

## Humanity and Imagination

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### Abstract

Imagination is a uniquely human capacity closely allied with language that has contributed crucially to the success of our species and underwrites our highest potential for moral action. Understanding imagination is central to an understanding of ourselves. Attempts to reduce human nature to animal nature are logically unconvincing in light of research in the fields of animal intelligence, linguistics, and anthropology. It is impractical to expect humans to meet the moral challenges of our time if we hold to the reductionist view of human nature. The first step in articulating a positive vision for humanity's future is to acknowledge that imagination is central to who we are.

### HUMANITY AND IMAGINATION

Paleontologists believe that mammoths, which stood up to fourteen feet tall and weighed thirteen tons, went extinct in the Stone Age due in large part to human overhunting. The suggestion underscores the fact that, despite our frail stature, humans have long been the most dominant species on the planet. Today the most physically powerful animals offer virtually no resistance to our machine-driving, gun-slinging will. Whether our reign has ushered peace and justice throughout the globe is not difficult to tell. Nevertheless, our competitive advantage must be acknowledged if we are to fully appreciate who we are as humans, and possibly map out a better future. Our success is due neither to physical nor reproductive power—we are weak and slow compared to lions, and no better at procreating than wildebeests. The computing power of the human brain is often cited as our trump card, but accompanying our neurological endowment is a capacity that other species lack, and that we ignore to our impoverishment—namely *imagination*. It is this faculty that has proven most valuable to us as masters of the planet. Far from being cause for exultation, this truth calls for sober recognition if we are to understand human nature and, whether against hope or not, create a more just and sustainable future.

## Ontological Discontinuity

German economist and polymath E.F. Schumacher describes the mysterious quality that distinguishes human from animal life:

This power...opens up unlimited possibilities of purposeful learning, investigating, exploring, formulating and accumulating knowledge.

This description applies aptly to the idea of *imagination*. Schumacher continues:

What shall we call it? As it is necessary to have word-labels, I shall call it 'self-awareness'. We must, however, take great care always to remember that such a word-label is merely (to use a Buddhist phrase) 'a finger pointing to the moon'. The 'moon' itself remains highly mysterious and needs to be studied with the greatest patience and perseverance, if we want to understand anything about man's position in the universe.<sup>1</sup>

The word-label *imagination* may afford a perspective on humanity's position in the universe that complements Schumacher's study of self-awareness. According to this perspective, there is, contrary to current intellectual fashion, an "ontological discontinuity"<sup>2</sup> or gap that separates humans from other species. The reductionist view, by contrast, sees things on the "higher" side of any such perceived gap as completely explainable in terms of things on the lower. Thus Desmond Morris analyzes human behavior as advanced animal behavior in his influential book *The Naked Ape*,<sup>3</sup> and MIT physicist Jeremy England seeks to explain biological systems in terms of thermodynamics.<sup>4</sup> Reductionism claims that, with respect to the actual nature of things, the gaps separating things on different perceived levels are either illusory or ultimately insignificant. The following study shows that the gap between a creature with imagination and one without is neither illusory nor insignificant. This conclusion complements the views described by

various skeptics of reductionism including philosophers Thomas Nagel and Alvin Plantinga, and scientists Stuart Kauffman, Adam Frank, and George Ellis.

Since Schumacher's publication in 1977, a growing list of experiments have shown that some animals including elephants, great apes, magpies, and dolphins are able to recognize themselves in mirrors, thus demonstrating self-awareness.<sup>5</sup> While these findings do not prove that such animals necessarily possess the same degree of self-awareness as the Dalai Lama, they underscore the fact that, in recent years, the term self-awareness is often associated with advanced animal psychology. In light of this, it may be least confusing to explore the quality that makes humans unique through the lens of a different word-label.

Historically, philosophers have had relatively little to say about imagination—at least in explicit terms. This may be in part because imagination, as Kant observed, pervades the human experience of life and thought, but is so commonplace to our experience that we are “scarcely conscious” of it.<sup>6</sup> Notable among recent studies of imagination is anthropologist Augustín Fuentes' monograph, *The Creative Spark: How Imagination Made Humans Exceptional*, in which the author presents a compelling analysis of imagination's place in the story of human evolution.<sup>7</sup>

### **What is Imagination?**

Imagination may be understood as the ability to form mental representations of images or other phenomenal ideas including sounds, smells, textures, or tastes. Imagination

accomplishes its work by drawing upon remembered physical sensations, often by means of the words that symbolize them. For example, you remember what a *horse* looks like, and you remember what *horns* look like; thus when someone explains that a unicorn is a horse with a horn on its forehead, you create the image in your mind, even if you have never seen a painting of the imaginary creature.

As defined, *imagination* does not only evoke mental images or pictures, but other imagined sensations. Thus a person born blind may remember the sound, texture, or smell of a horse or a horn and thus combine those ideas into a composite *non-visual* representation of a unicorn.<sup>8</sup> Whether visual or non-visual, the imagination creates mental representations.

