Revisioning the Animal Psyche

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Abstract: A new paradigm for understanding animals and our relationship to them is emerging from scientific inquiry. This paper explores our historic beliefs about animals, reviews advances in animal research that are calling for a revision of those beliefs, and asks what contributions the field of depth psychology might make to the project of revisioning the animal psyche for the 21st century. Particular emphasis is given to mapping Jung's biological understanding of psyche and archetype onto the emerging scientific model of evolutionary cognition, as well as consideration of imaginal consciousness and projection dynamics.

Introduction

The practice of depth psychology carries an ethical injunction to look beyond appearances, to question assumptions, to hear the unheard and see the unseen. Psyche is often invisible at first glance, lest why should depth psychologists need to make such effort to uncover and commune with her? Among the many aspects of our modern human life that fall into the background of silent assumption, the question of animals—what they are, what they experience, what they need from us—is worthy of renewed consideration from a depth perspective.

There is an uncomfortable emerging consensus, not just among animal lovers and pet owners, but also among neuroscientists, that animals are feeling, experiencing beings. The Cambridge Declaration of Consciousness (2012), put forth by a consortium of brain scientists, recognizes that non-human animals have consciousness, albeit perhaps a consciousness qualitatively different from our own. Nevertheless, this recognition of subjective being in animals continues to clash, often painfully, with centuries of collective assumption that animals are unfeeling biological machines, little more than a resource for human use, entertainment, and consumption.

A new paradigm for understanding animals and our relationship to them is emerging from scientific inquiry. Depth psychology, for its part, may have an important contribution to make in helping us understand why common cultural beliefs and perceptions from centuries past continue to occlude this new vision of life on earth. Our field can name the projections, the stories, the myths, the shadows that mar our relationships with our animal kin. Though animals cannot speak to us with symbolic verbal language, nevertheless we have a different set of skills to listen to them. We may listen by attending to psyche in all its manifestations, paying greater attention to animals' bodies, movements, and relational behaviors—and through our willingness to engage with animals as embodied living images in relationship with us and our world.

This paper will explore the emerging paradigm around animal consciousness, and the stalwart resistance to it, in the context of depth psychological understanding. A sampling of the startling and often delightful new evidence around complex cognition in

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animals will be reviewed. Finally, we will consider the contributions depth psychology might make to the project of revisioning the animal psyche for the 21st century.

It should be noted that this emerging perspective on animals is new to Western Culture, Western philosophy, and Western science. It is not new to humanity. Indigenous people around the world have lived in kinship with animals as non-human persons for millennia. The aim of the present work is to address a meaningful shift within the Western scientific paradigm specifically—a shift with the potential to bring Western civilization into greater harmony with the natural world.

The Old Paradigm

Since 2009, every summer solstice the Chinese city of Yulin celebrates a dog meat festival, in which people gather to eat hundreds, if not thousands, of dogs (Block, 2021). This practice is perhaps more likely to alarm the Western mind because we have a different set of cultural stories about dogs: that they are our guardians, our protectors, members of our family, sometimes our "best friend." The fact that, for many Americans, a dog-eating festival is more offensive than a pork barbeque is an example of what social psychologist Melanie Joy (2011) has coined *carnism*: the set of culturally constructed beliefs that determine the proper use of animals. For anyone who has raised and emotionally bonded with a pig (the author being one such person) the notion that dogs are inherently less appropriate for eating appears quite arbitrary. Pigs, when raised with love and engaged in relationship, can be clever, communicative, thoroughly emotional companions. When science measures pig intelligence, it finds them smarter than dogs, smarter perhaps than some human toddlers.

Setting aside the ethics of killing and eating an intelligent being, I raise the issue of eating pigs to demonstrate the degree to which our automatic, culturally transmitted ideas about animals are often based in little more than popular storytelling. Because the pigs cannot advocate for themselves, at least not in a manner than most humans are prepared to understand, we are free to project onto them as we will. Unless we have a particular experience to color (or individuate) that projective relationship, the default projection will be the collective story we have inherited from our cultural group. In Europe, a thousand years ago, the primary story about animals came from the church: God put them on Earth as a resource, to be used as humans see fit.

Though it will not be the focus of this paper, it is worth noting that there are strong financial interests in continuing to view animals as commodities. Factory farms, corporations dealing in animal-derived products, and industries devoted to resource extraction and land development all have vital moneyed interests in maintaining these collective stories about appropriate animal use. To further complicate matters, such interests are not simply a matter of wealthy executives supporting the status quo—millions of humans have their livelihood wrapped up in such activities and could potentially suffer real economic harm if laws and practices around animal use suddenly changed. The factor of human economic need makes for a tangled knot, not easily untied.

