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A study of desires and emotions in *Do Androids Dream of Electric Sheep?*

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Abstract
The dream in the title of Philip K. Dick's masterpiece *Do Androids Dream of Electric Sheep?* refers to the ability to have "desires" and "emotions." The text focuses closely on "desires" and "emotions"—a theme that can be divided into the humans' lack of emotion, the evolution of the androids' desire and its effect on human emotion. Most of the existing studies center on the humans' lack of emotion from the traditional anthropocentric perspective, but less attention has been paid to the androids' desires and emotions. This article uses the Cyborg Theory, put forward by the posthumanist scholar Donna Haraway, to explore the processes through which the androids learn to desire and emote as well as the retroactive effect of androids with emotions and desires upon humans on the premise that the boundaries between human and animal, organism and machine, and physical and non-physical are broken. It is found that mirroring the technological creation—with androids who possess desires and emotions—helps to enhance human empathy, increases human vigilance against technological control, and encourages humanity to proactively seek solutions to the conflicts between man and technology. In a posthuman era, we should also confront our sorrows and joys and face up to our bittersweet life in contrast to androids' valuing of desires and emotions.

Keywords Science fiction · Philip K. Dick · *Do Androids Dream of Electric Sheep?* · Cyborg · Emotion

Introduction

Philip Kindred Dick has been called "the Shakespeare of science fiction" (Freedman, 1988, p. 122) and his masterpiece, *Do Androids Dream of Electric Sheep?* (hereinafter referred to as "*Do Androids?*"), is one of the first works of science

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fiction to be included in the Library of America. In the novel, an internecine nuclear war leads to the near destruction of the human race. In order to avoid a repetition of the tragedy, humanity has regained its vital position after the war. Consequently, two moral codes are implemented throughout: one is to emphasize the care of animals at all costs, and the other is not to kill a human being for any reason (Dick, 2012, pp. 9, 126–127). However, in the context of the Cold War era in which Dick's book was written, how could he believe in the conversion of humans? Animal care becomes yet another form of exclusionary hierarchy as innocent people ("specials," referring to people whose intelligence has been degraded by the effects of radioactive fallout after nuclear war) are abandoned by the chaotic world. As Jennifer Clement puts it, "humanity uses animals and andys to define its own position—to prove they are someone not something. However, even in making empathy toward natural life central to being human, still they have not achieved utopia as they simply turn their cruelty and disgust toward the altered and the artificial—the specials and the andys" (Clements, 2015, p. 185). It is this irony that prompts Dick's androids to become a mirror for humans to confront themselves and to consider how they should achieve a meaningful existence. Similarly, using irony as a device, the posthumanist theorist Donna Haraway places the cyborg at the center, explaining in detail how the emergence of this figure signifies the breakdown of three key boundaries (Haraway, 1991, pp. 151–153). According to Haraway, "A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (Haraway, 1991, p. 149). The android in *Do Androids?* is a type of cyborg. This essay will use Donna Haraway's Cyborg Theory to explore the androids' processes and ways of acquiring desire and emotion, and the retroactive effect of "androids with emotion and desire" on humans, in the context of the breakdown of the boundaries between man and animal, organism and machine, and physical and non-physical.

Three boundary breakdowns

"Theology and humanism hold that we are distinct from animals, machines and everything else in nature, but science has eroded this distinction through technologies like synthetic replication, artificial intelligence (hereafter referred to as AI), and biotechnical integration" (Haney, 2006, p. 30). In what follows, Haraway's deconstruction of the three boundaries will be identified as that which is at stake in the androids' display of human capacities.

Human and animal

Marvin Minsky, "the father of AI," asks, with a touch of irony, in *The emotion machine* "what distinguishes us from other animals? One important difference is that no other animals ask questions like that!" (Minsky, 2006, p. 280). In contrast to the traditional emphasis on the differences between humans and animals, posthumanists emphasize that humans and animals actually have commonalities: "In a

way, every living thing has something animal in it, at least if we pay closer attention to the etymology, which shows that the word 'animal' derives from *anima*, a Latin term for the soul and the animating principle of life" (Braidotti & Hlavajova, 2018, p. 35). *Do Androids?* presents a future in which one animal species after another has disappeared after a nuclear war, and animals are highly prized as a cherished and vanishing form of life. In our view, the breaking down of the boundaries between humans and animals is manifested in two main places in the novel: the reversal of the identity of the two and the fusion between them.