Imagination also forms representations of things in the real world. When someone says, *tribespeople live in the Amazon*, you may spontaneously form a mental picture even though you have never directly perceived the thing described. The image—or non-visual representation—is likely to be different for each person, and may even be vague and indistinct unless one takes time to meditate upon it. In any case, a representation is formed, and we are ready to assign truth-value to the proposition if we believe the source delivering it to be credible. The same thing happens when more commonplace messages are delivered, such as *there is a box of black tea on the top shelf of the cupboard*. We combine the remembered physical sensations into a mental representation. Thus imagination is involved when we hear about things in the world beyond the direct reach of our own senses.

The ability to imagine also makes innovation and artistic creation possible. With imagination, one conceives things that do not yet exist, whether things intended for practical use such as tools or a house, or things to be admired for their beauty such as sculpture or music. In such cases something is imagined; then one sets to work to make the thing real—sketching, drafting, building, etc. The creator enlists the intellect and body in the service of creation, but the effort begins with a mental vision or representation.

Aristotle's description of the builder's process complements this view of imagination's role: "He starts by forming for himself a definite picture...of his end...and this he holds forth as the reason and explanation of each subsequent step that he takes."<sup>9</sup> The desirability of the imagined picture motivates the creator in his or her work. The initial picture, Aristotle says, is "definite," but it may in fact evolve during the process of creation. The creative act may thus become an improvisatory act, whereby the initial vision is increasingly refined as one nears completion. The whole process, however, cannot but begin with a vision of some kind, however determinate or indeterminate at the outset.

Thus imagination functions in three modes: (1) it forms representations of things such as unicorns that do not correspond—or at least do not correspond literally—to anything in the actual universe; (2) it forms representations of things believed to correspond to actual realities in the universe, such as hunter-gatherer tribes in the Amazon; (3) it forms representations of things that may come to exist in the future with work and effort, such as

a house or piano sonata. In all cases, imagination draws upon remembered physical sensations, abstracts them from their original context, and moves them around into different combinations or arrangements in the mind as needed or desired.

### **Imagination, Language and Thought**

Human language is often cited as the primary feature distinguishing humans from animals. Language and thought as we know them, however, are closely linked with imagination. As Charles Darwin observed:

The lower animals differ from man solely in his almost infinitely larger power of associating together the most diversified sounds and ideas; and this obviously depends on the high development of his mental powers.<sup>10</sup>

The “infinite power”<sup>11</sup> of connecting sounds with ideas, Darwin says, is what distinguishes humans from other creatures—more so than bipedality, nakedness, or manual dexterity. Noam Chomsky expands on Darwin’s statement, noting that language may function internally, i.e. when words are not vocalized. Thus the imagined sound of a word—not a literal sound—itsself stands for an idea. Furthermore, non-aural symbols such as manual gestures as in sign language are associated with ideas in a similar manner. Thus human language affords imagination the opportunity to explore endless possibilities of thought and expression.<sup>12</sup>

While primates, birds, and other animals communicate vocally or mimetically, their communication is apparently limited to concrete information obtained directly by the senses, either past or present.<sup>13</sup> Humans, however, can think and communicate about

things that are not and never have been *in totum* present to the senses. Composer Sufjan Stevens' independent record label is Asthmatic Kitty Records. The name unites three things one has observed separately, but never together. The ability to thus conceive something someone one has never actually observed is the work of imagination, and distinguishes human language from animal communication.

Incidentally, there is controversy on the subject of whether or to what extent animals are capable of language. A talented female chimpanzee named Washoe was taught to communicate with American Sign Language—to a limited extent but still remarkable extent.<sup>14</sup> Washoe's capacity, however, still seems to fall within the limitation described above. If, however, an ape or other animal should ever be observed without question to demonstrate symbolic imagination to a degree that rivals what may be commonplace for humans, the discovery should be welcomed by everyone interested in the pursuit of truth regardless of whether it forces them rethink their philosophy of human nature.

### **Words and Imagination**

As inheritors of linguistic tradition, our skill with language allows words to create mental images or ideas automatically. Asimov illustrates the point:

Why...does the design CRAYON in black print on this piece of paper automatically evoke a picture (to an English-speaking person) of a pigmented stick of wax and a certain sound that represents a word? You do not need to spell out the letters or search your memory or reason out the possible message contained in the design; from repeated conditioning, you automatically associate the symbol with the thing itself.<sup>15</sup>

Our skill with language allows us to imagine things efficiently and spontaneously. With it, we involuntarily sketch images in the mind, unless deliberate effort is taken to do otherwise. As Asimov notes, the written word evokes a *sound*. Such a “sound” exists in the mind and not in physical reality, and may even be used as a proxy for a mental picture. Thus, whether evoking a mental picture, a sound, both, or otherwise, a written symbol generates the representation of some qualia or phenomenal sensation.

It seems to be impossible that words should not be accompanied by mental representations of some kind, whether consciously available to introspection or not. However abstract or concrete their content, words are symbols, and thus stand things other than themselves. Whatever they stand for must be real or imagined entities; if they are real, they correspond to a physical sensation of some kind. If they are imagined, they correspond to an imagined idea of some kind. To suggest that an imagined idea is devoid of imagined phenomenological qualities is to suggest that the idea is empty. Of what else could it be constituted? This point, however, is peripheral to the main argument at present, which is that imagination is closely linked with the attribute widely seen as uniquely human—language.