The cultural stories that threaded this knot go back millennia. We see animal life first formally codified into a hierarchical system in the 4th century BCE with Aristotle's *Scala Naturae* ("ladder of nature"). Here animals were ranked according to their level of perfection, with human beings placed at the very top. Though Aristotle brought some empirical effort to his grand design, it was inevitably speculative, coming as it did some

two thousand years before the advent of formal scientific method. The *Scala Naturae* was adopted by the early church and integrated with a biblical ethos that placed humans at the center of creation. Thus, our Western myth of the animal world was established for thousands of years to come.

In the 17th century, René Descartes further formalized this mythology into the philosophy of his time and took it to a new extreme. Following the mind-body split explored in his meditations, he declared the entire world outside of the subjective human mind to be a kind of mechanism. Animals were part of a machine world. Descartes declared them unconscious automatons, incapable of feeling pain. Such a conception, of course, paves the way for all manner of abuses by removing any moral consideration about the experience of non-human animals. If they cannot feel, we cannot hurt them.

We find an early contradictory argument from the unlikely voice of Charles Darwin. Among Darwin's (1872/2005) lesser-known works is *The Expression of the Emotions in Animal and Man*, which advances a robust, detailed argument for the evolutionary continuity of emotions between humans and their non-human kin. Emotions, the book argues, are embodied responses to events and circumstances, both positive and negative. Although Darwin's work does little to escape the hierarchical elements of the Western myth, it opened up a new space for considering the emotional experiences of animals as being analogous to our own.

Jung on Animals

The brief historical sketch above provides some cultural context to evaluate Carl Jung's views on animals. Jung mentions animal life's significance to humans and to psychology in several passages without ever taking it on as a central topic. Though these ideas are not well developed, his viewpoints nevertheless offer a helpful starting point for depth psychological discussion of the animal psyche. His views on animals follow a similar track to his writings on gender: at once forward thinking for his historical and cultural milieu while at the same time largely under the sway of the dominant cultural myths of his time. Recounting his childhood, Jung (1961/1989) writes:

> Because they are so closely akin to us and share our unknowingness, I loved all warm-blooded animals who have souls like ourselves and with whom, so I thought, we have an instinctive understanding. We experience joy and sorrow, love and hate, hunger and thirst, fear and trust all in common—all the essential features of existence with the exceptions of speech, sharpened consciousness, and science. . . Animals were dear and faithful, unchanging and trustworthy. People I now distrusted more than ever. (p. 67).

These statements go beyond a mere scientific recognition of shared traits between animals and humans. Jung's words suggest a deeply felt sense of kinship, a sameness of experience rooted in the embodied exigencies of life on earth. Such reaching for connection through a deeper stratum of shared being mirrors Jung's lifelong project of seeking truth beyond the surface of the conscious mind and its conventional collective understandings. He expresses a level of trust in the deeper felt-connection that, at least some of the time, feels more nourishing than conventional human relationships with all their complications.

Eventually Jung's sense of kinship with animals took on an ethical dimension. Regarding the practice of animal dissection, he writes: "I could never free myself from

feeling that warm-blooded creatures were akin to us and not just cerebral automata. Consequently, I cut demonstration classes wherever I could" (1961/1989, p. 101). His conviction was strong enough to turn him away from a deeper study of physiology and may be counted among the many threads of influence that led to his interest in psyche. Though not a prominent aspect of his work, Jung's feelings about kinship with the animal world continued throughout his career. He writes in *Symbols of Transformation:* "Emotional manifestations are based on similar patterns, and are recognizably the same all over the earth. We understand them even in animals, and the animals themselves understand each other in this respect, even if they belong to a different species" (1919/1956, p. 234). And later in life: "Even domestic animals, to whom we erroneously deny a conscience, have complex and moral reactions" (1958/1964, p. 446). To attribute not only emotion but also complexity and morality to some animals is a bold and unusual stance for a thinker of Jung's era. Again, we see an ongoing movement toward both a shared sense of being and primal human-animal understanding throughout his works.

