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SCHOLARSHIP-BASED ANIMAL ADVOCACY

“I AM *NOT* AN ANIMAL!”

Denial of Death and the Relationship between Humans and Other Animals

A white paper by the Kimmela Center for Animal Advocacy

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ABSTRACT

The focus of this paper is to explore how cultural anthropologist Ernest Becker's claim that human behavior is largely motivated by fear of death may explain important aspects of our relationship with nonhuman animals. Terror Management Theory (TMT) suggests that when we humans are reminded of our personal mortality, we tend to deny our biological identity or creatureliness and distance ourselves from the other animals, since they remind us of our own mortal nature. In support of this assertion, an abundance of peer-reviewed experimental literature shows that reminders of our own mortality create a strong psychological need to proclaim that "I am not an animal."

We contend that the denial of death is an important factor in driving how and why our relationships with other animals are fundamentally exploitive and harmful. Even though today there are more animal advocacy and protection organizations than ever, the situation for nonhuman animals continues to deteriorate (e.g., more factory farming, mass extinction of wildlife species, and ocean life under severe stress).

Having reviewed the most up-to-date experimental literature, we look back at how some notable writers and philosophers throughout human history have approached the issue of our relationship to our fellow animals.

And finally, we look ahead to how we might address the question that Becker was never able to answer: How can we deal with the existential anxiety that is engendered by the awareness of our own mortality and that is the cause of so much harm to our fellow animals?

Keywords: animality, Becker, creatureliness, denial of death, terror management theory

INTRODUCTION

"Man is the only creature who refuses to be what he is."
Albert Camus, 'The Rebel'

In this paper we present the novel argument that there is an important connection between human denial of death and our troubled relationship with nonhuman animals. We summarize the claim made by Ernest Becker[1] that the awareness we humans have of our personal mortality creates a level of anxiety that drives much of our species' behavior, including our often-problematic interpersonal relationships and cultural practices. Becker argued that we tend to suppress this anxiety by

denying our biological identity and distancing ourselves from the other animals and therefore our own "creatureliness."

This paper takes Becker's claim a step further by arguing that mortality anxiety and denial lead us not only to having fraught relationships with each other, but also to an increasingly dysfunctional relationship with the rest of the natural world. More specifically, we present evidence that mortality anxiety has led to a disconnected and exploitive relationship with other animals, not only on a personal level but now on a global level, as manifested in the catastrophic rates of extinction, dramatic changes in climate, and toxic pollution of land, sea and air that are all being driven by human activity.[a]

We support our argument by bringing together diverse domains of knowledge starting with the peer-reviewed experimental psychology literature that shows that mortality anxiety increases the need to distance ourselves from the other animals. We then examine some of the key narratives about the relationship we have had with the other animals from prehistory to modern times in several domains—including mythological, historical, religious and cultural.

Finally, we bring these areas together to discuss the question that Becker was never able to answer: How can we deal with the existential anxiety that is engendered by the awareness of our own mortality and that is the cause of so much harm to our fellow animals?

Our Present Relationship with Nonhuman Animals and the Natural World

The last 50-60 years have seen an enormous growth in animal protection organizations around the world. For example, total operating revenues for the World Wildlife Fund were listed at $347.6 million[2]; for Best Friends Animal Society at $244 million[3], and for the Humane Society of the United States at $184.8 million[4]. But while there is a plethora of organizations focused on protecting animals in a wide range of domains, the situation for animals continues to deteriorate, particularly in four major areas – wildlife poaching and trafficking, factory farming and meat

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[a] The 2021 Sixth Assessment Report summary from the Intergovernmental Panel on Climate Change (www.ipcc.ch) found that "it is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred" and that "the scale of recent changes across the climate system as a whole and the present state of many aspects of the climate system are unprecedented over many centuries to many thousands of years." (Headline Statements from the Summary for Policymakers, 9 August 2021 subject to final copy-editing.)

consumption, the use of animals in invasive research, and loss of habitat due to human-induced climate change.

In the past decade, wildlife trafficking – the poaching or other takings of protected species and the illegal trade in wildlife and their body parts and products – has escalated into a global crisis. In the last century, rampant ivory poaching, killing for meat, and habitat loss caused African elephant numbers to drop from over 10 million animals in 1900 to fewer than 500,000 by the late 1980's[5]. Nearly 20 percent of all terrestrial vertebrates are impacted by the global wildlife trade[6]. And even our closest relatives, the great apes, are being decimated by poaching for meat, the exotic pet trade, and for zoos and tourist attractions with more than 22,000 great apes killed or captured between 2005 and 2011[7].