First, the novel poses the reversal of traditional identities between humans and animals. Deckard, the protagonist, is a failed shepherd, while the sheep/goat becomes his guardian. In *Do Androids?*, the most eye-catching animal is the sheep/goat, referring to the real sheep, the cloned electronic sheep, and the real goat. In the very beginning of the text, Dick quotes Yeats's poem "The Song of the Happy Shepherd." It is easy to see that the shepherd here refers to Deckard, the protagonist in the novel. Deckard should be a guardian as a real shepherd. However, he is not doing his duty. The first real sheep, a gift from his father-in-law, has died of tetanus because he "didn't get all the wire off the bale," and then his sheep "got a scratch and in that way contracted tetanus" (Dick, 2012, p. 8). The second sheep is a replica of the former but is never mentioned again with the arrival of the third animal, the real goat. Then later, instead of setting a clear boundary between the android and his real goat, he attempts to take advantage of the female android (referring to Rachael) as she knows androids' psychology and may help him hunt them down (Dick, 2012, p. 148), thus making the line between android and the goat even more blurred.[1] While the Deckards stay in the flat, the real goat stays outside on the roof, a distance that leads to its safety not being guaranteed and eventually being killed. While humans fail in their guardianship, animals continue accompanying them. The first real sheep and the second electronic sheep are beneficial in maintaining their dignity as human beings, while the third real goat helps to some extent to cure the wife's depression and indirectly saves their marriage. In other words, the animals become instead the companions and guardians of the natural man, while human beings are reduced to exploiters, with the two identities reversed.

Second, when humans commodify animals, humans themselves are commodified. As George Orwell puts it, "all animals are equal, but some animals are more equal than others" (Orwell, 1983, p. 83). It reminds us of the classification of humans in Dick's novel, and the inequality can be seen from the different prices for different animals, as well as the different treatments of real and electronic animals. When we divide animals into different classes, humans are also classified. For instance, while Deckard is about to buy a real animal, the salesman persuades him to get a goat by saying, "The thing about rabbits, sir, is that everybody has one. I'd like to see you step up to the goat-class where I feel you belong. Frankly you look more like a goat man to me" (Dick, 2012, pp. 132–133). Evidently, to have a real animal is to own "prestige" (Dick, 2012, p. 134), and the more expensive the animal you own, the

[1] Androids' psychology: "The Nexus-6s would be wary at being approached by a human. But if another Nexus-6 made the contact, [other Nexus-6s may take their guard off]" (Dick 2012, p. 72).

higher your social status is. While humans have commercialized animals greatly, Rosi Braidotti claims that "the counterpart of this global commodification of living organisms is that animals have become partly humanized themselves" (Braidotti, 2013, p. 8). Similarly, when animals are "humanized," humans are also "animalized." Consequently, humans and animals merge with each other.

In Dick's imaginary world, the relationship between human and animal is reversed, and they are in a state of mutual merging. He shows the unease of his own survival in post-war America. The elder Wilbur Mercer in *Do Androids?*, whose name alludes to "mercy," shares the suffering of mankind like Christ; Mercerism always stresses the importance of caring for animals, for otherwise you are not human. Interestingly, as a man who is not so sure about the existence of God (Dick, 1996, p. 29), how can Dick be sure of the ensuing dogmatic rule of "cherish[ing] the animals"? Accompanied by doubt and unease, the line between human and animal in his imaginary world becomes increasingly blurred.

Animal-human (organism) and machine

In *Do Androids?*, humans, represented by Deckard, Iran and Resch, show themselves as unfeeling, dull and indifferent, while androids, by contrast, reveal their vitality, liveliness and enthusiasm. In other words, "our machines are disturbingly lively, and we ourselves frighteningly inert" (Haraway, 1991, p. 152). The borderline between a should-be-vibrant organism and a dead machine becomes indistinct.

Some scholars argue that "one-dimensional robots are detached from the practical ethical relationships and lack the accumulated experience of social survival, and that robots' emotions are merely states of expression in the face of different situations, rather than having their own emotional capacities" (Fu, 2019, p. 34).[2] In Dick's case, on the other hand, the novel's artificial memory places the androids in traditional everyday ethical relationships, providing the conditions for their emotional precipitation; the androids' ability to mimic prompts their active engagement in social labor, providing space for their emotional development. More precisely, some androids are unaware of the false memories they have been implanted with and play a part in human ethical relationship (Dick, 2012, p. 47). Rachael Rosen, for example, has the memories of Rosen's niece. Alternatively, while they live in the alien colony, the Batys accumulate social experience through running a pharmacy. One could propose deploying a Confucianist understanding of subjectivity and compassion to elucidate the similarities and differences between humans and robots. However, it is not rigorous enough to deny the existence of empathy simply because robots rely on data and logical operations to generate emotion. After all, it

[2] In "Jiqiren huiyou 'tonglixin' ma?—Jiyu Rujia qinggan Lunlixue de shijiao," Fu, a scholar in the field of ethics, argues that "revisiting the Confucian political thinking of the 'human-animal debate,' upholding the dignity of humanity and promoting the value of human ethics, is a civilizational reference to the enduring challenge of the 'human-robot debate'." She also elaborates that Mencius believed that what makes man different from animals is that he has the "four virtues" and a compassionate heart (Fu 2019, p. 34). In this way, Fu's essay uses the Confucian concept of "compassion" to transition from the "human-animal debate" to the "human-robot debate."

is inappropriate to dismiss the emotions of androids as nonexistent before we have understood the origin of human emotions and confirmed the existence of human emotional mechanisms.

