VOL. 83, SPRING 2010

SPRING

A Journal of Archetype and Culture

Minding *the* Animal Psyche

Harbingers of (Silent) Spring: Archetypal Avians, Avian Archetypes and the Truly Collective Unconscious

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Laid low by sorrow, I crouched in the dust, gathering strength against grief at midday. Suddenly, I saw a flurry of feathers and felt a wobbly weight on my shoulder. The ungainly white bird swayed to maintain his balance while peering at me inquisitively. "Yes," I said, "I do need a friend right now." We swayed together for a moment, regarding each other and the day. Then, he alit and I went into the afternoon, soothed.

While the helpful bird is a well-traveled inhabitant of the lands of mythology and reverie,[1] that was no dream and that bird no mere symbol. The dust was that of a foraging yard at the Eastern Shore Sanctuary where, for nine years, I offered shelter and care to avian survivors of factory farming and cockfighting. The bird

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was a juvenile "broiler" chicken who had leapt or fallen from a slaughterhouse-bound transport truck and had arrived at the sanctuary only the week before. I no longer remember the specific source of the seemingly unsupportable grief that weakened me that day, but I will never forget the young rooster who so intrepidly leapt to comfort me. I called him "Heartbeat," and he was my little friend.

Birds' hearts beat more rapidly when they are afraid. Eyes narrow. Muscles twitch. In the midst of a full-fledged fight or flight response, a bird unable to escape a perceived threat may begin to pant in panic. We know this fear. We've felt it ourselves. Terror jolts through our limbic system like lightning, just as it does through theirs.

Full-fledged. Fight or *flight*. Our long associations with birds of all kinds linger in our language as allusions and figures of speech. Our earliest alphabets and pictograms used birds to depict sounds and concepts.[2] Birds dwell at every level of our collective unconscious as well. But the beating hearts and wings of birds are not symbols. Birds feel real fear, real joy, real hope and disappointment and, probably, other real feelings, the nuances of which we may not be able to imagine.

The question then becomes: Has our long-standing use of birds as psychological symbols facilitated our ever-escalating appropriation and abuse of their bodies? And, given how deeply our fantasies about birds permeate our *own* psyches, is it even possible for us to conceive what life feels like to them? Thus, before we can begin to think about bird psyches, we must first alert ourselves to the birds fluttering in our own psyches. Put another way, before we can think clearly about birds' brains, we must think critically about "birdbrain" and other derogatory notions.

In the days following our encouraging encounter, I got into the habit of calling "Heartbeat! Heartbeat! Where's my little friend?" whenever I went into the yards to refill water basins, replenish feed bowls, or put fresh straw in the coops. He always came running to greet me, charging enthusiastically from the underbrush.

The so-called "broiler" chickens raised for meat in factory farms across the globe spend their short lives in otherwise empty sheds, shoulder to shoulder with thousands of others of the same age and sex. They never nestle under their mothers' wings nor ever spread their own feathers in the sun. Bred to grow unnaturally large unnaturally quickly,

the young birds are trucked to slaughter when only about eight weeks old. Human avarice for chicken flesh is now such that billions of birds suffer this foreshortened and impoverished life cycle terminated by a terrifying death shackled upside-down to a slaughter machine.

Every one of those birds is an individual. Despite their genetic similarity and the social and environmental poverty of their early lives, birds lucky enough to escape the whirring blades of the poultry processing factory vary markedly in habits and personality. Some are shy, others sociable. Some are timid, others bold. Some are high-strung, others easy-going. Some are quick-witted, others dull. Some are curious, seizing every opportunity to try new things; others hang back, waiting for somebody else to be the first to venture into new territory or try new food.

Not long after Heartbeat's arrival at the sanctuary, a young hen I would come to call "Octagon" appeared in our driveway. Though shaken and bruised from her own fall from a transport truck, she wasn't so injured as to require isolation in the infirmary. Still, I hesitated to leave her to fend for herself in the foraging yard. What she needed was a friend. A-ha! "Heartbeat! Heartbeat! Where's my little friend?" Heartbeat came running but stopped short at the sight of the battered little hen. He circled her slowly, peering closely at each bruise and scrape. Then he sidled next to her until their wings were touching and lowered himself to the ground while making the sound that mother hens use to soothe their chicks. Octagon sighed, the tension leaving her body with her breath, and settled down beside him. I stood, stunned by the empathy and generosity displayed by a young bird who had known little but suffering in his own short life.