According to a 2019 UN Report up to one million species are facing extinction because of human activity. We are losing three species per hour[8]. A recent scientific study of vertebrate population losses and declines concludes that we are in the midst of a "biological annihilation"[9]. And the UN's Global Environmental Outlook (GEO5) warns that "the world continues to speed down an unsustainable path despite over 500 internationally agreed goals and objectives to support the sustainable management of the environment and improve human wellbeing"[10].

Factory farming and meat eating are on the rise globally despite the fact that vegetarianism and veganism have become more popular in some sectors. The Food and Agricultural Organization (FAO) of the United Nations reports that between 1990 and 2009, aggregate global meat consumption increased by almost 60 percent and per capita consumption by almost 25 percent. Meat consumption is expected to increase by 15 percent by 2027[11]. According to the Food and Agriculture Organization of the United Nations, more than 85 percent of the world's fisheries have been pushed to or beyond their biological limits[12]. And continued over-fishing of the oceans has led to the prediction of a global fisheries collapse by 2048[13].

Finally, more animals are being used in invasive and terminal research today than ever before. A recent paper estimated global animal use in scientific procedures in 2015 to be 192.1 million, a significant increase from the same estimate for 2005[14]**.** The Animal Welfare Institute reports that, according to the Department of Agriculture (USDA) in fiscal year 2018, there were 780,070 animals used in research in the US, and another 122,717 held in research facilities but not used for regulated activities. These numbers include dogs, cats, nonhuman primates, guinea pigs, hamsters, rabbits, pigs and sheep. Annual estimates regarding the number of rats, mice and birds in research range from 25 million to over 100 million. Millions of fish and

thousands of amphibians are also used. As these animals are excluded from protection under the Animal Welfare Act, there is no accounting to the USDA or any other federal agency of these millions of lives that are sacrificed for research, testing and teaching[15]. The most recent rises in animal procedures appear to mainly be due to the increased production and use of genetically modified animals, e.g., chimeras[16].

Animal protection groups are largely at a loss to explain this. Certainly, as human population and developing nations expand, wildlife is crowded out, people expect to be able to eat more animal products, and the oceans are overfished. But these factors are a symptom of the fact that humankind, for all of its intelligence and ingenuity, has set in motion a process of extinction and planetary destruction that may be one of the most devastating and relentless in the history of the planet.

One area of real progress is the decline in the number of homeless companion animals in the United States, where the number of dogs and cats being killed in shelters had fallen from around 17 million a year in 1990 to approximately 625,000 in 2019. (This fact supports the predictions and tenets of Terror Management Theory that we discuss in the next section in that we have come to think of these animals as companions and family members who are part of our in-group[17 18 19 20]. Companion animals are more favorably rated on a variety of dimensions, including attractiveness and mental complexity than other animals[21]. Thus, pets seem to represent a special category of animal who, according to Hirschman[19 p.623], "reside in an intermediate position between nature and culture".)

Several other countries also demonstrate a more compassionate relationship toward companion animals[22 23 24]. However, as we shall see, companion animals may be the exception that proves the rule in that they represent a special category of animal.

Overall, the small achievements in animal protection are largely incremental and fail to address the underlying cause of exploitation and abuse. Examples of this include regulations against using double-decker trailers to transport horses who are, nonetheless, going to slaughter[25]; the decision by SeaWorld to stop breeding captive orcas (but not to retire them to sanctuaries); and the agreement between HSUS and the United Egg Producers, which represents most of the large egg-producing factory farms, to seek legislation providing egg-laying hens with a few extra inches of space in the cages where, nonetheless, they will still spend their entire lives[26].

So, while people are more aware of issues to do with animal abuse and exploitation than ever before, our relationship with nonhuman animals, and indeed with the

whole natural world, remains fraught with contradictions and abuses to the point, indeed, where it threatens our own health and safety, and even our civilization[27] [28].