The blurring of the line between organism and machine in *Do Androids?* is mainly reflected in the "scientifically unfounded" Empathy Test. The Voigt-Kampff Empathy Test (hereinafter referred to as the V-K Empathy Test) is a test designed to tell androids from human beings based on the "fact" that androids are believed to have no empathy or love for animals. However, it is non-scientific for two reasons. Firstly, it is not a test of "emotions" per se, but rather of other indirect indicators. In this test, the test taker is judged on the criteria of "capillary dilation in the facial area" and "fluctuations of tension within the eye muscles" (Dick, 2012, p. 37). In real life, there are no tests directly demonstrating empathy and emotions as such. For one thing, findings on emotion have been obtained through indirect tests, whether it be cognitive bias, skin conductance levels or changes in heart rate, which are not "emotions," as normally conceived (Ortony & Turner, 1990, p. 319). For another, "empathy, in particular, requires an ability to recognize and express emotions and, in humans, the ability to experience another's emotions as one's own. Such abilities are tricky to test, and no widely accepted tests exist yet" (Picard, 2000, pp. 13–14). Secondly, the range of animals that appear in the test is not comprehensive. Some may wonder about the fact that there are only the calf, deer, dog, butterfly, oyster and lobster, which are not strongly aggressive. So, where are those larger, predatory and more intimidating animals? These animals are therefore "safe" for the people of the time, having been selected by their own culture. "As nature-cultural compounds, these animals qualify as cyborgs, that is to say as creatures of mixity or vectors of posthuman relationality" (Braidotti, 2013, p. 73). Thus, animals and androids are both the consumption goods of traditional humans. When we are in need of a certain kind of product, the market can provide as much as possible for us. Consequently, the empathy mentioned in the novel turns out to be a form of consumerism; the commodification of animals. Moreover, the V-K Empathy Test apparatus in Dick's novel is a Soviet invention, and given the uneasiness and tensions at the time of the US-Soviet Cold War, the apparatus is not very trustworthy. These two non-scientific and contemporary elements of the V-K Empathy Test have led to the serious consequence that the ability to empathize cannot be used as a criterion to distinguish between humans and androids, reflecting the fracture of the border between human and android.

Physical and non-physical

When it comes to the breaking down of the boundary between the physical and the non-physical, Haraway places emphasis on the ubiquitous yet invisible nature of information. As "one of the first SF writers to explore a new virtual techno-culture" (Best & Kellner, 2003, p. 190), Dick conceives of the Empathy Box as a virtual reality device full of information. The device also represents the fracturing of the boundaries between the physical and the non-physical. In the virtual space created by the Empathy Box, people can feel each other's feelings.

Mumford explains the emergence of the Mechanical Routine (Mumford, 1934, pp. 269–273), using the alarm clock as an example, to help many readers summarize and analyze the impact of mechanical stereotypes and mechanical devices in their lives. In the twenty first century, alarm clocks have been transplanted into more advanced devices such as mobile phones, tablets and smart watches. Our lives are no longer overflowing with ear-splitting alarm bells, but with an inexorable flow of information. Information as a patterned presence even disrupts people's thinking as it appears simultaneously in our material and non-material worlds. For example, when the Deckards immerse themselves in the scene created by the Empathy Box, they could be bothered by disruptive information from the real world. The question of "reality and the virtual" (true and false) runs through many of Dick's science fiction works, and the title of his 1969 novel, *Ubik*, also alludes to this "ubiquity." The ubiquity of information has placed the modern posthuman in a digital culture that makes the distinction between physical/non-physical less important.

It is important to note that the Empathy Box exists so that people can be in fusion with each other. "Fusion," according to the text, refers to the physical as well as mental/ spiritual merging where people can share others' experiences and feelings together with Wilbur Mercer (Dick, 2012, p. 17). However, when emotions are equally encoded as messages, how precisely can the person with whom they are shared decode them? Let us introduce a term: "the affective bandwidth of a channel," which refers to "how much affective information the channel lets through" (Picard, 2000, p. 57). With the increasing boom of the digital and information age, contemporary subjects are accustomed to a virtual and mirrored existence. In Dick's time, however, cyberspace was only a prophecy yet to be realized. The Empathy Box in *Do Androids?* is an advanced virtual reality device through which participants can achieve fusion with others. In the new government's brainwashing campaign, fusion means empathy. Leaving aside for the moment the question of whether fusion means true empathy, more worryingly, how much entropy has occurred in the process of the output/input (code/decode) of emotions? In other words, what is "the affective bandwidth" of the Empathy Box? In the process of fusion, people immersed in a virtual world feel the presence of others visually and audibly, but the information they receive in other senses (such as touch) is filtered out, resulting in a reduction of emotions.

When boundaries are broken, it is also a time of integration. Humans might as well try to experience life from the perspective of androids in order to ask what life means. When Dick titled his novel *Do Androids Dream of Electric Sheep?*, was he also thinking from the other's perspective? The Chinese translator of the novel, Xu Donghua, points out that "whether one can dream or not means whether one has lofty ideals and ambitions. Androids do not want to remain enslaved and want to live a life like every man. Such a dream is in fact very similar to the dream mentioned in Martin Luther King's famous speech 'I have a dream'" (Xu, 2017, p. 260). Furthermore, their ideals do not seem to be "great" for human beings because what they seek is merely the ability to have desires and emotions. If human ideals were as "great," contentment would be a commonplace.