During its nine years in rural Maryland, the Eastern Shore Sanctuary[3] provided refuge to poultry industry and cockfighting survivors and offered habitat to ground- and tree-nesting wild birds such as woodcocks and cowbirds, while also serving as a home-base for evolving flocks of feral chickens who had "rewilded" themselves, eschewing domestic life to live among the wild birds, foraging widely during the day and roosting at night in tree-branches. For many years, chickens and other birds have been subjects of both naturalistic observation and scientific experimentation. Hence, there are extensive data about their brains, minds, and bodies in the literature of psychology, ethology, and neurobiology. The ideas here integrate that

data with my own conclusions based on years of observation of and interaction with both psychologically healthy and severely traumatized birds.

Speaking of Birds...

Birds express themselves fluently through motion and sound. Language is one of the capabilities human beings like to reserve for ourselves, forever narrowing what we mean by "language" as one or another non-human animal proves capable of manipulating sounds as communicative symbols. However, the fact remains that birds communicate with one another and, as the need arises, with members of other species quite adequately and often complexly. As we do, birds use sounds as symbols. Among chickens, for example, the alarm cry for an aerial predator is distinct from the sound that symbolizes a threat on the ground.[4] As we do, birds inflect sound symbols with emotion.[5] The alarm vocalizations of magpies vary in volume and intensity depending on the degree of perceived danger.[6] Again as we do, parrots, hummingbirds, and songbirds learn and use complex vocal sequences structured by syntax[7,8] and develop distinct regional dialects.[9]

But would it be possible for a skylark to sing something meaningful about our dreams? If not, how can we presume to speak about avian psyches?

Like birds, we use combinations of gesture and sound to convey meaning. Just as the communications of other animals are delimited by need and anatomy, human languages are shaped by the brain,[10] which evolved in interaction with ecosocial environments.[11] The word "unspeakable" notwithstanding, we tend to assume that human languages are capable of saying everything, of accurately symbolizing whatever anyone might like to express. Of course this is not true, as our frequent recourse to music, dance, and graphic arts demonstrates. More troubling is the tendency of language to shape perception and perhaps constrain thought. If my language tells me, as English does, that "corporal" is an antonym of "cerebral," I may find it hard to conceptualize cognition as a biological process. If common usage places "animal" on a different and decidedly lower plane than "human," I may have difficulty reconciling myself to my own animality and will almost certainly tend *not* to notice evidence of animal equality.

Speakers of different languages have different ways of conceptualizing such basic elements of life as space[12] and time.[13] Even people with words in common may struggle with more than semantic differences in the meanings of terms related to psyche. Conceptually and experientially, "self" is very different for people of collectivist versus individualist cultures, so much so that cross-cultural conversations about "self" can sometimes be confounding.[14] People from individualist cultures tend to conceive and experience each "self" as a unitary and discrete entity while people from collectivist cultures tend to conceive and experience selves as relational and overlapping; these different conceptions of "self" (and, therefore, "other") influence not only emotion and social cognition but also aspects of cognition, such as perception and inferential reasoning, that are often assumed to be culture-free.[15] If people from individualist cultures must struggle to grasp what the interaction between self and world feels like to a person from a collectivist culture, how much more difficult must it be to imagine what the interaction between self and world that we call "psyche" feels like to a bird? Thus, our ability to speak accurately of avian psyches must be considered dubious at best. Yet speak we must, because our existing ideas about birds and their brains have been and continue to be so hurtful to them.

Flights of Fancy

We can't even imagine, those of us alive now, what it was like when the skies were black with birds. Reports filter down from the days before the triple trauma of hunting, smog, and DDT left us a world that our ancestors would find shockingly bereft of birds. I caught a glimpse of that past, a couple of times at the sanctuary, when migrating flocks descended, overflowing the trees and saturating the soundscape for just a few hours before bolting off again, my heart pounding crazily along with their departing wings. Now, living in a city after nine years at a bird sanctuary, I apprehend our collective loss acutely. The city sounds silent rather than noisy to me. Empty tree branches seem naked. The few birds I hear sound lonely. My heart leaps, then crashes, when I see a gamboling group of crows or a fluttering flock of morning doves.