The Denial of Death

In 1973, cultural anthropologist Ernest Becker published his Pulitzer Prize-winning book *The Denial of Death*[1], in which he drew on the work of psychologists, philosophers, scientists and theologians to demonstrate how the terror of our own mortality leads us to deny our nature as animals. Becker laid out the fundamental paradox of human nature thus:

> [Man] is a symbolic self ... a creator with a mind that soars out to speculate about atoms and infinity ... This immense expansion, this dexterity, this ethereality, this self-consciousness gives to man literally the status of a small god in nature.
>
> Yet, at the same time ... man is a worm and food for worms. This is the paradox: he is out of nature and hopelessly in it ... He has an awareness of his own splendid uniqueness in that he sticks out of nature with a towering majesty, and yet he goes back into the ground a few feet in order blindly and dumbly to rot and disappear forever.
>
> ... The knowledge of death is reflective and conceptual, and [nonhuman] animals are spared it. They live and they disappear with the same thoughtlessness: a few minutes of fear, a few seconds of anguish, and it is over. But to live a whole lifetime with the fate of death haunting one's dreams ... that's something else. [1 (p. 26)]

Animal advocacy efforts have largely neglected the core psychological issue, revealed by Becker's theory, that we humans have a desire (albeit largely unconscious) to separate ourselves from nature and the other animals. Those efforts cannot be successful because they fail to consider the deep reasons why we feel the need to maintain superiority over our fellow animals and an ingroup/outgroup attitude with respect to them. Becker's theory leads to the clear conclusion that the deterioration of our relationship with other animals, the damage we inflict on the natural world, and the inevitable harm this has on our own lives are inextricably linked to our insistence that "I am not an animal" and to our denial of our fundamental nature. As Becker wrote in his final book, *Escape from Evil*:

> Mortality is connected to the natural, animal side of his existence; and so man reaches beyond and away from that side. So much so that he tries to deny it completely. As soon as man reached new historical forms of power, he turned against the animals with whom he had previously identified—with a vengeance,

as we now see, because the animals embodied what man feared most, a nameless and faceless death[29 (p.92)].

Mortality Salience and Terror Management Theory

The empirical and experimental embodiment of Becker's premise is Terror Management Theory (TMT), a social psychological theory that asserts that much of human behavior is motivated by anxiety, however unconscious, about personal mortality and that mortality salience is a specific driver of attempts to alleviate this anxiety. Mortality salience is produced by situations that remind us of our personal mortality or that make the idea of it more accessible. Mortality salience affects attitudes, decision-making, and the kinds of systems we adopt to imbue our lives with meaning[30].

While fully conscious thoughts of death invoke very direct and conscious efforts to remove thoughts of vulnerability, thoughts of death that are not within full consciousness (e.g., when there is a short delay after contemplating one's mortality) evoke less direct and more distal defenses, such as adopting religious and cultural worldviews, efforts that exist "under the radar" of our awareness[31] [32]. These thoughts are, therefore, more difficult to identify and make a conscious decision to change.

From the terror management perspective, the body reminds us of our animal limitations, in particular our certain mortality. TMT argues that any reminder of our corporeal existence and creatureliness is threatening, even though we may not be consciously aware that it is. That means animals themselves are threatening, and TMT predicts that we should want to distance ourselves from them and work to convince ourselves of a qualitative difference from, and of superiority over, them. While we cannot entirely distance ourselves from the other animals while continuing to use them physically, the critical point here is that we can distance ourselves from them psychologically by viewing them as commodities, resources, tools, and symbols. In the case of pets, we tend to relate to them as "furry people," thus, paradoxically, distancing *them* from the animals they really are.

Terror Management Theory is presented for a lay audience in the book "The Worm at the Core – On the Role of Death in Life" by Sheldon Solomon, Jeff Greenberg and Tom Pyszczynski.[33] The book explores how our unconscious fear of death drives much of human behavior.

"I Am Not an Animal"

One of the leading researchers in TMT, Jamie Goldenberg, and her colleagues argue that "cultures promote norms that help people to distinguish themselves from animals"[34 (p.1)]. They report that "distancing from the rest of the animal kingdom helps humans defend against anxiety associated with awareness of death". These findings are consistent with Becker's earlier claim that "all systematizations of culture have in the end the same goal: to raise men above nature, to assure them that in some ways their lives count in the universe more than merely physical things count"[35 (p.4)]. Modern civilizations, the authors note, go to great lengths to distinguish humans from other animals. And even those cultures that embrace nature (for example among indigenous societies) "also tend to imbue nature with supernatural significance because this symbolic meaning strips nature of its more threatening mortality-related qualities"[34 (p.433)].