The learned emotions

While William Reddy, a pioneer in the study of the history of emotions, argues that emotions are largely learned (Reddy, 2004, p. xi), the British philosopher of human mind, Richard Wollheim, transfers the problem of emotion to that of desire: "that emotion rides into our lives on the back of desire is a crucial fact about emotion, as well as a crucial fact about us (Wollheim, 1999, p. 15). Even though androids are set up as not being able to have emotions, it does not mean that they do not desire them. In *Do Androids?*, androids' emotions are developed gradually together with their desires, which echoes Wollheim's discussion on the origin of human emotions. Almost every android, as the protagonist says, "has more vitality and desire to live..." (Dick, 2012, pp. 75–76). In the following, we shall elaborate on the process and the manner in which the androids' desires and emotions evolve and develop, with the emotional androids—Luba Luft, Roy Baty and Rachael Rosen as examples.

The elegant Luba

Luba Luft is a female cyborg with great personal charisma. She is designed to be an artist and she is indeed a very good opera singer. The perfect voice and good looks make her a shining star in the crowd. She puts herself in the spotlight, singing and performing *The Magic Flute* and *Don Giovanni* with passion. More importantly, Luba aspires to have a normal human life and even achieve artistic beauty in her imitations.

With a lifespan of only 4 years, most androids' first rule of living is to cherish life. While others focus on invisibility, Luba chooses to experience life in the spotlight. It seems that Luba cherishes the freedom of choice more than mere living. When Luba is discovered by two bounty hunters, she does not resist arrest, but cooperates. When the bounty hunters find her, she is immersed in an exhibition of Munch's paintings. Looking into the details, we can see her imitating Munch's *Puberty* and *The Scream*. As the girl in *Puberty* awakens from her dream to brood by her bed, the wall behind her has been imprinted with shadows that suggest danger. As Luba stares at *Puberty* on the wall, she seems to see the emotion Munch has injected into it, feeling the danger and fear. When the hero of the novel mentions the way she looks when she dies, he finds her in the same state as the person in *The Scream*. The person looks empty, covering his/her ears not knowing if he/she is hiding from the noise of the outside world or if he/she is afraid to hear himself/herself shouting. This existential anxiety, depicted in the paintings and experienced by Luba, is captured by Dick's use of the descriptive words, such as "faded," "dimmed," "cadaverous," and "decay" (Dick, 2012, p. 105). We can imagine how wonderful her earlier artistic career as a fine leading actress in the opera house was for her, but at this moment, her life is "fading/dimming/decaying," from gloriously brilliant to tragically "cadaverous."

Art is often considered the pursuit of beauty, and Proust believes that art allows us to enter a different world, a world outside of ourselves (Minsky, 1988, p. 247). However, for Luba, she is in a quagmire, struggling and crying out even in the world of art. She yearns for the beauty of art, but sees death in what she finds. The

astonishing thing is that she does not fear it, but lives for it, making her death a kind of art, embodying a tragic beauty. As Braidotti says, "the wish to die can consequently be seen as the counterpart and as another expression of the desire to live intensely" (Braidotti, 2013, p. 134). Luba's death not only gives herself the key to humanity, but also awakens the true humanity of Deckard—the true capacity for empathy. After Luba's death, he says: "I can't any more; I've had enough. She was a wonderful singer. The planet could have used her. This is insane" (Dick, 2012, p. 108). The hero's exclamation is a testament to the difference this female cyborg makes. Her elegance lies in the fact that it is more important for her to master the meaning of life through the free pursuit of art and beauty than to simply have life. In this way, the reader sees an android whose desires become stronger and whose emotions become deeper, correlating to a complex life that is irreducible to the brute fact of existence.

The contradictory Roy

The character of Roy Baty is a compelling and arguably heroic figure in the android community. He is the leader who encourages others to flee; he is the inventor who tries to "create" (if we admit that androids are able to create) "a group experience similar to that of Mercerism" (Dick, 2012, p. 145), and we can even regard him as a scientist.

However, there are contradictions in Dick's portrayal of Baty. For one thing, Dick's portrayal of the character starts with an imposing description, giving the reader the impression of an authoritative and ultra-aggressive general, but his death is unusually simple and swift, as if he suddenly becomes an insignificant pawn. Furthermore, Baty's treatment of Isidore (as a special, or a chickhead, he is a type of human who has become specially disabled due to nuclear radiation) and the spider (an animal) proves the human perception that androids should be heartless and cold-blooded machines. However, before dying, he cries out in anguish at the death of his wife. In this way, Dick reverses the characterization at the end of the novel, making him an emotional and passionate husband.