Homo Sapiens emerged in a world full of birds. Those of us living under comparatively barren contemporary skies can only extrapolate

from the historical record to imagine what it might have been like to coexist with birds before the combination of hunting, pollution, and deforestation emptied the airspace above us. As recently as the late 1800s, for example, billions of passenger pigeons in North America migrated in flocks a mile wide and hundreds of miles long, passing overhead for hours or days.[16] Wherever they rested, they filled the trees with movement and the air with sound.

That's just one kind of bird just over a century ago, long after firearms, smog, and tree-cutting had decimated many avian populations and driven others to extinction. Imagine, then, if you can, the degree to which bird bodies and bird song filled the perceptual fields of our hominid ancestors as they came out of the trees and into the grasslands, where the warning cries of songbirds alerted them to danger at the watering hole and the hovering of corvids directed them to potentially fruitful scavenging sites. In late winter, the return of migrating birds presaged the rebound of spring.

Our brain architecture, including the structures and pathways associated with archetypes, evolved in this context. We may be evolutionarily predisposed to see birds and think spring. Such associations are not inherently hurtful. An upsurge of birds often does mean that warmer weather is around the corner, just as the sight of the postal carrier rounding the corner often does mean that bills will soon be in the mailbox. But if we begin to associate the postal carrier —or, worse, people of his race—with the unpleasant sensation of receiving a demand for payment, our relations with people who look like him may begin to go awry. The key difference is between signal and symbol. When we recognize birds or mail carriers as signals, we see them clearly and accurately, noting the implications of their appearance or behavior for us within a shared ecosocial environment. When we use birds, other animals, or other people as symbols, we reduce them to objects to be manipulated in the realm of fantasy.

The fine line between archetype and stereotype is easily seen in the facility with which we project our feared and despised shadows onto people of other races and ethnicities.[17,18] The same process of projection can lead to abuses of birds and other animals. People around the world associate vultures with death and persecute them accordingly. While vultures are protected species in the United States, people made uneasy by their association with death feel free to blast them from

treetops with shotguns, hanging their corpses from the trees as warnings to others.[19]

Bird protection ordinances date back at least to Deuteronomy,[20] evidence of both our sympathy for and lethality towards our feathered kin. Both bird watching and bird hunting remain popular sports.[21] These two opposite acts mirror opposite conceptions of birds dating back at least as far as we have evidence of human thought. Depictions of birds in rock art around the world illustrate both "a connexion between birds and death" and "an association between birds and reproduction."[22]

Birds populate the human psyche. Because birds spring so readily to mind, we reach for birds—both literally and metaphorically—to symbolize and enact our ideas. Armstrong's survey of birds in folklore and folk art demonstrates our propensity to use birds as symbols; in virtually every culture and place, birds show up in myths, rituals, song, and dance. Hybrid bird-human figures appear in art across the world from the paleolithic to the present, evidencing our urge to project ourselves onto or into birds. "The various forms of belief in which the human soul is thought to take the form of a bird, or persons are believed to become birds" are "ancient and widespread."[23] *Bird* then, is a potent and multivalent figure in the human psyche, so much so that it might be worthwhile to consider the possibility that *bird* is an archetype rather than a mere symbol of other archetypes.

People certainly do use birds to symbolize archetypal ideas, sometimes going so far as to trick or force actual birds to enact our conceptions. This is especially evident in the realm of gender. We see female chickens as "mother hens" and "dumb clucks," often treating them in ways that reduce them to their reproductive functions and foster the dull-wittedness and passivity attributed to femininity. For example, as will be detailed below, hens in egg factories are deprived of cognitive stimulation and subjected to unrelenting trauma likely to produce learned helplessness.

Roosters, on the other hand, are celebrated as exemplars of masculinity, so much so that the word for male chickens does double-duty as a term for the penis in several languages.[24] As I have detailed elsewhere, cockfighting bouts are human-engineered spectacles of stylized masculinity.[25] Roosters used in cockfighting grow up in isolation and frustration, confined in cages or tethered to stakes.