Jung's statements detailed above are admittedly better understood as expressions of personal conviction and worldview rather than as any kind of cohesive theory. We come upon the latter more fully in Jung's discussion of animals in relation to archetypes. "There is nothing to prevent us from assuming that certain archetypes exist even in animals, that they are grounded in the peculiarities of the organism itself" (1917/1953, p. 69). The same idea is later expressed with greater conviction in his ETH lectures: "Archetypes go back not only through human history, but to our ancestors the animals. That is why we are able to understand animals so well and make friends with them" (2018, p. 177). Just as Darwin demonstrated the continuity of emotional expression in animals and humans, Jung is here suggesting a similar evolutionary progression with regard to archetypes in the evolution of psyche. The mother archetype, then, is experienced and expressed by the mother bear nurturing and protecting her cubs. We are better able to understand and empathize with her because we share a deep intuitive understanding with the archetypal pattern of motherhood. This line of thinking is particularly interesting in light of Downing's (2006) assertion that for Jung, archetypes are instincts made psychologically meaningful. Thus, the mother bear cares for her cubs not merely out of blind, compulsory instinct—she also *experiences meaningful existence* in the fulfillment of that pattern. It would of course not be the "meaning" found in words or rational understandings. But if we expand our definition of meaning to include the emotional, the somatic, and the imaginal, there is nothing to preclude the notion of a bear living a meaningful life freed from our semantic constraints. These possibilities and the evidence supporting them will be discussed in greater detail below.

Though Jung's childhood recollection limited his sense of kinship only to warm-blooded animals, his theory of archetypes in the animal kingdom extends all the way down the ladder. In *The Nature of the Psyche*, he uses the examples of leafcutter ants:

> Every instinct bears in itself the pattern of its situation. Always it fulfills an image, and the image has fixed qualities. The instinct of the leaf cutting ant fulfills the image of ant, tree, leaf, cutting, transport, and the little and gardens of fungi. If any one of these conditions is lacking, the instinct does not function, because it cannot exist without its total pattern, without its image. Such an image is an a priori type. It is inborn in the ant prior to any activity (1946/1960, p. 201).

It remains a stretch, in Jung's time and in ours, to attempt to conceive of an insect *psychology* (modern parlance goes so far as to acknowledge "insect cognition" with its computational overtones). Yet here Jung seems to be suggesting an imaginal basis to psyche that is present in an embryonic form even in the supposedly lowly ant. To be clear, ascribing a baseline archetypal psychic existence to the ant does not imbue it with other psychological qualities such as empathy, self-awareness, complex cognition, and the like. Rather it opens the door for even invertebrates to experience some small measure of imaginal consciousness. Jung's assertion about the ant can be read as an antecedent to neuroscientist Rodolfo Llinas' (2001) theory, discussed below, that image-making has been the among the primary functions of the animal nervous system from the beginning.

The Emerging Paradigm

Over the last few decades an abundance of new research has turned many of our entrenched Western assumptions about animals on their head. In the words of primatologist Franz de Waal (2016):

> Everyone must have noticed the avalanche of knowledge emerging, diffusing rapidly over the internet. Almost every week there is a new finding regarding sophisticated animal cognition, often with compelling videos to back it up. We hear that rats may regret their own decisions, that crows manufacture tools, that octopuses recognize human faces . . . we speak openly about culture in animals and about their empathy and friendship (p. 5).

This summation draws attention to the fact that it is not only new research that is emerging, but also a renewed cultural hunger to understand and wrestle with these issues.

To provide a framework for understanding how the scientific understanding of animals is shifting, de Waal uses the concept of *evolutionary cognition*. The basic premise of evolutionary cognition, and the related field of cognitive ecology, is that different organisms have evolved different kinds of minds to suit their particular needs. This shifts the conversation away from a strictly hierarchical and one-dimensional scale of intelligence that places humans being at the top and replaces it with a more open-ended exploration of how different kinds of intelligence have emerged in different animal bodies. The mind did not evolve in a single straight line from worm to human but rather branched out into a multiplicity of successful, species-specific modes of cognition. As de Waal (2016) puts it, "I look at human cognition as a variety of animal cognition" (p. 5). Evolutionary cognition's shift in emphasis is much closer to Darwin's original understanding of evolutionary development, and marks a significant departure from the *scala naturae* that has for so long been ingrained in Western thought.

