is not a far-fetched idea to use court cases about domesticated animals as a benchmark to clarify liability issues about robots (Schaerer, Kelly and Nicolescu 2009). However, this does not give us a useful answer for

how we should treat robots in everyday workplaces where there is no liability issue. We need to discuss the moral status of robots, if any, analogously to that of work animals. In what follows, we briefly discuss the status of robots as work animals with two standard accounts: sentience and sapience, explaining why the major standards have limitations. Then, we introduce a third account that we find promising.

Sentience is typically defined as the capacity to feel pain. Obviously, work animals have this capacity. One should not hurt cows unless there is a considerable ethical reason to do so. Utilitarian philosophers such as Peter Singer use the standard of sentience to defend animal rights and liberation (1995). If robots are sentient like domesticated cows, it follows from the utilitarian/sentience view, which demands us to maximize happiness and minimize pain that we should treat robots in ways that minimize their pain. Are robots sentient? At this point, it is very unlikely that robots "feel" pain. One might suggest that although robots are not sentient now, they could be in the future. There is much discussion about whether artificial neural nets are analogous to human neurons. But if we take the rationale behind sentience seriously—namely, that we should minimize the total net pain—why should we develop robots that can feel pain? There does not seem to be a good reason. Thus, realistically and practically, sentience is not really a useful view by which to treat robots. Hence, sentience is not an apt standard that can be used to defend the analogy between robots and work animals.

Sapience is a broadly Kantian capacity associated with high intelligence, self-awareness and reasons-responsiveness. Whether some non-human animals, like chimpanzees, have sapience is a controversial issue. We do not answer that question here. Primates are not typically used as work animals. Most work animals are not sapient or

sapient in a low level. Robots can have domain-specific higher intelligence, but that does not mean that they have sapience. Machine learning-based robots, for instance, are a bunch of correlations. As John Searle's (1984) "Chinese room argument" shows, there is no such thing as self-awareness in a computer, which just simulates reasoning in its seeming understanding. It is not plausible to say that machine-learning algorithms think. They seem to think, but the seeming thought is not a real thought. Because many machine-learning models are non-linear algorithms, they are not reasons-responsive. To be reasons-responsive, a decision must be based on reasons that a machine chooses. However, that is not how deep learning, for instance, works; we still do not know exactly how deep learning works and why its predictive power is often good. Logic programming-based robots are better in terms of reasons-responsiveness. How they make a decision is transparent to them and humans in a linear manner. Even it is possible to program a logic-based machine to act in accordance with some moral principles (for instance, Kant's categorical imperative on universalization) (Hooker and Kim 2018). Such machines, perhaps, can have some agency, in terms of having some minimal ability to make an ethical decision, but are not agents that deserve full moral status, which requires machines to have some real phenomenal kind of self-awareness and personal autonomy (Hooker and Kim 2019).

Setting aside self-awareness, some advanced robots can have domain-specific high intelligence, even higher than humans; otherwise humans would not use them as recommender systems. Perhaps work animals, too, have some domain-specific higher intelligence in the sense that they can effectively accomplish what they are trained to do, as algorithms trained with data can accomplish what they are trained to do. In this sense, there's some analogy between robots and work animals. So, in terms of sapience, there is

some analogy and dis-analogy between robots and work animals. Both work animals and robots share the intelligence aspect of sapience, but this aspect is not useful to give us lessons on how to treat robots. We should treat humans with respect regardless of whether they are of super intelligence or moderate intelligence. We do not owe super-respect to super computers. Intelligence may be a futile standard for our context.

A third approach, which we find is fertile for our context, is a ritual approach. To understand the view, it is useful to look at the background of how this view emerged. In the middle of the debate about animal rights in 1970s, mostly led by Peter Singer, sentience was the dominant theoretical foundation to discuss the justifiability of animal liberation. Against that movement, Cora Diamond (1978) pointed out that sentience is not what we really care about when it comes to animals, with a striking question: "Why do we not eat our dead?" The deceased do not have pain or pleasure, so any hedonistic version of consequentialism cannot properly value our activities in the respect for our dead. The deceased would never be able to have interests, so cannot have rights to anything, if having an interest to something is presupposed to have a right to it. However, we express respect toward to the deceased in funeral services by observing many different, complex or small, rituals, depending upon different cultures. Are we irrational? Assuming that we are not, Diamond pointed out that interests, rights, or utilities are not directly crucial to status, but that there is another more fundamental dimension of moral standing. Diamond takes our attention to countless small rituals in funerals, dinners, and other special or common occasions. Think about the ways we pay tribute to fallen American soldiers in Iraq and how their bodies are moved from Iraq to the US to be ritualized with the Stars and the Stripes graciously wrapping coffins. Diamond's insight is that those rituals, rules of manners, which

could seem frivolous, significantly constitute the concept and the meaning of status: who we are, who you are, how we are to be treated, and how we should treat "others" prior to rights and utilities (see also, Buss 1999).