Prevented from learning the social signals by which roosters naturally resolve conflicts before they become deadly, fighting roosters are injected with testosterone and amphetamines, armed with steel knives lashed to their sawed-off spurs, and dropped into cacophonous combat rings from which the only escape is victory or death.[26] Proponents of cockfighting assert—and appear to sincerely believe—that the predictably deranged behavior of these unsocialized and terrified birds is both natural and emblematic of masculinity.[27]

These are paradigmatic examples of what I call the social construction of gender via animals.[28] Social constructs are collective ideas that seem to be natural facts. Fighting roosters and other animals serve as unwitting tools of the social construction of gender through a three-part process wherein people project their ideas about gender onto animals, force or trick animals into acting out those ideas, and then read the consequent animal behavior as evidence that masculinity and femininity are natural correlates of maleness and femaleness. Sometimes the second stage is finessed by "reading" natural animal behavior selectively, as when the primatologists of old "saw" male dominance among every variety of ape and monkey or when ethologists either didn't see or didn't record the same-sex sexual encounters we now know to be common among hundreds of species, including some 130 bird species.[29] The construction of birds as relentlessly heterosexual, mechanically fixated on reproduction, hinders our ability to see the spectrum of bird relationships and appreciate the degree to which relationships of all varieties are valuable to these social animals.

Birds and Brains

Hence, before we can begin to speak of bird psyches, we must clear away ideas about birds that reflect our fantasies rather than their realities. These include not only ideas rooted in our use of birds as symbols but also our more general fantasy of cognitive or spiritual superiority over other animals. In recent decades, findings in ethology and neurobiology have consistently undermined the notion that there is some special skill or capacity exclusive to humans or that, indeed, there is any biological reason to elevate or even separate *Homo sapiens* from all other animals.[30] Language, tool making, self-awareness: each of these and many other imagined reasons for human singularity have

fallen before the onslaught of data concerning animal capabilities and comparative anatomy.

This is not to say that humans are in no way unique. Every kind of animal is special in some way. Many animals possess capacities not shared by others. Giraffes can reach into the trees while standing on the ground. Whales send songs along miles of water. Bees use dance to convey precise navigational directions. Each of these is wondrous, as are many human abilities. But none stands as a reason to consider that animal as somehow apart from the rest of the natural world.

Birds not only use sound symbols and syntax to communicate as we do but also make and use tools. Like people, birds sometimes cooperate in the process of "cumulative technological evolution" by testing diverse designs, making cumulative changes to those designs, and dispersing new designs through social networks.[31] Birds have also demonstrated evidence of episodic memory and theory of mind, two other cognitive capacities previously believed to be confined to humans.[32]

While emotional congruences between birds and people may be traced to the limbic system and other shared structures,[33] complementary cognitive capacities are most likely the result of convergent evolution, with birds sometimes achieving similar ends by different neurological means.[34] For both birds and mammals, the development of warm-bloodedness after branching off from reptiles "enhanced the potency of neural functioning" just as "flexible behavior became the key" to fitness.[35] For both birds and mammals, the brain growth encouraged by this combination of possibility and necessity promoted further brain plasticity and behavioral flexibility:

> The divergent and complicated reproductive strategies of brooding and lactating emerged not least because of the need to release into independence offspring with brains too large to mature intrauterinely or intraovally.... These strategies demanded differential parental care behaviors, for which these same brains had to evolve new capabilities. The accompanying birth or hatching at an early stage of embryological development caused the brains of the offspring to be exposed at an immature stage to an environment to which they had to match their behavior. This undoubtedly enhanced the role of neural plasticity in the adjustment of the behavioral repertoire of both avians and

> mammals and advanced the development of brain structures specialized for learning and memory.... This eventually converted the ecological niches in which birds and mammals operated into socioecologial niches that encouraged the evolution of capabilities for highly flexible social behaviors.[36]

In short, both birds and people have brains that evolved in an ecological context favoring behavioral flexibility and the maintenance of social relationships, both of which require the cognitive capabilities we call intelligence. This raises the question of consciousness, the complement of which is unconscious cognition, including the processes known in depth psychology as the collective unconscious.