We can try to explore the roots of Dick's conflict. Firstly, in terms of Baty himself: his anguished cry is key, expressing his pain over the loss of his wife. Due to the complex nature of emotions, often the concealment of emotions can lead others to misunderstand them and mistakenly believe that they are missing, hence emotional expression is vital. In his grief, Baty loses control of his emotions. In the film *Blade Runner* (1982), which is based on the novel, Baty is further portrayed as a flesh-and-blood redeemer, bringing the protagonist back from the brink of double deaths: one death is the death of life, and the other is the death of humanity. We believe that director Ridley Scott was influenced by Dick's reversal of Baty's characterization. At the end of the film, the bounty hunter becomes the hunted and the android leader becomes the hunter; the bounty hunter becomes the rescued and the android leader is his redeemer. Secondly, in the process of writing, the development of the story can sometimes get out of the writer's control due to its overwhelming emotional substitution. As the bounty hunter has witnessed the androids' cherishing

of life, he begins to sympathize with them, and Dick's own empathy for the androids begins to grow, leading him to de-emphasize their aggressiveness and instead write more sympathetically about their "humanity."

The avenging Rachael

Rachael Rosen, another female cyborg in the novel, retains the typical physical and social traits of Dick's female characters: tall and thin, black hair, and a bit cold. However, this aloofness does not detract from the fact that she is a very emotional female android in the novel. From falling in love, to being jealous, to loving and hating, Rachael, like Medea, moves towards revenge in her grief.

From the moment she falls in love, Rachael begins an emotional tug-of-war with Deckard. In this relationship between ordinary humans, she loses herself in love. Before Deckard, Rachael has used her special status to seduce many bounty hunters. After the bounty hunters have sex with her, most of them are no longer able to go on hunting missions and so thereby she protects the android community. However, after meeting Deckard, things change. She asks him repeatedly, "is it a loss (that I cannot bear a child)?" (Dick, 2012, p. 152). She turns her head and exclaims "I'm not alive!" (Dick, 2012, p. 152). She also asks "what sort of wife do you have?" (Dick, 2012, p. 155). Deckard does not answer any one of the questions, but simply replies: "if you weren't an android [...] if I could legally marry you, I would" (Dick, 2012, p. 155). This response makes Rachael think she has completed her mission as she is programmed to do so by the Rosen Association as a way to protect the company's interests. But it is love for Deckard that makes her clarify all of this, and Deckard is furious to hear it, but lets her go anyway. Rachael knows that she has been programmed by the company to always be a vile android in Deckard's eyes, unable to be the object of his love. As she parts, she says to herself, "That goat [...] You love the goat more than me. More than you love your wife, probably. First the goat, then your wife, then last of all [...] What can you do but laugh?" (Dick, 2012, pp. 158–159). With a smile of either helplessness or sadness, and perhaps hatred for Deckard, Rachael leaves. Later, when all the escaped androids have been hunted down, Rachael reappears as an avenger and pushes Deckard's beloved goat off the roof.

Rachael's reasons for revenge are twofold: first, she is jealous of love and wants to destroy Deckard's beloved goat, which she already sees as her enemy; second, she holds a grudge regarding her loss of friendship, because Deckard not only has destroyed the group she belongs to, but also has buried the only friendship she has. Luba is her closest friend and they have been together for 2 years, which is half the life of an android and all the days Rachael has existed in the world.

In contrast to the humans who have undergone emotional degradation through high-tech devices such as the Empathy Box and Mood Organ, androids have gone to great lengths to learn from and emulate human beings. The process of acquiring emotions by imitating humans as role models is touching. It is in this way that the AI in science fiction stimulates a rethinking and revaluation of human nature. At the dawn of the twenty first century, Picard had already expressed her expectations

for AI in her book: "It is my hope that affective computers, as tools to help us, will not just be more intelligent machines, but will also be companions in our endeavors to better understand how we are made, and so enhance our own humanity" (Picard, 2000, p. xi). From science fiction to reality, the impact of AI with emotions on people is mainly in the enhancement of human empathy. For so long, real-life AI has remained in a state of artificial retardation, while humans, as creators, seem to have become increasingly impatient and apathetic. In a way, this is somewhat linked to the development of AI. Due to the limitations of our disciplinary background, we cannot determine whether it is appropriate to say that "AI should have emotions," which is a task of the times. What we can see through Dick's imaginary world is that when humans feel the desires and emotions of androids, they can be infected by them, and the validity of "emotional contagion" has been proven by the psychological community (Hatfield et al., 1994, p. 4). Furthermore, the display of emotion does not imply the presence of consciousness, as has also been demonstrated in neurology (Picard, 2000, p. 74). We may hold some extreme views about the development of AI as well as emotional intelligence, and this is something that needs to be rethought. Emotionless robots do not necessarily lead to indifference to human emotions, but they do condone this trend; conversely, "emotional" robots have the potential to stimulate human emotions.