When thinking or communicating, the accompanying representations may only partially resemble what they represent. C.S. Lewis explains:

When I think about London I usually see a mental picture of Euston Station. But...though I have the image while I am thinking about London, what I think or say is not *about* that image...but about the real London, outside my imagination, of which no one can have an adequate picture at all.<sup>16</sup>

Chomsky echoes Lewis, though his terminology is more abstruse. Defining ‘I-language’ as introspective linguistic thought, as opposed to ‘E-language,’ externalized linguistic thought—i.e. communication—he says:

In my I-language, there is an internal entity *London*—not necessarily matching yours exactly—constituted of elements that provide perspectives for referring to aspects of the world.<sup>17</sup>

Your image of London may be, and probably is, different than mine. Nevertheless, we both have phenomenal representations of some kind or other when we hear the word spoken or see it written. Perhaps those representations vary in vividness or clarity. Nevertheless, they are representations and thus the product of imagination.

Imagination is apparently active during REM sleep. The subtly meaningful content of dreams, informed by a subject’s daily submersion in linguistic thought, suggests that the imagination operates on a subconscious level, where deeper meanings or associations are perceived.<sup>18</sup> The subconscious imagination, furthermore, is similarly active during daydreaming or mental resting.<sup>19</sup> The imagination’s ability to synthesize thoughts and ideas on a deeper level of consciousness seems to render mysterious the nature of its operation. This seems to justify Chomsky’s suggestion, following Hume, that a full understanding of imagination’s activity lies outside the scope of human minds.<sup>20</sup>

Human language and thought are therefore closely connected to imagination. Together these faculties may be viewed as different aspects of the same thing, namely the mysterious quality that makes humans human. We may study this quality through the lens of different word-labels—self-awareness, abstract reasoning, symbolic consciousness, imagination—

but as Schumacher reminds us, any such word-label is itself a symbol, not the thing itself, like a finger pointing to the moon.

### **Imagination and Intelligence**

The ideas of imagination and intelligence overlap, but have different connotations.

Ethologist Frans de Waal concisely defines the latter in terms of cognition:

*Cognition* is the mental transformation of sensory input into knowledge about the environment and the flexible application of this knowledge. While the term *cognition* refers to the process of doing this, *intelligence* refers more to the ability to do it successfully.<sup>21</sup>

Intelligence deals with “sensory input” from one’s environment—data—while imagination creates an environment of its own in the mind. This mental environment, naturally and unavoidably, is built with data received in the past, and abstracted from its original context—data like horns, horses, kitties, the color blue, musical scores with composer names printed on them, etc. Philosopher Steven T. Asma uses the phrase “second universe” to describe this mental environment. In his words, imagination creates “an internal environment of possibilities that exists concurrently with the stubborn physical world.”<sup>22</sup> One’s second universe consists of images or ideas not physically present to the senses. This makes the imagination, creator of the second universe, distinct from that aspect of human intelligence that simply works with the data of sensory experience.

In light of this, it may be meaningful to distinguish two general kinds of intelligence: (1) computational intelligence, which analyses information about the environment and draws

conclusions therefrom via rational intuition; and (2) creative intelligence, which abstracts elements from the environment and forms them into new ideas in one's internal environment. Computational intelligence subjects given information to logical or algorithmic processes; creative intelligence conceives ideas that never existed before in the subject's awareness.

Humans are assumed to be more intelligent than animals, but our computational intelligence may be very close, for example, to that of apes; whereas our creative intelligence or imagination provides the intellect a wider field of play.<sup>23</sup> Moving freely in this wider field, the intellect is able to achieve more than otherwise. For example, one envisions a house on the grassy knoll in view, and drafts a representation of it on a two-dimensional surface—sand or a blueprint. This process allows the intellect to confront specific problems such as how the structure should be designed to resist the pull of gravity over time, etc. An architect or engineer will translate such problems into math and solve them logically. All this is possible because the initial abstraction and graphic representation—products of imagination—made it possible. With access to the second universe created by imagination, the scope of the intellect is expanded. The barrier between physical sensations and imagined ones is removed, and the intellect is set free like a stallion from its corral.

### **Contradictory Views**

As noted above, some scientists and philosophers are keen to explain human behavior in terms of animal behavior. Among these is the aforementioned Frans de Waal, who has contributed much to the study of animal intelligence and behavior. De Waal's work, furthermore, has helped supplant behaviorist methodology, which reduces animals to their objectively measurable behavior, often justifying animal cruelty as a result and perpetuating myths about the inferiority of animal capacities. In his recent work on animal intelligence, however, de Waal attempts a sortie on the idea of human uniqueness. After chronicling various failed theories of capacities that animals lack, he says:

Claims about absent capacities range from the idea that primates do not care about the welfare of others, do not imitate, or even fail to understand gravity. Imagine this for flightless animals that travel high above the ground!<sup>24</sup>