Edelman writes:

> Since Descartes' dualistic proposal, consciousness has been considered by many to be outside the reach of physics, or to require strange physics, or even to be beyond human analysis. Over the last decade, however, there has been a heightened interest in attacking the problem of consciousness through scientific investigation. To succeed, such a program must take account of what is special about consciousness while rejecting any extraphysical assumptions.[37]

The same may be said of the collective unconscious. "Consciousness is not a thing but rather, as William James pointed out, a process that emerges from interactions of the brain, the body, and the environment."[38] Like consciousness, the archetypes said to reside in the collective unconscious[39] are likely to be processes rather than structures. Furthermore, archetypes, like the various processes collectively called consciousness, are means by which the organism organizes and responds to complex stimuli, including both incoming sensations and remembered experiences.

Consciousness, which arises from "a continual interplay of signals from the environment, the body, and the brain itself... confers an evolutionary advantage on individuals possessing it, for, by these means, richly structured events can be related adaptively to the past history of value-dependent learning events in an individual animal."[40] Birds are among the animals who enjoy the evolutionary advantages of consciousness.[41,42,43,44]

In people, "consciousness is not a property of a single brain location or neuronal type, but rather is the result of dynamic interactions among widely distributed groups of neurons."[45] Similarly, consciousness in birds is likely to be "based on patterns of circuitry rather than on local architectural constraints."[46] However, "the neuroanatomical features of the forebrain common to both birds and mammals may be those that are crucial to the generation of both complex cognition and consciousness."[47] In other words, for both birds and people, consciousness is a widely distributed neurological process involving brain structures also associated with complex cognition.

Because of the constraints imposed by the relatively limited capacity of working memory, much of human cognition occurs below the threshold of consciousness. Given the parallels between human and avian brains, this is presumably true for birds as well. As unconscious schemas for recognizing and responding to salient patterns of external and internal stimulation, archetypes may be considered to be among the varieties of nonconscious cognition. Thus we can begin to see archetypes as natural processes likely to be shared by both birds and people. This has far-reaching implications for the concept of the collective unconscious.

Archetypes, Instincts, and the Collective Unconscious

As Stevens notes, "the Jungian approach to the body has been one of neglect,"[48] and this has tended to undercut the credibility of concepts like archetype and the collective unconscious outside of the field of depth psychology. In *Archetype Revisited: An Updated Natural History of the Self,* Stevens draws upon advances in neuropsychology to naturalize the concept of the archetype, thereby situating the collective unconscious within the nervous system.[49] Advances in comparative neurobiology allow us to go further than that, developing a more nuanced conception of archetypes as products of evolution and the collective unconscious as an ongoing and widely distributed interactive process.

Jung and subsequent depth psychologists hypothesized archetypes to be the human analogues of the instincts believed to determine animal behavior,[50] pointing specifically to the *innate releasing mechanisms* identified by Lorenz[51] and other ethologists as the avian equivalents of

human archetypes. We now have a better understanding of biology, evolution, and ecology than was available to Jung or even early ethologists like Lorenz. We now know that the seemingly innate and immutable patterns of perception and behavior we call instincts are (a) often more flexible than was previously believed, and always (b) the result of generations of *interactions* between organisms and environments that (c) are *ongoing*.

The implications of this understanding of instinct are profound for the concept of archetype. If archetypes are kinds of instincts, then they too must be rooted in generations of interactions between organisms and environments. In other words, as products of evolution, archetypes reflect the material and social circumstances in which our species evolved and is still evolving. Given that interactions between genetic endowment and environment begin before birth and that social learning begins at birth, Jung may have over-estimated our capacity to distinguish between innate cognitive or perceptual propensities (archetypes) and their culturally influenced manifestations (symbols). Just as it is impossible to disaggregate nature and nurture when speaking of intelligence, athletic ability, or even height, it may not be possible to confidently abstract archetypes from the situations in which they are expressed.

Furthermore, if archetypes are innate templates for perception and response rooted in interactions between psyche and the material environment, there may be many more of them than Jung identified. (*Bird* being one example.) In the current context of ecological crisis, it may be especially useful for us to understand those archetypes (and their common manifestations) that are not about ourselves or other people but rather about animals or what we have come to call nature.

Evolution is slow but ongoing. Whatever "instinctual" animal behavior we may consider, be it nest-building or migration or response to predation, we find that:

- The behavior evolved over the course of generations of interactions with environment.
- The behavior is itself an interaction with environment.
- Some environmental cue is generally needed to evoke the behavior.