Importantly, the emergence of evolutionary cognition provides a scientific basis for reconsidering our aversion to so-called *anthropomorphism*—the practice of projecting human qualities onto animals. An evolutionary model of mind assumes, on the contrary, that we would expect to see many shared traits in human and animal minds resulting from our shared cognitive heritage. Animal minds may at times resemble human minds because both are branches with origins in the same cognitive root. Of course, the concept of *projection* itself comes out of depth psychology, so depth psychologists especially will be wary that when observing another being, be they human or non-human, we are likely to

project contents that are not there. We might expect this to be particularly true with animals, whose modes of communication are not easily understood by most humans. But that projection works both ways: we may project thoughts onto animals that they are not having, but so too we may project our cultural assumptions onto animals (i.e., that they are dumb, unfeeling machines). A commitment to the latter stance has been encapsulated by de Wall (2016) in the term *anthropodenial*—then denial of our evolutionary kinship with the animal world.

As an example of what a differently intelligent non-human mind might look like, consider the case of the Clark's nutcracker. In the fall, this busy bird stashes pine nuts in hundreds of locations, some of them distributed over many miles. Later, throughout winter and spring, the bird returns, remembers those hundreds of locations, and retrieves the majority of the nuts (Balda & Kamil, 1992). Imagine a typical human attempting such a thing: being tasked with stashing coins in hundreds of individual caches throughout a forest, in places hidden from view, *without making notes or drawing a map*. Imagine that same human coming back months later, remembering each location, and recovering all of the coins. Perhaps you, the reader, might consider how well you would fare at such a task? That we can imagine a human doing so at all is likely due to stories of savants with extraordinary memories. But what for a human would be an act of rare cognitive genius is business as usual for Clark's nutcracker.

We should acknowledge that the words "mind" and "cognition," as conceived by scientists, are not quite equivalent to what depth psychology refers to as "psyche." Nor can they be completely disentangled. The more poetic term *psyche* is broader in scope and evokes the soulful aspect of our being, those elements that cannot adequately be expressed in the machinations of cognition. Psyche evokes the unconscious, the imaginal, the emotional, the intuitive, the somatic, and perhaps the spiritual. But for psyche to encompass the fullness of being, it must encompass and integrate the cognitive aspect of that being as well.

Indeed, Jung (1946/1960) writes about the evolution of the psyche in biological terms, using language reminiscent of modern evolutionary cognition:

> In view of the structure of the body, it would be astonishing if the psyche were the only biological phenomenon not to show clear traces of evolutionary history, and it is altogether probable that these marks are closely connected to the instinctual base. Instinct and the archaic mode meet in the biological conception of the "pattern of behavior" (p. 200).

A reductive focus on cognition may be useful in scientific research but represents only part of the story. Here, Jung is suggesting a branching evolution of the fullness of psyche in a framework that is largely compatible with the model of evolutionary cognition. This suggests the possibility of a psychological tree of life, a polymorphous psyche growing, developing, and differentiating into manifold forms over hundreds of millions of years.

Contemporary Animal Research

Dozens of books have been published detailing new evidence and perspectives on animals, all in greater depth than a single article can hope to encompass. What follows instead is a brief survey, a sampling of different and extraordinary minds across the species spectrum, to give the reader a taste of the emerging paradigm.

Mammals

The easiest starting point in discussing a reevaluation of the animal psyche are those big-brained creatures who have the longest history of surprising us with their high intelligence and complex social and emotional lives. Jane Goodall and her fellow primatologists have been telling us about the human characteristic of primates for the better part of a century. Apes are perhaps easier to recognize and accept as kin because of all the animals they look the most like us and share the closest genetic heritage. More astounding, and perhaps more evocative of wonder, are the cases of elephants and cetaceans, whose bodies are not remotely human and whose massive brains remain largely mysterious. All three of these groups, elephants, cetaceans, and apes, have demonstrated themselves to be creative problem solvers and tool users. Equally important, all three engage in social systems complex enough that it is becoming increasingly routine to speak in terms of these animals having *culture*. All have complex forms of communication, and all have been observed mourning their dead (see de Waal, 2001; Bradshaw, 2009; Casey, 2015). Elephants and cetaceans, in particular, stand at the threshold between the familiar and the alien—we recognize their intelligence but struggle to understand it. Their brains are enormous, complex, and quite different from ours. Dolphins' brains follow the general framework of human brains but have an extra lobe, the paralimbic, which may be involved in social and emotional intelligence (Hof, et al, 2005). And elephants' brains not only are physically larger than ours—they actually contain three times as many brain cells (about 270 billion) as human brains do (Herculano-Houzel et al., 2014). While the elephant cerebral cortex is smaller than a human cortex, elephants have enormous cerebellums, unprecedented in the animal kingdom. In humans, the cerebellum is involved in motor coordination and in some communication functions, and Herculano-Houzel et al. (2014) have speculated that this massive brain region may be necessary to operate the complex musculature of the trunk. But his argument is less compelling when considering neuronal requirements of complex motor activities in other species. For example: humans playing the piano despite their smaller cerebellums. Or consider the octopus, which has only 500 million neurons, 0.002 percent of the elephant brain, yet is able to manipulate its tentacles deftly to move objects and manipulate tools. The elephant's use of the cerebellum therefore remains quite mysterious. Our last common ancestor with elephants lived more than 100 million years ago, a sufficient timespan to evolve uses for the cerebellum that do not exactly mirror our own.