Moreover, the way in which human-animal comparisons are framed affects our ability to include other animals in our moral ingroup. That is, when animals are depicted as similar to humans there is less outgroup bias against them than when the direction of the relationship changes so that humans are depicted as similar to animals – even though both are equivalent in terms of depicting humans and other animals as similar.[36]

Regardless, and even though there is no empirical basis for a line separating humans from other animals when it comes to the experience of consciousness, emotions, self-awareness, and the ability to experience pain, pleasure, joy and suffering[37 38 39 40 41 42], the need to believe that we are distinct from the other animals reasserts itself again and again. In sum, human exceptionalism remains central to our sense of self-worth.

Mortality Awareness

Psychologists and anthropologists point to our sophisticated level of self-awareness as being both a proverbial "blessing and a curse" – a blessing in that we may be endowed with a complex awareness of ourselves and our environment; and a curse in that this complex capacity burdens us with the constant awareness of our own mortality. As a result, we spend our lives in a persistent state of anxiety, struggling to give our lives "meaning" and to deny that our individual existence is purely temporary.

Much of human culture can be seen as an attempt to transcend our biological nature and to reach for some elusive form of immortality. As Stephen Cave describes it in his 2012 book *Immortality: The Quest to Live Forever and How It Drives Civilization*[43] (p.2) :

> "All living things seek to perpetuate themselves into the future, but humans seek to perpetuate themselves forever. This seeking—this will to immortality—is the foundation of human achievement; it is the wellspring of religion, the muse of philosophy, the architect of our cities and the impulse behind the arts. It is embedded in our very nature, and its result is what we know as civilization."

Cave offers four basic categorizations of "immortality projects":

> **Staying Alive** – the hope of an elixir that will defeat disease and debility for good;
>
> **Resurrection** – the belief that, although we must physically die, nonetheless we can physically rise again with the bodies we knew in life;
>
> **The Soul** – a belief system that promises survival as a spiritual entity of some kind. (A popular modern variation of this is the belief that we will soon be able to upload our brains to a computer.);
>
> **Legacy** – extending ourselves into the future through fame or fortune, good works, or genetically through our children.

Cave notes that none of these has successfully relieved the anxiety of our mortality salience. Quite the opposite, in fact, since when one person's immortality project conflicts with another's – e.g., the Christian path versus that of Islam – the end result is often conflict and aggression. (Or, as Sheldon Solomon puts it rather crisply: "My belief system is better than yours, and I'm going to kick your ass to prove it!"[44])

THE EMPIRICAL EVIDENCE

We now examine the experimental evidence supporting a relationship between mortality salience and our psychological need to disconnect from other animals.

Terror Management Theory argues that if psychological structures like worldviews, religions and cultural practices provide protection from concerns about death, then people will tend to cling to those structures and embrace ingroup practices and characteristics. Likewise, they will attempt to diminish or destroy representations

(e.g., people, religions, cultures, species) that appear to be inconsistent with that protective structure, i.e., outgroup practices and characteristics.[31] [45] [46]

"I Am *Not* an Animal!" – The Experimental Evidence

Empirical support for the general claims of TMT comes from over 300 peer-reviewed experiments[47] [48] [49] [50] conducted in at least 15 different countries [e.g.] [51] [52] [53]. The work has supported hypotheses concerning a wide range of areas of human behavior, including prejudice, self-esteem, and social judgment. Becker's basic premise has been validated in a variety of experimental situations and appears to have predictive value for various facets of human psychology. Here we examine the experimental support for the specific hypothesis that enhanced mortality salience increases negative views of other animals.

In a series of five recent studies, Lifshin et al.[54] provided the first direct empirical evidence that support for killing animals is in part caused by the psychological need to cope with mortality awareness. Subjects exposed to subliminal death primes reported more support for the (non-subsistence) killing of animals than those in a control group. The effect was robust to many of the usual potential moderating factors, e.g., gender, pre-existing animal rights beliefs, political or religious orientation. However, consistent with the general TMT literature, self-esteem boosting primes lessened the support for killing of animals.

In earlier studies, Goldenberg et al.[55] showed that human subjects distance themselves from animals as a defense against death anxiety. In the first of two studies, they found that enhancing mortality salience increased disgust sensitivity toward animals and animal body processes, specifically over other non-animal related types of disgust, for example, food. In the second study, they found that mortality salience increased preference for arguments that humans are unique among all life forms, compared with a control condition. Essays emphasizing differences between humans and other animals were preferred to those targeting similarities. Goldenberg et al. suggested that participants may have found the essay portraying humans as unique as particularly helpful in the face of increased mortality salience.