> • The tendency to engage in the behavior appears to be encoded in the genes and therefore can be said to reside within each animal's body.
> • There is variation, across individuals, in how (and sometimes even whether) the behavior is performed; these variations may or may not affect the life chances of the individual or her offspring.
> • Changes in environment may make the behavior, or particular variants of the behavior, more or less adaptive; over time, this may lead to changes in the "instinct" as observed in the population.

Consider migration. Already, we have seen change in this instinctive bird behavior as a result of global warming. Furthermore, these changes have been calibrated to place, with some birds hastening and others delaying departure dates.[52] Presumably, those birds displaying the most flexibility in their enactment of archetypal imperatives will have the most reproductive success, thereby continuing the evolutionary process by which birds developed the behavioral flexibility and brain plasticity associated with what we call intelligence.

Certainly, there is no evidence to suggest that our unconscious archetypes are more inflexible than the migration instinct. Thus, we must presume that archetypes are considerably less fixed than has been traditionally presumed within depth psychology. As our interactions with our ever-changing environments continue, our archetypes—like animal instincts—may change.

This way of understanding archetypes grounds psyche in the material not only in the sense of embodying mind but also in the sense of bringing the seemingly timeless back into history. Put another way, this way of looking at archetypes relocates them in place and time. Doing so may aid us in restoring humankind to a more realistic (and less dangerously estranged) relationship with place and time.

To do so, we will need a better understanding of the relational nature of the collective unconscious. Birds and mammals both are social animals. For both, the demands of sociality led to the evolution of emotional capacities such as empathy along with a wealth of intellectual capabilities. Social animals have social brains. Birds and people both are emotionally distressed and cognitively stunted by social isolation.

This is because our brains evolved both *within* and *for* relationships.

The concept of the collective unconscious takes on new dimensions considered in the light of evolutionary neuroscience. Rather than a mythic realm of mysterious and possibly supernatural phenomena, the collective unconscious now may be seen as, simply, the subset of nonconscious cognitive processes that are both emotionally valent and rooted in the collective ecosocial history of our species. Since our species shares evolutionary history with birds as well as other mammals, including but not limited to those with whom our ancestors participated in coevolution, some of those nonconscious processes may be presumed to be shared with other animals, including birds.

Thus the collective unconscious becomes a significantly more lively location. First, as a product of evolution, which is ongoing, the collective unconscious no longer need be seen as a static site of archaic inclinations. Next, because even the most rigidly instinctive processes are differentially enacted in complex interaction with evocative environments, we are better able to see cultural influences as intrinsic rather than extrinsic elements of the collective unconscious. Finally, we can begin to see birds and other animals as fellow participants in the ongoing collective process that is the collective unconscious. Since many of them are more skilled than we at collective cognition,[53] perhaps this is cause for celebration. Certainly, this way of conceiving the collective unconscious mandates more cooperative relations with our avian kin. This may prove useful to all. It was, after all, a process of collective cognition inspired in part by observation of birds that led Rachel Carson to the conclusions published in *Silent Spring*.[54]

Avian Archetypes

Thinking of archetypes as instincts raises the possibility of thinking of instincts as archetypes, which might prove to be useful in understanding avian psyches. Certainly, birds do enact evidently instinctual patterns of perception and behavior, such as the alarmed Jackdaw response to anything resembling a predator carrying away a nestling.[55] And, indeed, these are the very phenomena to which some Jungian theorists have pointed as the nonhuman analogue of archetypes.[56] But let us go further than that, now that we know that birds are sentient, social, intelligent, and highly emotional beings who

share many of the processes that we call psyche. As Bradshaw and Sapolsky note, "Historically, science has admitted inference from animals to humans but not the reverse,"[57] arguing that there is much to be learned from such a transposition. Analytic psychologists have considered how ethological concepts like *innate releasing mechanism* might apply to people; now, let's reverse the operation and consider how the psychological concept of *archetype* might apply to birds. Since birds have brains that function similarly to ours, cognitive repertoires that overlap ours, and are conscious as we are, then perhaps they are also unconscious as we are. In other words, perhaps their inherited patterns of perception and reaction function in the same manner as do ours. In short, perhaps archetypes are active in avian psyches. Jung himself did not discount this possibility, writing that "there is nothing to prevent us from assuming that certain archetypes exist even in animals, that they are grounded in the peculiarities of the living organism itself."[58]