This invitation to “imagine” something undercuts the argument against human uniqueness. De Waal fails to confront the idea that imagination is the unique human capacity. He mentions imagination inadvertently by inviting the reader to imagine things. The trap snares him again after he boldly recommends “placing a moratorium on human uniqueness claims”:

I imagine a future in which we explore a range of capacities in specific organisms on the assumption of generalizability. We may end up studying technical skills in New Caledonian crows, and capuchin monkeys, conformity in guppies, empathy in canids, object categorization in parrots, and so on.<sup>25</sup>

The scientific project de Waal describes is laudable, but by *imagining* it, he demonstrates the uniqueness he denies that humans possess. De Waal admits elsewhere in the treatise that no other species share humans' capacity for language. The inconsistency recalls Kant's comment that we are “scarcely conscious” of imagination. The author's creative use of language—not to mention his graphic illustrations—demonstrate a powerful imagination throughout his work, and this very fact cripples his own argument against human

uniqueness. One may welcome the contributions to scientific knowledge he and other researchers offer, but discard any accompanying reductionism about human nature being essentially the same as animal nature. One can chew the meat and spit out the bones.

E.O. Wilson has also contributed greatly to the advance of scientific knowledge. In his fieldwork over the years, for example, he has discovered and given Latin names to 450 new species of ant.<sup>26</sup> In the famed biologist's philosophical foray, *The Meaning of Human Existence*, he opposes—in one place—the idea of human uniqueness:

It might be supposed that the human condition is so distinctive and came so late in the history of life on Earth as to suggest the hand of a divine creator. Yet...in a critical sense, the human achievement was not unique at all. Biologists have identified at the time of this writing twenty evolutionary lines in the modern-world fauna that attained advanced social life based on some degree of altruistic division of labor.<sup>27</sup>

The discoveries Wilson cites ought to be celebrated; it does not follow from them that the human condition is not unique. To insist on this would be to contradict the statement made earlier in his monograph that imagination is a “uniquely human” faculty<sup>28</sup>—a worthy idea echoed in his more recent work, *The Origins of Creativity*.<sup>29</sup> Whether the power of imagination suggests the hand of a divine creator is a separate question—perhaps one best resolved individually. In any case, the above quote may be discarded insofar as it contradicts the main thrust of Wilson's teaching on the uniqueness of human imagination.

One strategy used to dismiss the significance of the power of imagination in human history is to simply claim to be unconvinced. This is the strategy taken by an article in the *Economist* reviewing Fuentes' *The Creative Spark*. “Overall, its central thesis—that the

power of the imagination alone is responsible for human success—is not entirely convincing.”<sup>30</sup> A closer read of Fuentes’ scholarship will show that imagination works with other faculties in humanity’s strong suit—notably bipedality and cooperation—but that imagination is what makes humanity truly distinct from other species. The Economist author’s failure to adduce reasons for rejecting Fuentes’ central idea speaks for itself.

Anyone eager to explain the human condition in terms of animal (i.e. non-human) behavior must confront the idea of human imagination. He or she must argue either (a) that animals exhibit imagination to a degree comparable to humans; or (b) that human imagination does not make a material difference in the world, and thus does not count as a significant form of power in the first place. There is at present no convincing evidence for the former; regarding the latter, the evidence points in the opposite direction.

If human imagination has no effect on what people do in the real world, then one can logically maintain that it represents no significant difference between humans and animals—it is only the “tip of the iceberg,” to use de Waal’s analogy.<sup>31</sup> But if it makes an observable difference, then we are looking at something else—not the tip of an iceberg, but an ice castle—potentially as magnificent as Versailles or the Taj Mahal. Indeed, humans and animals share much—a deep, submerged glacier of biological similarity. Animal capabilities should not be minimized—it would seem difficult rather *not* to marvel at the many astonishing capabilities that scientists such as de Waal, Wilson, and others have described—but there is indeed something that distinguishes humans if the words we speak and the thoughts we think make a material difference in life.

### **Ruler of the World**

It is idle to deny that imagination has made a significant difference in human life on this planet. All human weapons, technology, and art are the offspring of this power. Blaise Pascal called imagination “the ruler of the world.”<sup>32</sup> The metaphor is justified considering the changes imagination has made on the planet, for better or worse. This is to say that certain individuals in human history have implemented new ideas that have changed a society’s economic or social structure, with different impacts on the environment. For many, however, imagination’s role may extend merely to common activities such as the daily use of language, or economic problem-solving in the face of survival challenges. On whatever scale and to whatever degree different individuals may have the opportunity or inclination to innovate, the human species as a whole has achieved “ruler” status by virtue of imagination.

Imagination, again, is one of various human capacities; but it is uniquely human, and expands the scope of mental and physical activity. It does not, however, necessarily change one’s desired results—such as the acquisition of food and drink, the fulfillment of sexual desire, or the attainment of higher social status. It rather solves the problem of achieving these or other ends in novel ways. Examples of imagination’s influence on the body and other departments of the mind are endless. Consider them each by turn, beginning with physical power.