The bridges to empathy

The concept of empathy has its philosophical and aesthetic roots. In 1873, the German philosopher Robert Vischer suggested the use of the German word "Einfühlung" (the predecessor of empathy) to express the phenomenon of people actively projecting their true feelings of the mind onto what they see; by the end of the 19th and beginning of the 20th century, the German psychologist and aesthete Theodor Lips pointed out that it was in the form of "Einfühlung" that people understood and reacted to each other, that it occurred before projection and imitation, and that as emotional imitation between people increased, so too does "Einfühlung"; in 1909, Edward Titchener coined a new English word, "empathy," to replace "Einfühlung," which he then redefined as the "process of humanizing objects, of reading or feeling ourselves into them" (qtd. in Duan & Hill, 1996, p. 261). We often contrast intelligence with emotion, and even consider emotion to be more elementary and primitive. In fact, emotion and intelligence have equal importance and are not superior or inferior. To a large extent, the flexibility of the former even proves that it deserves more attention than we typically devote to it. Only after we have been aware of this, can we step towards empathy. Secondly, the android community in *Do Androids?* is a mirror of the human society, and when we see desires and emotions at work in androids, it is also time to look at our own humanity. Finally, once the importance of emotion has been vindicated and we have found our place, it is particularly important to emphasize the characteristics of communal empathy in human beings. After grasping these three points, humans are more able to build a bridge of empathy. Meanwhile, we should note that empathy has two sides, the positive side

and the negative or dark side (Ciaramicoli & Ketcham, 2001, p. 113), and the former is emphasized here.

Emotion and intelligence

What is emotion? The academic community still does not have a fixed definition. And what is intelligence again? It is "our name for whichever of those processes we don't yet understand" (Minsky, 1988, p. 71). With this definition, intelligence seems more concrete than emotion. However, the meaning of intelligence keeps changing as we learn more about those processes.[3] Emotion and intelligence are both abstract concepts. Given that we have both, and are at the same time baffled by both, the habitual belittling of the former and elevation of the latter is unproductive. Marvin Minsky, a leading authority on AI, also repeatedly criticizes the denigration of emotion: "we censure those who fail to learn to control their emotions but merely pity those whose problem-solving capabilities are poor; we blame for 'lack of self-control,' but not for 'weakness of intelligence'" (Minsky, 1988, p. 172). We are used to polarizing the two relative sides, or even prejudicing one against the other, forgetting the benefits of integration between them. It is worth noting that while intelligence quotient is constant, the presence or absence of emotions, and the degree of emotionality, are in a state of flux, and this flux is to some extent controllable. For example, we often talk about emotion management.

In *Do Androids?*, the "special" Isidore is one such representative who puts the usefulness of emotions to good use. Due to his degenerate intelligence, he is unable to distinguish between natural/real and electronic animals, or between humans and androids. Coincidently, it is this low cognitive ability that allows him to treat the natural and the artificial alike. He takes care of those androids who seek refuge and rescues the spider when it is subjected to violence. Known as a "chickhead" (another name for "the special," referring to a person who is mentally retarded after being exposed to nuclear radiation), Isidore shows us a side of humanity that is scarce in the novel. Not only that, but his emotional richness even makes him a character of great intelligence. Throughout the novel, Isidore is the one with the most soliloquies and the one who reflects on himself most frequently. He ponders what it means to be empathetic. He knows the meaning of "no man is an island." Even though he mistakes the author John Donne as William Shakespeare, understanding the meaning of sermons is of greater significance than just knowing who the author is. Here, Dick is satirizing those who possess only encyclopedic knowledge, but not introspection. "Chickhead" is likely a corruption of "egghead," which is originally derived from the German word "der Eierkopf," a slang term for "a person who is very intelligent and is only interested in studying," but generally in a derogatory sense, emphasizing the image of an asocial nerd. In the novel, Dick,

[3] In *The society of mind*, Marvin Minsky says, "our minds contain processes that allow us to solve problems we consider difficult. 'Intelligence' is our name for whichever of those processes we don't yet understand." Nevertheless, "some people dislike this 'definition' because its meaning is doomed to keep changing as we learn more about psychology […] the very concept of intelligence is like a stage magician's trick" (Minsky 1988, p. 71).

who majored in German at university, morphs it to refer to the intellectually inferior but richly humane "special," both satirizing the American intelligentsia and celebrating Isidore's rich emotions.

Androids and humans

The relationship between androids and humans, and the question of human self-awareness are thought-provoking. The novelist writes, "My grand theme [is] who is human and who only appears (masquerades) as human? [...] Without answering it adequately, we cannot even be certain of our own selves [...] And the answer comes very hard" (Dick, 1989, p. 393). In *Do Androids?*, Dick distinguishes humans from androids not by the traditional standards of reason and language, but by the criterion of whether or not they possess the capacity for empathy. During the reading process, we unconsciously follow the protagonist's lead, questioning his identity and searching for his empathic capacity for self-awareness.

The word "android" means "manlike" in ancient Greek (Haney, 2006, p. 20). It is this "likeness" that makes androids a mirror of Deckard's quest for self-knowledge. The three emotional androids mentioned earlier, Luba Luft, Roy Baty and Rachael Rosen, are mirrors of the humans' quest of self-knowledge. Looking back at Mary Shelley's *Frankenstein*, often referred to as the earliest work of science fiction in Britain, we find that those three androids in *Do Androids?* form together the same path of emotional growth as that of the monster Frankenstein created: recognition of emotion in art—expression of anger in bereavement—revenge after betrayal. The latter experiences the beauty of literature in *Paradise Lost* and *The Sorrows of Young Werther*, where he begins to envision Adam and Eve knowing and loving each other from Satan's point of view. He then begs Dr. Frankenstein to create a female partner for him, trying to find his community and belonging, only to lose it again. Finally, after being betrayed by his creator, he becomes determined to kill the people that Frankenstein loves dearly. Readers are often confused by the use of "electric" in the title, *Do Androids Dream of Electric Sheep?*, as the artificial sheep in the novel is an electronic sheep. Placing Dick's novel alongside *Frankenstein*, we believe that the "electric" in the title indicates Dick's connection with Shelley: the former has intentionally changed the name from electronic to electric sheep as a homage to Shelley, who was born in an age of reverence for electricity and whose monsters are brought to life by electric shock. Likewise, just as Frankenstein sees in the monster the callousness of his own actions because he is so irresponsible as the parent of a monster, Dick's protagonist begins to reflect on his own emotional capacity.