A deep dive into studying the lives of elephants, cetaceans, and apes reveals the need to speak of them psychologically, to recognize the complexity of their experience as subjective beings, even as we recognize important differences between their minds and our own. Here, perhaps, the skeptic may be tempted to make a concession: that there may be more than one intelligent species cohabitating our planet. Perhaps for these three we can make an exception, while comfortably holding on to our collective myths about "lesser" species.

Consider, for example, the sheep, who to this day is regularly invoked as a symbol of the mindless follower. Jung too used the metaphor of the *herd* (borrowed presumably from Nietzsche), sometimes invoking the image of separating from the herd to illustrate the work of psychological individuation. So widespread is this story about the mindlessness of sheep, it might seem foolish to study their minds at all. Nevertheless, research by Kendrick et al. (2001) found that sheep have an extraordinary capacity to recognize each

other's individual faces. Note that this is not a matter of having a heightened sense of smell whereby we can imagine each sheep has an esoteric scent marker. The study involved sheep looking at photographs of other sheep in their herd. It would likely surprise most humans to know that individual sheep have faces that can be distinguished from one another. But when prompted in the lab, sheep responded to pictures of sheep that they knew, not to pictures of sheep who were strangers. These results may not be a penchant for abstract thought, but it does speak to a nuanced social intelligence concerned with relationships—a mind that is organized differently; not mindless.

Birds

The phrase "bird-brain," a pejorative used to suggest that a person is stupid, has been in use since the early 20th century, following several centuries of use of the similar "bird-witted" (Bird-brain, n.d.) It is true that birds have relatively small cerebral cortexes, and all other things being equal, it may seem intuitive to assume that a smaller brain would be less capable. However, in recent decades a closer study of bird intelligence, particularly among parrots and corvids, has rendered some astonishing results.

The most famous of these cases is probably the gray parrot Alex, who worked with researcher Irene Pepperberg (2008) for years to demonstrate an uncanny understanding of language, color, shape, and numbers. Alex actually appeared to understand many of the English words he had been taught, and he was able to use those words to demonstrate his comprehension in real-time tests. When presented with a collection of differently colored objects and asked, "how many are blue?" he would speak the correct number out loud. When asked "what shape is green?" he would reply with the word "square." Alex even demonstrated an ability to do basic addition. These results were quite shocking to the scientific community, which had long assumed that bird brains were incapable of these cognitive feats.

Likewise a fascinating body of research has explored the minds of corvids—the family of birds that includes crows, ravens, jays, magpies, and jackdaws (Ackerman, 2016). Corvids have been known to recognize themselves in mirrors, suggesting a level of self-awareness. They are able to recognize faces of individual humans and have been known to hold grudges against them for quite some time. Crows appear to develop regional dialects: when attempting to join a new crow community, a newcomer will make an attempt to start vocalizing in the new dialect. Corvids have also shown themselves to be efficient tool users, reshaping sticks to create hooks, and even solving multi-step puzzles to unlock a tasty treat. This last observation suggests a capacity to actively imagine future steps in a problem, using imaginal cognition to achieve their aims.

Fish

In the titular song on Ani DiFranco's (1998) highest charting album, *Little Plastic Castle*, she sings:

> *They say goldfish have no memory*
> *I guess their lives are much like mine*
> *And the little plastic castle is a surprise every time*
> *And it's hard to say if they're happy*
> *But they don't seem much to mind*

DiFranco is here using the supposedly amnesiac goldfish to express her own whimsical experience of days blending together. The song is ultimately more concerned with the singer's lived experience, and perhaps more generally the human condition, than it is with the fish per se. Nevertheless, it contains an affirmation of kinship (I am like a fish) and a seemingly friendly attitude to the goldfish's imagined existence. But friendly or not, the song does not give the fish much credit.