These findings are consistent with earlier studies by Rozin and Fallon[56] supporting the view that disgust is elicited by animals and body products because these concepts blur the distinction between humans and other animals. The authors suggested that disgusting stimuli can be a salient reminder of death because of their association with creatureliness. Cox et al.[57] also found a relationship between

mortality salience, disgust and priming with human-animal similarities, supporting the view that bodily processes are often considered disgusting because of their similarity to creatureliness and the decay of death.

Further support for Goldenberg's findings comes from more recent studies in which the authors tested the relationship between mortality salience and resistance to the notion that another animal might share or exceed our superior human status[58]. In the first study, they investigated whether reminders of death lead people to react against information that members of another species, in this case dolphins, are smarter than humans. The authors found that participants reminded of death report lower liking for, and are less persuaded by, reading an article stating that dolphins are more intelligent than humans, compared with an article that focuses on dolphin intelligence without making any comparison to humans. Participants not led to think about death – i.e., not in the mortality salience group – were much less negative toward the article advocating dolphin superiority.

In a second study, they investigated whether reading an article stating that dolphins are more intelligent than humans is an existential threat. They found that participants who read an article about how dolphins are more intelligent than humans show higher levels of death-related thoughts compared to participants who read an article about the characteristics of dolphin intelligence. Both of these studies provide potent evidence of the relationship between mortality salience and the need to remain unique and separate from the rest of the animal kingdom.

Extending these insights to another domain of human and nonhuman animal behavior, Goldenberg et al.[59] examined the relationship between mortality salience and attitudes toward the physical aspects of sexuality. In one series of experiments, when subjects were primed with an essay that described the similarity between humans and other animals, the physical aspects of sex (shared with other animals) became less appealing than the romantic (and supposedly uniquely human) components of sexuality, like love and commitment. Subjects who read an essay about how culture distinguishes humans from other animals found the physical side of sex to be more appealing.

Beatson and Halloran[60] showed that the effects of mortality salience on defenses against creatureliness are moderated by self-esteem. Mortality salience leads subjects with low self-esteem to have more negative responses toward animals under conditions where they are primed about creatureliness. In a follow-up study, Beatson, Loughnan and Halloran[61] found that even companion animals are not exempt from eliciting negative attitudes when mortality salience is very high. This is interesting in light of the evidence that companion animals are generally regarded more positively

than other animals. Goldenberg et al.[62] reviewed empirical evidence that mortality salience triggers psychological defenses against both other animals and other humans, extending its reach to the widespread and robust psychosocial phenomena of objectification and subhumanization. From this perspective, "humanness" is typically defined as that which distinguishes humans from other animals[63], and the twin phenomena of objectification and subhumanization are well known to all who have studied the many historical examples of one race or nationality of people attempting to annihilate another. Examples include Nazi propaganda images of Jews as hordes of rats and American citizens posing for "trophy photos" with African Americans who have been lynched (Zimbardo, 2008). Objectification takes this concept further by stripping away the animal and any shared characteristics with humans and viewing members of the outgroup as lifeless objects.

Terror Management Theory argues that in order to manage challenges to the veracity of one's defenses against mortality that derive from outgroup behavior, viewpoints, cultures and religions, we denigrate members of the outgroup, thereby diminishing their importance and distancing ourselves from them. Leyens et al.[64] demonstrated a direct link between one's ingroup and humanness: Priming the human ingroup led to faster recognition of the word "human" versus the words "ape" or "chimpanzee," but the human outgroup prime led to faster recognition of animal faces. And Goldenberg et al.[65] reviewed 37 empirical demonstrations of a similar effect in a dozen different countries and concluded that people have a general tendency to attribute most of the essence of humanness to one's ingroup and less of it to others.

Related to the sub-humanization effect on outgroups described above, additional research has shown that viewing humans as infrahuman increases aggression and support for violence against them[66] [67]. Plous[68] has provided evidence that there are important connections between prejudice toward human outgroups and speciesism. Both are driven by an increase in ingroup-outgroup distinctions. Consistent with these findings are those of Motyl, Hart and Pyszczynski[69] showing that when mortality salience is increased, people scoring high on a scale of right-wing authoritarianism tend to have a less supportive attitude toward violence against outgroups when the violence is portrayed as something instinctual and animalistic. Thus, suggestions that violence toward outgroups is "animalistic" tend to decrease one's outgroup aggression toward other humans.