If emotion can be seen as an acquired cognition, then the ability to empathize should also be something that can be acquired. The ability to do so depends to a large extent on whether we value it and what attitude we have towards it. We should therefore assume a welcoming stance and look forward to its arrival.

Empathy versus sympathy

Before discussing empathy and sympathy, we can consider our own perceptions of the patient. If someone close to us has a serious illness, such as heart disease, we feel sorry and sympathetic. If someone around us shows symptoms of schizophrenia, do we still feel sorry and compassionate or do we stay away in fear? We should keep in mind that both of them are patients. Before Philippe Pinel (a French physician and psychiatrist), the treatment of the mentally ill was no different from the punishment of criminals. But in fact, the mentally ill are patients (Lelord, 2022, p. 38). Physically, their brains are hurt, thus, on a mental level, this causes them to think differently from normal people. When Dick juxtaposes androids with the schizophrenic, we can note the innocence of both groups. The former are created with an incomplete brain structure, especially the design of the cerebral cortex; the latter are either born with, or were influenced by, an incomplete cerebral cortex. Thus, androids are as innocent as the schizophrenic. Contrary to Rabkin's contention—"While Mary Shelley had enormous sympathy for Frankenstein's monster, Philip Dick here has none for androids" (Rabkin, 1988, p. 164)—we would argue that Dick not only sympathizes with those androids, but also empathizes with them.

Sympathy means 'to suffer or experience with.' Empathy means to suffer or experience in" (Ciaramicoli & Ketcham, 2001, pp. 79-80). We are always looking for empathy, which is likewise an acquired skill and needs to be renewed on an ongoing basis. In *Do Androids?*, the story is divided into two lines, one centered on Deckard and Rachael and the other on Isidore and Pris (a female android of the same type as Rachael). The combination of "humans + androids" takes us along with the writer towards empathy. As we mention at the beginning of this essay, the place where boundaries are broken is also where things merge. Recalling the passage of the V-K Empathy Test, the embodiment of empathy in the text, we notice one of its drawbacks, namely the inability of schizophrenics to pass the test. Hayles adds that "the inside/outside confusion links the schizophrenic to the android. Like the schizophrenic, the android is a hybrid figure—part human, part machine—whose very existence calls boundaries into question" (Hayles, 1999, p. 177). If this is the case, then the schizophrenics are in the same position as androids. During his writing process, Dick has painstakingly transformed the combination of "humans + androids" to "schizophrenics + androids."

As human characters enter the story line together with androids, they begin to ask what empathy is and complete this combination of perception and practice by presenting a schizophrenic state. Let's take Deckard and Isidore's experience as good examples. For Deckard, he himself says: "It's strange […] I had the absolute, utter, completely real illusion that I had become Mercer and people were lobbing rocks at me" (Dick, 2012, pp. 185–186). He experiences the illusion without holding the Empathy Box, meaning that it is not a virtual scene provided by virtual reality technology, but a hallucination. For Isidore, after the androids cut off the legs of the spider, he is so upset that he has a hallucination. He thinks he has put down the spider and saved it, but he wonders why others cannot see it (Dick, 2012, p. 172). After experiencing a shock to their humanity, Deckard and Isidore fall into a state of "hallucination." Hallucinations are in fact a classic feature of schizophrenia

(Shorter, 2008, pp. 140–141). In other words, once the protagonists have completed their experience of community with the androids, they have "fused" in a real sense, passing through the bridge of difference to the empathic world on the other side.

Hayles argues that Dick has sympathy for psychotic schizophrenic patients (Hayles, 1999, p. 176). In our view, it would be more accurate to replace "sympathy" with "empathy." As the derivative of "sympathy," "sympathetic," in English, is the same word as sympathetic in "sympathetic nervous system," which suggests that sympathy is an unconscious activity from a neurological perspective.[4] Empathy, on the other hand, is conscious and "requires a much more complicated integration of the thought and feeling" of others, which can determine the direction of events (Ciaramicoli & Ketcham, 2001, p. 54). Dick's entire creative career accompanies the full range of the ups and downs of the Cold War and endures its pervasive sense of imminent nuclear doom. Due to his scrappy life and depressing living conditions, Dick needed to take psychotropic drugs to treat his mental illnesses. Due to the same physical and mental experiences, he also empathized with schizophrenics.