The popular notion that goldfish have three-second memories is just one example of a general cultural belief that fish are unintelligent. Even Jung (1961/1989), who wrote warmly of animal kinship in his youth, mentions a disdain for cold-blooded creatures. In fact, fish can have quite prodigious memories. Studies of goldfish memory have consistently found that the fish will remember key features of an environment even after being removed from it for a year (Balcombe, 2016).

Even more striking is the case of the frillfin goby, a small fish that lives in tidal pools along the Atlantic. Because life in tidal pools can sometimes mean becoming trapped in small pools with a predator at low tide, the frillfin goby has developed a seemingly haphazard strategy of hurling itself out of the water and into an adjacent pool. At first glance this appears to be a "Hail Mary" move based on the premise that anything is better than getting eaten. Surely, the fish ends up beached on the rocks as often as not? But, in fact, these fish never seem to miss. They always seem to know *exactly* where the next pool is—without being able to see it—and how to project themselves aerodynamically the correct distance to safety.

In a formal study, Aaronson (1971), concluded that during high tide, the fish swims around and completely memorizes the topography of the region, calculating which areas will become pools at low tide. When the goby was studied in the lab, only one learning session was required during a simulated "high tide" to give the fish a 97% success rate in making their jumps. Without that single learning session, their success rate was only 15%. This study demonstrates both an extraordinary capacity for visual memorization and a remarkable embodied intelligence, in that the fish is somehow able to calculate intuitively the exact speed and trajectory necessary to fly through the air and land in the next pool.

Invertebrates

Even insects continue to surprise us. For those struggling to accept that sheep can recognize the individual faces of their friends, it may be astonishing to learn that the same capacity has been demonstrated by at least one species of wasp (O'Grady, 2021). We have known for some time that honeybees are able to communicate specific locations to each other through a "waggle dance" (Riley et al., 2005). Studies have shown that bees are able to map large locations, meaningfully discern between different colors and shapes, and even show some recognition of human faces (Collet & Collet, 2000; Dyer et al. 2005). Recent research has provided evidence not only that bees can count but also that they seem to have some understanding of the number zero (Warren, 2018). An impressive resume indeed for a brain that is smaller than a grain of rice.

Of course, the real star of the invertebrate world is the octopus, which defies all convention about what an invertebrate should be capable of **(**Godfrey-Smith, 2016; Montgomery, 2015). Octopi are problem solvers, tool users, tricksters, master escape artists; and like so many other animals they seem to have a capacity to recognize individual human faces. The mimic octopus has even been known to shapeshift into an imitation of

other animals as a disguise. These feats are accomplished with a brain and nervous system estimated at 500 million neurons, less than one percent of the brain cells found in a typical human. Octopi are a particularly fascinating example because they are so alien: boneless, multi-limbed shape-shifters with embodied brains that extend to the tips of their tentacles. Yet even these strange aquatic beings show sparks of conscious intelligence when we pay attention. Even these aliens are distant kin.

Shifting Perspectives on Human-Animal Relationships

Mounting evidence for the sentience, intelligence, and emotional sensitivity of animals creates an ethical injunction both to examine deeply and to revise our relationships to the non-human world. Political movements for animal rights and animal liberation are not new (Singer, 1976), though they have often been relegated to the fringes of society. Thus why the 2012 Cambridge Declaration of Consciousness represents such an important step forward:

> The absence of a neocortex does not appear to preclude an organism from experiencing affective states. Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates.

The declaration was made by scientists and is based on decades of study and comparison of human and non-human brains. It is a powerful acknowledgment of our transforming understanding about what animals are and how we should relate to them.

Another important development is the recent emergence of multi-species ethnography (or trans-species ethnography) as a research method. Although there are many different approaches to what multi-species ethnography can be, the basic idea is to take the method of ethnography, as developed in anthropology to study human cultures, and to widen its scope to include non-human species as well. In some cases, the research strives for a better understanding how non-human animals participate meaningfully as a part of a human culture. In others, the entire enterprise is reframed as the meeting of human and non-human cultures or as case studies of integrated interspecies communities. I participated in the latter approach myself, studying human-elephant relationships at a sanctuary in Cambodia (Erickson, 2018). Multi-species ethnography is only just beginning, but the shift in frame from hierarchical dominance and ownership to inter-species coexistence holds great promise.