Finally, there is evidence that terror management concerns increase negativity toward nature in general. Exposure to wilderness can promote physical and psychological well-being [70] [71], and many have argued that people have a "biophilia" motive, a biologically based affinity for life [72] [73]. But wilderness is also associated with death

and uncontrollability since the "forces of nature" are typically viewed as more powerful and unpredictable than oneself [74] [75]. In a series of experiments, Koole and van den Berg [76] found robust support for this idea, finding that increased mortality salience led to less favorable aesthetic views of the wilderness than cultivated and artificial environments. Importantly, people did not have a uniformly negative reaction to nature, but rather only when thoughts of death were enhanced.

The evidence, then, is that mortality salience has a strong and consistent connection with psychological mechanisms that serve to devalue and separate nature (including animals) from our own species. This phenomenon acts on several levels and across a broad range of contexts.

NARRATIVES THROUGH TIME

Having reviewed the most up-to-date experimental literature, we now look back at how some notable writers and philosophers throughout human history have approached mortality salience as a central issue regarding the human condition. This discussion is meant to be descriptive but not exhaustive.

Mortality Salience in Mythology

The oldest known written stories in the world, dating to around 4,000 years ago, tell of the hero Gilgamesh (two-thirds god, one-third human) and his beloved friend Enkidu (two-thirds beast, one-third human) and of the anguish each of them experiences as they become aware of their own mortality.

For Enkidu, who once roamed with the other animals and protected them from hunters, his ascent into human civilization includes becoming a hunter himself. And after he joins Gilgamesh in a reckless adventure to kill the "monster" Humbaba, who is in fact the protector of the forest, the gods decree that he must die, a prospect that, on account of his having become more human than beast, terrifies him.

Gilgamesh, in turn, is not only grief-stricken by the death of his friend, but also fully awakened to his own mortality. So, he goes off on a quest to find the key to immortality, a quest that is ultimately thwarted when he is led to a plant that confers eternal youth, only to have the plant stolen by a snake. At the end of the story, Gilgamesh returns to his city, a sadder but wiser man[77].

The story of a plant that confers immortality and of an accompanying snake is clearly echoed in the Hebrew Garden of Eden story, written more than 1,500 years later, around 500 BCE. And while this version has been co-opted by many religions that

have translated it and reinterpreted it for their own purposes, a fresh reading arguably offers a dramatic picture of what happened as we humans developed a greater self-awareness.

The man and woman are "naked and untouched by shame," living in harmony with the animals around them. Then they hear from two voices: one warning them not to eat of the "tree of knowing good and bad" lest they be "touched by death"; the other leading them forward to fulfill their potential for self-awareness, telling them they will become "as gods" [78].

> Both voices, of course, are true. And so begins the story of civilization. The growth of self-awareness brings with it the duality of a god-like self-awareness together with the painful, ungod-like shameful awareness of our animal nature as naked, sexual, physical beings who are doomed to die. In the context of Becker's theory, we discover that we are "gods with anuses" [1 (p.219)]. So catastrophic is this fall from innocence, according to the Hebrew Bible story of Noah and the flood, that within a few brief generations, humankind has brought about the near destruction of the entire planet.

In Ancient Greek literature, Prometheus, who represents foresight, offers humankind the gift of fire, generally accepted as a metaphor for enlightenment. But in *Prometheus Bound* [79], he recognizes that the gift is a curse and takes away the pain of humans' mortality salience by enabling them to deny their own mortality:

> **Prometheus: I prevented mortals from foreseeing their death.**
> **Chorus Leader: By finding what remedy for this malady?**
> **Prometheus: I caused blind hopes to dwell within them.**
> **Chorus Leader: In this you gave a mighty benefit to mortals!**

In other examples, the Cheyenne people of the Americas speak of a time when humans were naked and innocent before they received a gift of knowledge that led to war, famine and other disasters[80]; the Mayan Popol Vuh echoes the Hebrew Bible in saying that the creators of the first humans were afraid that their creation would become "as Gods"[81]; and many African myths describe a time when "people lived forever and never died—they understood the language of animals and lived at peace with them"[82]. All these stories suggest the innocence of living in an eternal present without the existential terror of death.