One phenomenon Diamond observed about animals is that we refuse to eat our pets, regardless of whether they have a right to life, when we interact with them through social rituals (e.g., offering a funeral). By engaging in social rituals with our pets, we treat animals as if they had some kind of status. Return to all the stories we discussed in the beginning of this chapter about how humans interact with robots. One thread that weaves them together is ritual. When a robot dies, people offer a funeral, for example. So, by having some rituals with robots, humans invite robots to be assimilated with them in a unique way. The question is now: can robots observe rituals together with humans in a workplace? Ritual is primarily a behavioral activity, so robots can be trained to behaviorally observe ritual, without sentience or sapience. During rituals, humans can endow some status to them.

Evolutionary studies show that "human beings, and only human beings are biologically adapted for participating in collaborative activities that involve shared goals and socially coordinated action plans (joint intentions)" (Tomasello, et al. 2005: 676), which are typically structured by "shared symbolic artifacts such as linguistic symbols and social institutions" (675). Robots do not likely have joint intentions, because they do not likely have any intention in a phenomenal level. However, they can behave as if they have joint intentions, by sharing symbolic rituals with humans. Pets do not likely have joint intentions with humans, but by being a participant in a ritual observed by humans, they become endowed some unique status. If humans tame an animal to be a pet, they give him a name and allow him to sit next to them at a dinner table. By doing so, the pet has some kind

of status and standing. If humans tame an animal to be a purely work animal, not to be a pet at all, they do not usually give it a name but a number, and do not allow it to come inside a house. Of course, there is a spectrum between these two. Work animals are often given names even though they are not pets. The tamed animal in the middle has some mid-range status.

What does this imply for business with robots? Companies invest valuable assets in rituals such as annual shareholder meeting, Chair/CEO inauguration ceremonies or welcoming ceremonies for new employees. Trice and Beyer (1984, 1991) conceptualized organizational rituals as rites of passage, rites of degradation, rites of enhancement, rites of renewal, rites of conflict reduction, and rites of integration. It is likely that an introduction of a robot to a workplace involves some ritual and other various types of rituals for other contexts. Businesses should carefully design and arrange corporate rituals (both special events and everyday rites) with robots, because they can make a significant impact on how people believe they should treat robots. In a circumstance in which treating a robot as a pet is not a reasonable option, giving it a pet-like name, for instance, should be discouraged.

Concluding remarks

In this chapter, we have discussed how to humanize business in the age of artificial intelligence. We maintained that neither anthropomorphizing robots, nor refusing to use robots, is a good answer. A reasonable choice is to think about how to treat robots through the analogy between robots and work animals. In fact, it is more than an analogy. Robots and work animals are both non-human entities tamed to work for humans. Using robots is not necessarily dehumanizing. Humans have lived with work animals for centuries. Taming

animals is not the same thing as anthropomorphizing them. In a healthy ranch life, work animals have their own unique status, qualitatively distinct from that of pets, who we sometimes treat as if they are human family members. We do not deny the potential for robots to reasonably play the role of pets in some circumstances. In business settings, however, treating robots as if we have tamed the wild is a reasonable choice. This does not mean that we are allowed to treat robots brutally. Like humans have a *prima facie* moral duty to treat work animals in a reasonably decent manner, tamed robots will likely have a similar status. As work animals' status does not measure up to that of humans, the moral status of robots, if any, should not be equated to that of humans. Humans can, and will likely, create analogous relationships with robots in business, through the processes of taming the wild of artificial intelligence.

One might object that an analogy between smart machines and work animals is inadequate, because we can expect machines to become much more intelligent than animals. Machines can or will soon be able to compose music, converse with humans, anticipate and manipulate our desires, and so forth. Yet we have argued that the problem of anthropomorphism is posed not by machine intelligence per se, but by gratuitous humanlike characteristics. An octopus is remarkably intelligent but inspires no one to anthropomorphize it in the slightest. While Max Weber might well have understood our drive to humanize robots in our quest for companionship, we can make machines as intelligent as we want, with respect to the task at hand, without making them any more humanlike than work animals. In any case, by drawing an analogy with work animals, we do not suggest that we should interact with machines in the same specific ways as with animals, using the same ritual behaviors. We only suggest that we take a cue from these

interactions by developing relationships and rituals that are appropriate to the capabilities of the machine.

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