An important contribution to the new discourse from depth psychology is Mary Watkin's and Gay Bradshaw's (2007) theoretical paper calling for a *trans-species psychology.* Here Bradshaw and Watkins integrate principles from ecopsychology and liberation psychology to advocate for a psychological model in which animals are recognized and approached as individual agents with their own psychic reality. "The model of the trans-species psyche explicitly names the interpretation of human and animal domains in parity, absent assumptions of ascendance" (p.71). In other words, the playing

field is leveled. Humans are not masters; animals are not possessions. Rather, the meeting of human and animal is reframed as the meeting of two interpenetrating psychic realities.

Depth Psychology's Contribution

Depth psychology has the potential to make important contributions to the project of revisioning the animal psyche. These contributions will not happen automatically—indeed, the first step may be for depth psychologists to reflect on practices of relating to animals only as they relate to human psychological well-being. We should beware of tendencies to reduce animals to symbols and synchronicities on the path to human individuation. Animals may serve this function, but they are also intelligent agents of their own needs and life experiences. James Hillman and Margot McLean address this concern directly:

> I wouldn't want to forget about the real fox. I think it is important to see the same respect given to the real animal wherever it appears. I think it is important to see the animal as you do in dreams, but dream animals must not be segregated from the animals living out back under your porch or in the bush. . . . One must be careful when adopting an "inner" animal that the connection to the animal world is not reduced to a "feel-good-about-me" condition." (p. 5)

The butterfly emerging from the chrysalis may reflect back to us our psychological transformations, the eagle our newfound ability to soar, the elephant a reminder of our stalwart inner strength. But the butterfly, the eagle, and the elephant do not exist solely as symbols for our own benefit—they exist also for themselves. Thus, we undertake to revision the animal psyche not for our own benefit, but rather to be in better relationship with our non-human kin.

Archetypal and Imaginal Bases for the Animal Psyche

The evolutionary cognition model suggests a tree of life that maps not only the transformation of biological forms but also the branching forms of mind and cognition, patterns of experience and behavior. As discussed above, it is a natural progression to expand our conception of this tree to include the total psyche. Jung conceived of archetypes as a priori structures of behavior and experience that organized psychological life, and he recognized that some of these archetypal patterns would necessarily be continuous with the animal world. Again, the fierce love of the mother bear serves as a symbol for motherhood precisely because it exemplifies an aspect of the mother archetype in its wild and primal form.

To move beyond reducing the bear to a symbol in service of our own psychological understanding, we must make an effort to understand her from her own perspective. Attempting to do so with an animal was long considered a vexing philosophical quandary, if not an outright impossibility. But if we take the Cambridge Declaration and the science that supports it seriously, new avenues emerge for how we might utilize our shared neurobiological traits to begin to bridge the gap between animal experiences and our own. Talking grey parrots and signing apes notwithstanding, any such attempt must be willing to leave a dependency on verbal language aside. I have argued elsewhere (Erickson, 2016) that a somatic approach opens new lines of communication and understanding by emphasizing the shared experience of embodiment. We shit our attention to what it is like

to be an embodied being, with bones and skin and muscles, to feel the pleasures and pains of life, to experience a felt-response to the world in our viscera, to engage the world through the prism of sensation and emotion. We are similar enough to animals physiologically that by coming more fully into our own embodiment, we can better understand them in theirs.

Another promising approach to understanding psyche in animals is to focus on the imaginal. Jung (1946/1960) talked about the work of leafcutter ants in terms of the fulfillment of an image: a wholistic pattern inborn in the colony (p. 201). Ants do not share our complex neural architecture around the construction of sensory imagery, but image, more broadly used, simply refers to a meaningful shape or pattern. An animal as neuronally modest as the frillfin goby appears to have a remarkable ability to retain detailed internal images of tide pool topography. Corvids seem to be able to imagine the future uses of tools while solving multi-step puzzles. Because the neural systems that support sensation and imagination are so entangled (Kosslyn et al., 2001), it seems likely that any creature capable of receiving information in a particular sense modality (sight, sound, touch, etc.) would also be capable of at least rudimentary imaginal thinking in that modality. Animal behaviorist Temple Grandin, who herself thinks in pictures, has long advocated for an understanding of the animal mind as being based on images rather than words (Grandin & Johnson, 2006).