Conclusion

Haraway breaks with traditional dichotomies in her Cyborg Theory, and Dick abandons the idea of black and white in his *Do Androids?*. Intelligence and emotion/desire, man and machine, and man and technology, are likewise not merely contradictory opposites. Posthumanism takes a more optimistic view of the birth and development of the cyborg, which embodies a genuine problematization of anthropocentrism. Most of the existing research has explored the lack of human emotions from a traditional human perspective, without granting enough attention to androids' emotions. In *Sapiens: A brief history of humankind*, Harari states bluntly: "the real potential of future technologies is to change Homo sapiens itself, including our emotions and desires, and not merely our vehicles and weapons" (Harari, 2014, p. 461). Accordingly, the purpose of science fiction is not to spread scientific knowledge or to foresee the future, but its imagery and depictions of the future can inspire people to enliven their minds and live well in the moment without their contentment being reliant on a technologically afforded resolution that is absent from the present. This essay has explored the androids' perspective on their process of acquiring emotion on the premise of Haraway's triple boundary breaking between human and animal, organism and non-organism and physical and non-physical. We find that as androids become increasingly human, traditional human perceptions of emotion, technology, and the relationship between human and technology become clearer.

In terms of emotion, it is empathy, not sympathy, that keeps human beings connected. Literature has its anthropological effect, and Dick's *Do Androids?* has its psychological effect that gives human beings inspiration from the androids'

[4] The "sympathetic nervous system" is part of the autonomic nervous system, and the latter is characterized by involuntary activity, hence it is named this way by J. N. Langley, and it is also known as the involuntary nervous system or the vegetative nervous system.

perspective. We have already recognized the difference between empathy and sympathy, and how to achieve empathy is even more important. Based on this reading, we can derive two recommendations. First, express yourself sincerely and stimulate a courteous emotional exchange. Psychology suggests that "sometimes, although someone is suffering, others act as if nothing has happened. Often, this is because the sufferers are not displaying the proper emotions" (Hatfield et al., 1994, p. 191). Very often, it is not because the emotions cannot reach a state of empathy, but because they are not being expressed. It is important to note that expression here encompasses both speech, intonation, and facial expression, with the last being even more important. Psychologists have found that in the process of human emotional communication, verbal content accounts for 7%, intonation accounts for 38%, and the speaker's facial expression accounts for 55% (Du et al., 2012, p. 18). The first suggestion we make aims to emphasize active expressions. When we express our feelings, we use such an atmosphere of mutual communication to enable the other person to express themselves and shape a virtuous circle of communication. Second, one should imitate the object of one's empathy by assuming an open posture. In the field of psychology, when young counsellors are unable to relate to their visitors' feelings, experienced counsellors suggest that they try to imitate their visitors' body postures and their changes, as this allows them to unconsciously approach their visitors' thoughts and feelings (Hatfield et al., 1994, p. 92). Edgar Allan Poe, in "The Purloined Letter" contends that if people consciously imitate others' facial expressions, they will soon come to feel as they do (Poe, 1975, pp. 215–216).[5] Imitating your subject allows you to understand and experience them from the outside in, from the body to the psyche.

Besides, in terms of technology, it is not the technology itself that we fear, but the destruction of humanity that comes with it. Nietzsche also says "a little poison now and then: that makes for agreeable dreams. And much poison in the end, for an agreeable death" (Nietzsche, 1954, pp. 129–130). Clearly, the final aim of technological advancement is to make human beings live and feel better, while sometimes technology ignores the fact that human beings are born to be emotional animals, which means it is natural for them to have the feelings of fear, love, and also depression. Making people feel better all the time cannot be achieved by technology; after all, technology should not become an addiction for human beings, but a therapeutic tool when it is necessary. As Campbell understands Haraway, "technology in this world is the source of all evil, but through some transformation or transubstantiation technology is also the source of hope" (Campbell, 2001, p. 168). How to retain the morality and conscience of humanity in the ongoing development of technology is therefore of paramount importance. "More generally, to think about changing the way things are, we have to imagine how they might be" (Minsky, 2006, p.

[5] We refer here to Dupin's statement: "When I wish to find out how wise, or how stupid, or how good, or how wicked is any one, or what are his thoughts at the moment, I fashion the expression of my face, as accurately as possible, in accordance with the expression of his, and then wait to see what thoughts or sentiments arise in my mind or heart, as if to match or correspond with the expression" (Poe 1975, pp. 215–216).

93). In the case of AI, for example, before designing the ideal AI, we should carefully imagine what we want it to be. In contrast to the life-loving, freedom-seeking and emotion-valuing androids, humans use technology to push themselves towards the edge of freedom and sensuality, making themselves indifferent loners manipulated by machines. The technology itself is neutral as the focus is on human choice. As Csikszentmihalyi puts it, "if mankind had tried to ban fire because it could be used to burn things down, we would not have grown to be very different from the great apes" (Csikszentmihalyi, 1991, p. 70). We, as human beings with free will, can choose to use or not to use, to decide how much we want to use, and thus avoid being controlled by technology, rather than simply blaming it for its creation. Fundamentally, the relationship between man and technology has always been that of creator and creation.

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