### Imagination and Physical Power

Military history is the history of people who have imagined themselves in possession of other people's land and resources. Alexander the Great, for example, saw himself as the ruler of the world. Before setting out as conqueror, he had second-hand knowledge of Persia and India and the inhabitants that dwelt there, yet he saw himself as their benefactor. It was a conceit of the imagination, and impelled him to conquer most of the then-known world. Nor was he the last to attempt this. The common theme throughout all recorded history is that *people in power imagine themselves owning other people's land or goods, and set about seizing them by force.*

Imagination also offers new solutions to the old problem of how to win in a physical confrontation with rivals. The art of hand-to-hand combat has developed differently in different parts of the world: Kung Fu in China, Taekwondo in Korea, Karate and Jujitsu in Japan, wrestling in Greece, and pugilism throughout the West. All these different fighting-styles are solutions to the problem—*how can I defeat my opponent?* Their variety bespeaks the fertility of human imagination. Amongst aggressive animals, by contrast, there is a narrower range of possible solutions to the problem of how to win a fight. Muskoxen bulls butt their heads with extremely powerful force—yet there is little if any variation in how the battle takes place. Whichever is the biggest and strongest, and maybe the luckiest, wins. Chimpanzees have more sophisticated methods of fighting or intimidating rivals, which reflects their advanced intelligence and even nascent imagination.<sup>33</sup> Nevertheless, even

among our primate cousins there is a relatively narrow range of solutions to the problem of how to win in combat. Similar statements may be made comparing methods of hunting among animals and humans.

Imagination expands the scope of human physical power in less violent ways. A homeowner imagines a vegetable garden in his back yard. He purchases plants and materials and sets about building what he has envisioned. The physical energy he uses is thus set in motion by the imagination. The towns and cities in which we dwell, similarly, are all the product of physical work initiated by a vision conceived in the minds of landowners and city planners. In this way, imagination has revolutionized the very landscape of our planet.

### **Imagination and Sexuality**

In the sexual domain, imagination has a field of play. As sex therapist Ian Kerner writes: "So potent is the power of imagination that some women are able to fantasize themselves to orgasm, without any physical stimulation at all."<sup>34</sup> Such a feat would seem miraculous. Whether miraculous or not, it demonstrates that the body participates freely in what the imagination conceives.

Another name for sexual fantasy is "voyeurism," which zoologist Desmond Morris describes as an outlet for the sexual curiosity of monogamous couples:

In the strict sense, voyeurism means obtaining sexual excitement from watching other individuals copulating, but it can logically be broadened out to include any

non-participatory interest in any sexual activity. Almost the entire population indulges in this. They watch it, they read about it, they listen to it...Magazines, newspapers and general conversation also make a large contribution. It has become a major industry. And never once throughout all this does the sexual observer actually *do* anything. Everything is performed by proxy.<sup>35</sup>

Deeds performed “by proxy” are performed in the secondary universe of imagination, and the body participates as needed. As Asma writes, “humans can just daydream about a desirable body, and the sexual equipment will begin to ramp up for action.”<sup>36</sup>

Imagination’s impact is also evident in humans’ wide and perhaps shocking variety of sexual practices—a variety is unseen in any other animal species. Orangutans or bonobos have perhaps the most diversity in their sexual repertoire—different sexual positions for example—but nothing that approaches the innovations seen in our modern sex stores, pornographic films, or virtual reality. The modern industry, however, reflects an ancient predilection for sexual novelty, as the third-century BCE *Kama Sutra* testifies, as well as Stone Age artifacts including venus figurines, and a phallus presumably used as a sex toy.<sup>37</sup> There is little reason to doubt that as long as imagination has been with us it has had something to say about sex.

### **Imagination and Intellectual power**

Leaving the sexual domain, imagination also enlarges the scope of intellectual work.

Spanish sculptor Xavier Corberó highlights the roles of imagination and reason in his work as an artist:

What I try to do does not stem from reason. It comes from life itself. I use reason to build things up, so they don’t fall to pieces. But the motives behind all the rest are

aesthetic, ethic, and, if you will, divine. I seek to make things that I have imagined and have not yet done.<sup>38</sup>

Here, the artist confides, reason serves as an important aid to the imagination, but by itself does not create. When given a vision—however dim and flexible—to implement by imagination, reason sets to work.

Imagination also partners with computational intelligence in the task of technological innovation. Thomas Edison sought a solution to the problem of how to use electricity to create light, replacing the need for oil lamps and candles. The solution was to cause a filament wire to glow in an oxygen-free space. Much of Edison's work was conducted by trial and error, a heuristic process by which one accumulates knowledge, and "transforms sensory input into knowledge about the environment." Gradually the gap toward Edison's ultimate goal was closed. This endgame was a product of the imagination, however vaguely foreseen. Imagination defined the vision, and the intellect and body set about achieving it.

In the realm of business, risk managers create models to predict future cash-flow based on assumptions; and accountants draft balance sheets and income statements. All is done within the context of a company vision—the leadership imagines a future in which *success is achieved* as the company meets certain needs in the marketplace. The mathematical intelligence employed in the process is done within the context of this vision. Perhaps the business idea is novel; perhaps it is not. Either way it is an idea, and the product of imagination.