In his book *Memories and Visions of Paradise*, Richard Heinberg[83] sums up our loss of innocence and our disconnection from the animals and nature:

> **From earliest times, humans have believed that there is a quality in themselves that sets them apart from the animals – a quality that manifests itself as a sense of alienation and insufficiency and as an abnormal capacity for destructiveness and cruelty. Ancient peoples insisted that evil in this ... sense has not always existed, and that it had a specific cause. ... [It] is described as having resulted from the Fall, the tragic end that brought the Golden Age to an end.**

Mortality Salience in History

History also records the change in our relationship with the other animals over the millennia. And while this is obviously a long and complex story, the following are examples of some of the key points in that history.

Early cave art, dating at least as far back as 30,000 BP, reflects a level of respect for every animal, not just as a food source but as an individual in his or her own right, one with whom we humans were intimately connected through the cycle of nature[84].

By 11,000 BP, however, according to recent archeological finds in Turkey, the relationship between humans and other animals had changed dramatically, with humans taking on a position of superiority. This change is reflected at the ruins at Gobekli Tepe, seen by many as the world's oldest-known temple, where T-shaped pillars, clearly representing humans, are contrasted with depictions of other animals, whose much smaller size and low positioning on the pillars suggest a relationship that is no longer one of equality[85]. The presence of human skulls that appear to have been buried and then dug up, along with wall carvings of headless men, also suggests a growing preoccupation with mortality.

The agricultural era, which began roughly 12,000 years ago, brought with it the increasing domestication of animals and a fundamental shift in our relationship to them, by which the animals began to be seen less as beings of great mystery and power, and instead as commodities[86]. The animal deities of the new religions were less embodiments of sacred animal power and more representations of the growing human power over nature. Again, this increasing separation from nature comes at a price: Ancient Egyptian civilization became locked in a cycle of increasing obsession with death. Indeed, Stephen Cave[87] notes that Egypt was, for thousands of years, totally preoccupied with all four forms of immortality project outlined in his book.

In addition to serving as food and transport, domesticated animals were still viewed symbolically as the gods and goddesses of the new agricultural societies. But these divinities were increasingly under the control of humans. As an example, in Egypt, a young bull representing Osiris, the god of death and rebirth, was kept in captivity his

entire life before being sacrificially killed and then replaced by another young bull. While considered a symbol of great power, the bull "god" spent his life languishing in captivity, awaiting execution and replacement (Rice 1998), and was therefore more importantly a symbol of humankind's dominion over nature.

Much of the modern Western world's relationship to nonhuman animals was forged in Ancient Greek thought, where, for example, Aristotle argued that "the divine intellect, of which each man has a potential share and which distinguishes man from other animals, is immortal and transcendent"[88]

For the ensuing Christian world, there was simply no place in the symbolic realm of heaven for nonhumans. Augustine argued that in heaven "there will be no animal body to weigh down the soul in its process of corruption"[89].

But the notion that only humans had a soul culminated in the work of 17th-century philosopher René Descartes, who asserted that since, according to him, "animals" have no self-awareness and don't "think," they are therefore simply biological machines that don't have to be treated as living beings at all[90]. Descartes' work represents the philosophical and moral nadir of the separation of humans from the mortal, corporeal world of other animals.

Today, nonhuman animals are routinely used in ways that disguise who they are or reinforce our ostensible superiority. We buy meat in shrink-wrapped packages, use other animals as biomedical "models" or "systems" in research, and force them to perform for our entertainment. All of these ways of using other animals as spare parts, commodities and property are so embedded in most cultures that they are not typically questioned.

Just as "The Worm at the Core – On the Role of Death in Life"[33] offers a highly readable account of how mortality anxiety drives human civilization and culture, so Jim Mason's "An Unnatural Order – The Roots of Our Destruction of Nature" explores human exceptionalism and our mission through the ages to take dominion over our fellow animals – and indeed of each other. First published in 1993, it has recently been revised and updated[91].

CONCLUSIONS AND DISCUSSION

In this paper we have provided empirical evidence suggesting that a strong assertion of humankind is "I am *not* an animal," and that this affirmation is driven by the fact that animals remind us of our own creatureliness and mortality.