Neuroscientist Rodolfo Llinas (2001) argues a similar theory—that image-making has been the primary function of all nervous systems tasked with navigating the environment, from the beginning. Even for a creature as simple as a worm, any effective movement through the environment, towards nutrition or away from danger, would depend on the integration of sensory data that could order and form "an internal reckoning—a transient sensorimotor image—of what might be outside" (p.18). What Llinas suggests here is that the original purpose of the nervous system in animal life was to generate images for use in navigating the world. This would mean that, at a basic level, image was the basis for psyche a half billion years before humans arrived on the scene.

From the premise that the animal psyche exists in a world of somatic experience and multisensory imagery, it is only a small step further to recognize that consistently meaningful images experienced by animals over vast generations can be understood as archetypal patterns of experience and behavior. Patrice Jones (2010) suggests that in the case of birds, archetypes might include: *Mother, offspring, predator, safe space, competitor, flock, sibling/cousin, friend/ally* (including allies of another species). We might also add, in the case of monogamous birds, the archetype of *partner.* In each case, the word is a conceptual stand-in for a recognizable and meaningful pattern of experience. It might even be argued that animals' lack of words enables them to experience these archetypal patterns more fully than we humans with our distancing penchant for abstract thought.

Projection and Transference

Another potential contribution depth psychology can make to the expanding field of animal studies is our framework for understanding the complex phenomena of projection and transference dynamics. Depth psychology has long recognized that the human condition includes the external projection of unconscious images, expectations, and narratives, particularly in relationships. Marie-Louise von Franz (1980) goes so far so to suggest that projection is the beginning of every meaningful relationship, that we could not connect without it, and that the gradual process of withdrawing our projections is how a relationship

deepens over time. The question is not whether humans project onto animals—of course we do, just as we project onto each other, more or less constantly. Rather the aim here would be to better recognize these inevitable projection dynamics and work with them consciously. Transference between human and animal—in either direction—is not so much a mistake as a recurrent starting point. Recognizing and working with these dynamics consciously over time has the potential to deepen communication and understanding with non-verbal beings.

The Subtle Art Interpretation: Letting Psyche Speak

Ultimately, depth psychology is well positioned to open up new spaces in human-animal relationships because it is a form of psychology devoted to uncovering, making space for, and attending to that which has not yet come fully into consciousness. Phoebe Green Linden (2010), who has spent decades of her life in an inter-species community of parrots, argues that Jungian dream interpretation has much to tell us about trans-species understanding. Although Jung was fascinated by mythic and archetypal symbolism in dreams, he was also quite careful to treat each dream, and each dreamer, as a unique phenomenon. Thus, while there might be a likely interpretation for a given symbol—"the ocean represents the unconscious," for example—any new dream brought to him involving an ocean would have to be evaluated on its own terms, depending on the experience and associations of the dreamer. Jung's (1945/1969) rule for each new dream presented to him in analysis was to tell himself, "I have no idea what this dream means" (p. 283), and then to collaborate with the dreamer to uncover its meaning. Linden (2010) draws a direct parallel: "In much the same manner as a dream interpretation, interpretation in a trans-species community is fresh each time, layered within the 'imagination and intuition [which] are vital to our understanding" (p. 17). Linden advocates for a holistic approach to interpreting our interactions with animals, making plenty of room for empirical data, but also allowing emotion, imagination, and intuition to carry us through the inevitable ambiguities of the process. This is not to say that we should accept our fantasies about the animal as real but rather to allow ourselves to try on different fantasies, different images, and different meanings as the interactions continue. Such an iterative process of uncovering and constructing inter-species understanding requires a willingness to revise our assumptions when the animal offers us something new or unexpected.

Such a process is reminiscent of the hermeneutic circle in the interpretation of texts, whereby we progressively understand the whole in terms of the part and the part in terms of the whole. Similar to von Franz's (1980) assertion that no relationship can begin without projection, Gadamer (1975/2004) argued that in the hermeneutic process of developing new understanding, we must begin with our fore-conceptions, our assumptions, as an entry point for initial interpretation. We cannot proceed without these assumptions and projections, yet the real work of understanding another text—or another mind—is a willingness to revise those assumptions over time. Contained here is an injunction to move our understanding beyond rigid rational categories and live instead in the complex space of relational knowing. We come into deeper relationships with animals by building and revising imperfect nonverbal communication from one moment to the next.

The task is great, and so is the reward. Out beyond our limiting beliefs, our obsession with conceptual hierarchies, and our own psychological navel gazing, waits a

vast wild world waiting to welcome us home. A world where the human mind is revealed as but one aspect of a vibrant, living, more-than-human psyche.

Contributor

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