Thus imagination vastly enlarges the scope of the other human capacities. Muscle, libido, and intellect are powerful, but apart from imagination, they are *constrained*—that is, they act within a narrower range of possible courses of action. Different religious traditions, political systems, and business institutions will allow people greater or less freedom to exercise imagination, but in whatever context and on whatever scale, this human power imagination expands the activity of mind and body. History, experience, and reflection confirm the fact that imagination, as progenitor of all human innovations, has changed the structure of human society throughout history, not to mention ecological dynamics throughout the globe and, in more recent years, geological patterns related, for example, to global climate.

### **What is Moral Imagination?**

Recognizing that imagination is a uniquely human faculty helps us escape contradictions regarding our view of human nature. The purpose is not to admire our own exceptionalism,<sup>39</sup> but rather to make room for the moral responsibility that this exceptionalism implies. Human imagination not only expands the scope of physical power, sexual behavior, and intellectual work—it potentially expands our capacity for altruism or moral excellence.

For Pascal, “the ruler of the world” is a largely pernicious force associated with vanity, pretense, and deceit.<sup>40</sup> This perspective on imagination is parallel to his religious belief that humans in their natural state are wretched and concupiscent. If humans are evil, then what

they imagine is evil. Pascal still acknowledges imagination as a potential force for good: “Imagination decides everything: it creates beauty, justice and happiness, which is the world’s supreme good.”<sup>41</sup> However wicked or righteous humanity may be, Pascal’s logic is sound: imagination can be good only to the extent that humans are good. What we do with our power reflects our moral nature.

Coined by Edmund Burke and elaborated upon by modern writers,<sup>42</sup> the phrase *moral imagination* denotes the idea that imagination plays a crucial role in the discernment of moral truth and practice of moral behavior. In Adam’s Smith’s phrase “it is by changing places in fancy with the sufferer, that we come either to conceive or to be affected by what he feels.”<sup>43</sup> Maurice Nicoll describes the same idea with the phrase “external considering,” i.e. “putting yourself into the other person’s place.”<sup>44</sup> Such “putting” happens by virtue of imagination, and makes the feeling of empathy possible. This emotion, in turn, motivates one to act for the benefit of the other. The whole sequence may be as automatic as one’s interpreting the design *crayon*, but it is initiated by the imagination’s power of taking the perspectives of those who will be affected by your decisions.

“Perspective-taking” abilities are evident in the animal kingdom. De Waal cites “dramatic cases of apes, elephants, or dolphins helping one another under dire circumstances.”<sup>45</sup>

Unsurprisingly, these are some of the very animals that exhibit basic self-awareness.

Examples of animal altruism are not to be minimized; however, human imagination magnifies the scope of perspective-taking. By it, one may take the perspective not only of

an individual in near proximity, but of someone who is not even present, or who might not even exist.

### **Expanded Altruism**

For example, Potiphar's wife tries to seduce Joseph in a secret chamber. She has been hustling him for several days, but Joseph has refused on the ground that he would not betray his master Potiphar and "sin against God." This time she catches him by the garment and propositions him aggressively. What does Joseph do? He "changes places" with Potiphar—*who is not present*—and flees the scene leaving his garment behind.<sup>46</sup> Thus Joseph, having cultivated the habit of "external considering," treated Potiphar as he would have wanted Potiphar to treat him. From the perspective of purely animal behavior, the thing is miraculous.

Thus humans have the ability to change places with individuals that are not physically present, and this, in relevant circumstances, makes the more difficult kinds of moral action possible. Such action, incidentally, is distinct from the altruistic behavior seen in the animal kingdom. It is rare enough among humans. The ability to forego guaranteed pleasure or comfort in the present rather than cause someone else possible pain or discomfort in the future is remarkable, all the more so when the former is great and the risk of the latter small. The human capacity for sacrificial behavior, like deeds of athletic prowess, is defined by our best—in recent history, Mother Theresa, Martin Luther King Jr., Thich Nhat Hahn, Mahatma Gandhi. Attempts to reduce the selflessness of leaders such as

these to the altruism observed in the animal kingdom are logically unconvincing and seem to merely reflect devotion to reductionist metaphysics.<sup>47</sup>

### **Conclusion**

The woolly mammoth is extinct, paleontologists say, because our ancestors invented powerful darts and cooperated to overpower it. This fact tragically highlights our exceptionalism as creatures. Many species continue to go extinct on a daily basis today, largely due to human activity.<sup>48</sup> Economic hardship, wealth inequality, and starvation continue in the midst of abundant material resources on the planet. How fruitful can the pleas to achieve a more sustainable economy and peaceful society be if our intellectual leaders describe humans as merely advanced apes? Exhortations to moral reformation lose their force. Aside from the greater probability of its truth value, the idea that humans occupy a higher ontological status than animals has practical value: it will embolden us to achieve the necessary reforms despite the short-term costs they may incur. We will see ourselves as actually capable of such sacrifice. This, however, opens up a new discussion regarding the moral nature of humans, the ideal state of human existence, and the best path forward to achieve it. Any path forward, however, begins with a vision articulated in advance. The ability to create such a vision is impossible without that scarcely-acknowledged faculty of the soul—imagination.