Over time, we have developed increasingly sophisticated civilizations that have served to distance ourselves from the other animals to the point where we now relate to most of them as little more than commodities, resources, and spare parts that can gain us, at very least, a few more years in which to fight off the specter of death.

A way forward?

Becker's theories and the supporting evidence of Terror Management Theory have shown us the extent to which the human condition is rooted in the denial of death. But they have not been able to offer a way through the terror that is inspired by the knowledge that we are mortal animals. In his closing chapter Becker writes[92]:

> **There is no way to overcome creaturely anxiety unless one is a god and not a creature ... Men are doomed to live in an overwhelmingly tragic and demonic world ... Creation is a nightmare spectacular taking place on a planet that has been soaked for hundreds of millions of years in the blood of all its creatures ...**
>
> **Whatever man does on this planet has to be done in the lived truth of the terror of creation, of the grotesque, of the rumble of panic underneath everything. Otherwise, it is false[29 (p. 283)].**

Other explorers of the human condition have been less uncompromising than Becker. In the Epic of Gilgamesh, the owner of a tavern where Gilgamesh stops by during his search for the key to immortality counsels him not to waste his time on such a pursuit, but rather to assuage his mortality anxiety by enjoying the simple pleasures of life.

The Hebrew Bible, in turn, echoes this advice in many of its books. "Go your way, eat your bread with joy, and drink your wine with a merry heart," writes the author of Ecclesiastes. "Live joyfully with the wife whom you love all the days of the life of your vanity"[93 (p.987)]

The Greek philosopher Epicurus counseled his followers to understand that the fear of death arises from the false belief that in death there is consciousness. Hence the Epicurean epitaph: "Non fui, fui, non sum, non curo." ("I was not; I was; I am not; I do not care.")[94]

More recently, British philosopher Bertrand Russell argued that "The fear of death is somewhat abject and ignoble. The best way to overcome it ... is to make your interests gradually wider and more impersonal, until bit by bit the walls of the ego recede, and your life becomes increasingly merged in the universal life."[95]

Albert Einstein took this approach a step further, proposing that our sense of being separate from the rest of creation is "a kind of optical delusion" and that "Our task must be to free ourselves from this prison by widening our circles of compassion to embrace all living creatures and the whole of nature in its beauty."[96]

And in an earlier version of this paper, we ourselves suggested that "Just as our attempt to separate ourselves from the world of nature has driven us to the brink of global catastrophe, so any true resolution of our terror of death has to lie in establishing a new and more meaningful relationship with the world of nature, and therefore with our own true nature."

In retrospect, however, we question whether "any true resolution of our terror of death" is possible for humankind. Nor do we now think that establishing a better relationship with the natural world could be a prescription for alleviating mortality anxiety and a solution to the paradox of our being "part-creature-part-god". Certainly, there is no evidence to suggest that it is. Indeed, the entire history of our species argues that it is not.

In any case, we conclude by suggesting that this is not, frankly, a time to be trying, yet again, to sort out the human condition. Right now, we are living in what environmental philosopher Glenn A. Albrecht calls "the massive transformational forces of the Anthropocene, the period of human dominance over all biophysical processes on the planet, including the big one: a hotter and more chaotic global climate."[97]

The deep irony of our situation is that we humans have so devalued the lives of our fellow animals in our efforts to rise above them that we have brought on the early days of a mass extinction that may indeed swallow us up, along with much of the rest of Planet Earth's creatures

And on the occasions when we humans stop to even consider the fact that we are driving the planet deeper into mass extinction, all we ever seem concerned about is how this will affect us humans.

So, rather than proposing solutions to the human predicament and its effects on other living creatures, we close this paper by arguing that if we humans are to achieve any dignity, then it is surely time to stop giving priority to ourselves, our fears and our anxieties, and instead to devote whatever time we have left to doing whatever we can to alleviate the suffering we have brought upon our fellow animals.

The story of humankind is a tragedy in the classical sense of the word: the tale of a prodigal species with a tragic flaw that it could never overcome, and the denial of which has brought disaster upon itself and upon the whole world.

The one remaining question can only be whether, in the final act of this drama, we can recognize and come to terms with what we have brought about and do whatever we can for our fellow creatures who have borne the brunt of our denial.

We can do this in large ways together or in small ways individually, but it is the one thing we can actually do that will address the situation, even if only in small part.

And perhaps, in making restitution wherever we can, we will find some relief from our own fears and anxieties, and a measure of redemption for ourselves.

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