**Author Biography**

Gregory Kyle Klug is a composer and music instructor with a doctorate from the University of Northern Colorado. He currently teaches music theory and directs the orchestra at BASIS charter school in Phoenix. His solo piano album Diapason was self-released through a successful Kickstarter in 2013, and his solo piano and chamber works are published by MMHC music Publications. Dr. Klug's research and other writings appear in Search Journal for New Music and Culture, The Journal of the American Liszt Society, The Philosopher Journal, and Philosophical Investigations. Dr. Klug studied business entrepreneurship as an undergraduate at Long Island University, creative writing at the 2004 Southampton College Writer's Conference, and graphic art with Pam Capozzola in Westhampton Beach, NY. A native Long Islander, he is currently based in Arizona where he enjoys life as a husband and father of three.

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## Endnotes

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<sup>1</sup> E.F. Schumacher, *A Guide for the Perplexed* [1977] (London: Vintage, 2011), 27.

<sup>2</sup> *Ibid.*, 26.

<sup>3</sup> The thesis of which a recent reviewer paraphrases: “humans really were just apes, and much of our behaviour could be understood in terms of animal behaviour and its evolution.” Robin Dunbar, Angela Saini, Ben Garrod, Adam Rutherford, “The Naked Ape at 50: ‘Its central claim has surely stood the test of time’,” *The Guardian*. 24 September 2017. <https://www.theguardian.com/science/2017/sep/24/the-naked-ape-at-50-desmond-morris-four-experts-assess-impact> (Accessed 8 June 2018).

<sup>4</sup> Jeremy England, “Why Trees Don’t Ungrow,” *Aeon Magazine*. 1 November 2017. <https://bit.ly/2sHedHf> (Accessed 8 June 2018).

<sup>5</sup> See “List of Animals That Have Passed the Mirror Test,” *Animal Cognition*. <http://www.animalcognition.org/2015/04/15/list-of-animals-that-have-passed-the-mirror-test/> (Accessed 12 June 2018)

<sup>6</sup> The context of Kant’s quote reads: “Synthesis in general is the mere result of what I call the faculty of imagination, a blind but indispensable function of the soul, without which we should have no knowledge whatsoever, but of the existence of which we are scarcely conscious.” Immanuel Kant, *Critique of Pure Reason*. Translated by F. Max Müller (New York: MacMillan, 1896) 64-65.

<sup>7</sup> Agustín Fuentes, *The Creative Spark: How Imagination Made Humans Exceptional* (New York: Dutton, 2017).

<sup>8</sup> Natalie Wolchover, “How Do Blind People Picture Reality?” *LiveScience*. 4 October 2012 <https://www.livescience.com/23709-blind-people-picture-reality.html> (Accessed 12 June 2018)

<sup>9</sup> Aristotle, from *Parts of Animals*, quoted in *Philosophies of Art & Beauty: Selected Readings in Aesthetics from Plato to Heidegger*. Edited by Albert Hofstadter and Richard Kuhns (Chicago: University of Chicago Press, 1964), 84.

<sup>10</sup> Charles Darwin, *The Descent of Man and Selection in Relation to Sex* (New York: P.F. Collier, 1901), 120.

<sup>11</sup> Chomsky, *What Kind of Creatures Are We?* (New York: Columbia University Press, 2016), 2.

<sup>12</sup> Britannica articulates the consensus: “The most important single feature characterizing human language...against every known mode of animal communication, is its infinite productivity and creativity. Human beings are unrestricted in what they can communicate.” “Language.” *Britannica Academic*, Encyclopædia Britannica, 9 May.

2017. [academic.eb.com.ezproxy1.lib.asu.edu/levels/collegiate/article/language/108460](http://academic.eb.com.ezproxy1.lib.asu.edu/levels/collegiate/article/language/108460) (Accessed 18 May 2017).

<sup>13</sup> See Frans de Waal, *Are We Smart Enough to Know How Smart Animals Are?* (New York: W.W. Norton and Company, 2016), 126; Chomsky, *Creatures*, 41-43.

<sup>14</sup> See Jane Goodall, *Through A Window: My Thirty Years with the Chimpanzees of Gombe* (Boston: Mariner Books, 2010), 22-26.

<sup>15</sup> Isaac Asimov, *Asimov’s New guide to Science: A Revised Edition* (London: Penguin Books, 1984), 774.

<sup>16</sup> C.S. Lewis *Miracles* [1947] (New York: Touchstone, 1996) 95.

<sup>17</sup> Chomsky, *Creatures*, 50.

<sup>18</sup> Sue Llewellyn, “Are dreams predictions?” *Aeon Magazine*. 23 May 2016. <https://aeon.co/essays/how-dreams-predict-the-future-by-making-sense-of-the-past> (Accessed 8 June 2018)

<sup>19</sup> Julia Christensen et al. “‘Let the Soul Dangle’: How Mind-Wandering Spurs Creativity,” *Aeon Magazine*. 5 December 2017. <https://aeon.co/ideas/let-the-soul-dangle-how-mind-wandering-spurs-creativity> (Accessed 8 June 2018)

<sup>20</sup> Chomsky, *Creatures*, 27, 31, 51-52.

<sup>21</sup> Frans de Waal, *Are We Smart Enough to Know How Smart Animals Are?* (New York: W.W. Norton and Company, 2016), 10-11.

<sup>22</sup> The phrase is attributed to Harvard psychiatrist Arnold H. Modell. Steven T. Asma, *The Evolution of Imagination* (Chicago: University of Chicago Press, 2017) 40-41.

<sup>23</sup> In a recent study comparing chimpanzee and human toddler intelligence, it was shown that both groups of subjects shared “similar cognitive skills for dealing with the physical world,” but that the children excelled in social cognition, evidenced by their sharing knowledge with one another. Esther Herrmann et al., “Humans

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Have Evolved Specialized Skills of Social Cognition: The Cultural Intelligence Hypothesis,” *Science* 317 (September 7, 2007): 1360-66.

<sup>24</sup> de Waal, *Are We Smart Enough?*, 140.

<sup>25</sup> *Ibid.*, 158, 163.

<sup>26</sup> E.O. Wilson, *The Origins of Creativity* (New York: Liveright Publishing Corporation, 2017) 34.

<sup>27</sup> E.O. Wilson, *The Meaning of Human Existence*, 31.

<sup>28</sup> *Ibid.*, 14.

<sup>29</sup> “The ancestors of our species developed the brain power to connect with other minds and to conceive unlimited time, distance, and potential outcomes. This infinite reach of imagination, put quite simply, is what made us great.” E.O. Wilson, *The Origins of Creativity* (New York, W.W. Norton, 2017), 21.

<sup>30</sup> “The Human Imagination” in *The Economist*, 17 March 2017. <https://www.economist.com/books-and-arts/2017/03/16/the-human-imagination> (Accessed 24 May 2018).

<sup>31</sup> de Waal, *Are We Smart Enough?*, 125.

<sup>32</sup> Blaise Pascal, *Pensées*. Translated by A.J. Krailshimer (London: Penguin Books, 1995), 9.

<sup>33</sup> Jane Goodall describes alpha male chimpanzee Mike’s “imaginative strategy” to ascend in social rank: “Mike, by incorporating empty four-gallon tin cans into his charging displays, hitting and kicking them ahead of him as he ran toward his rivals, succeeded in intimidating them all – including individuals much larger than himself.” Goodall, *Through a Window*, 51.

<sup>34</sup> Ian Kerner, *She Comes First: The Thinking Man’s Guide to Pleasuring a Woman* (New York: Harper Collins, 2004), 87.

<sup>35</sup> Desmond Morris, *The Naked Ape: A Zoologists Study of the Human Animal* (New York: McGraw-Hill Book Company, 1967), 92.

<sup>36</sup> Steven T. Asma, “Imagination is Ancient,” *Aeon Magazine*. 11 September 2017.

<https://aeon.co/essays/imagination-is-such-an-ancient-ability-it-might-precede-language> (Accessed 26 May 2018).

<sup>37</sup> Jonathan Amos, “Ancient phallus unearthed in cave,” in *BBC News*, 25 July 2005.

<http://news.bbc.co.uk/2/hi/4713323.stm>. Accessed 18 May 2017.

<sup>38</sup> Xavier Corberó, “In Residence Ep18: ‘Xavier Corbero’ by Albert Moya.” *YouTube*, 2 February 2015.

<https://www.youtube.com/watch?v=vF8pY8Om840>. Accessed 18 May 2017.

<sup>39</sup> As some accuse. For example zoologist Antone Martinho-Truswell preaches, “nor should we be hubristic about the differences between humans and other vertebrates. That’s another sin in the biological sciences.” See “The Minds of Other Animals.” *Aeon Magazine*. 8 December 2016. <https://aeon.co/essays/why-wont-biologists-say-that-animals-might-be-conscious> (Accessed 12 July 2018)

<sup>40</sup> Pascal, *Pensées*, 9-11. Thomas Paine partly echoes this sentiment in his invective against the institution of monarchy a hundred years later in his pamphlet *Common Sense*.

<sup>41</sup> Pascal, *ibid.*

<sup>42</sup> Such as Asma, *The Evolution of Imagination*, and Mark Johnson, *Moral Imagination: Implications of Cognitive Science for Ethics* (Chicago: University of Chicago Press, 1993).

<sup>43</sup> Adam Smith, *The Theory of Moral Sentiments* [1759]. Edited by Knud Haakonssen (Cambridge: Cambridge University Press, 2002), 12.

<sup>44</sup> Quoted in Schumacher, *Guide*, 111.

<sup>45</sup> De Waal, *Are We Smart Enough?*, 132.

<sup>46</sup> cf. Genesis 39.

<sup>47</sup> See for example Herbert Simon, “A Mechanism for Social Selection and Successful Altruism,” *Science* 250. 21 December 1990. 1665-1668. <http://science.sciencemag.org/content/250/4988/1665/tab-pdf> (Accessed 8 June 2018).

<sup>48</sup> See E.O. Wilson *Half-Earth: Our Planet’s Fight for Life* (New York: Liveright Publishing Corporation, 2016).