If archetypes were active in bird psyches, what might those archetypes be? A tentative list springs immediately to mind: *mother, safe place, offspring, predator, competitor, flock, sibling/cousin/age-mate*. The archetype of *partner* seems likely for birds who form lasting pair-bonds. An archetype of *elder* might be functional for birds, like chickens, who are raised primarily by their mothers but who receive both instruction and protection from other adult flock members. *Father* might be an archetype for those birds for whom the biological father plays an active and distinct role in the life of the young; for those birds among whom mothers and fathers play the same role, cooperatively feeding and protecting their young, it might be that both are perceived as *mother* or, simply, *parent.* Similarly, the term *offspring* is as close as I can come in English for juveniles in need of nurturing, who may or may not be (in species where sisters help to raise their sibling's offspring, juveniles stay to help raise their siblings, or other forms of cooperative care are practiced) one's son or daughter.

Birds also appear to make use of an archetype I call *friend* and by which I mean a helpful or otherwise friendly animal of another species. Perhaps this originates in the kinds of mutual aid observed by Kropotkin[59] wherein, for example, animals of different kinds sharing a watering hole might warn one another of the approach of a predator. Many birds appear to regard any animal who has not been flagged as

a potential predator as a potential friend. At the sanctuary, I witnessed roosters huddling with barn cats for warmth on many a winter day. One dog, called Dandelion, was particularly adept at smelling out eggs left behind by hens. One group of hens became her regular entourage, trailing along after her in hopes of snatching the eggshells (a good source of calcium) once she had slurped out their contents. And, of course, birds like Heartbeat routinely slotted me and other people at the sanctuary into their schema of helpful-other-animal. This is, perhaps, the avian complement of our longstanding image of the helpful bird.

Like most mammals, most birds are deeply dependent on *mother* for some significant period during which both brain and body are growing rapidly. Hence, for birds as for people, the match (or lack thereof) between archetypal and actual mothering is likely to have long-lasting repercussions. Here we begin to see the assault on avian psyches implicit in captivity. Chickens and other captive birds birthed in hatcheries awaken to the world under the chilly warmth of electric lights rather than within the soft darkness of their mothers' wings. Like Harlow's poor monkeys clinging to cloth dolls for contact comfort,[60] birds deprived of mothers scan their environments for anybody or anything that might offer a semblance of mothering.

Like orphaned children, orphaned birds may attach themselves to each other, inanimate objects, or members of other species. I have seen birds raised together on factory farms, where chicks from hatcheries grow to slaughter weight among thousands of other birds of the same age and sex, clumsily alternate in seeking shelter under one another's wings. When chicks found their way to the sanctuary directly from hatcheries, we tried to place them with surrogate mothers but sometimes no hen was willing to enact that role. Hence, a tiny bantam rooster we called Mighty Mouse came to serve as surrogate mother for a succession of "broiler" chickens who quickly grew to many times his size but still fled to him for comfort and protection. Mighty Mouse never betrayed his young charges, but the surrogates to whom farmed and domesticated birds turn often do. Perhaps the experiences of abused and neglected children can help us to understand the psychic impact when *mother* kills your siblings before your eyes or cages or mutilates you.

These forms of psychic cleavage may be less obvious or acute than the extreme suffering inflicted by egg factories or cockfighting, but are

Fig. 1: Mighty Mouse, a rooster who became a surrogate mother.
Photo courtesy of pattrice jones

no less real. Furthermore, archetypal betrayal tends to be perpetrated in tandem with these more obviously traumatic practices. It is, after all, a *friend* or surrogate *mother* who drops the fighting rooster into the combat ring to face an armed and terrified *predator*. And all hens in egg factories began life in hatcheries, where they are deprived of both *mother* and *flock*, interacting only with similarly deprived chicks.

Avian Psyches in Situ

No bird is an island. No bird psyche exists except in relationship to the surrounding ecosocial system. Unfortunately for birds, people have profoundly (mis)shaped the circumstances of virtually every avian species, often to disastrous effect. Our collective impact on bird populations—which includes not only hunting them and crowding them out of their habitats but also poisoning water, lessening the availability of food, spreading disease, and altering the climate—has led to a 20 to 25 percent decline in the number of individual birds in the world since 1500; within the next hundred years, one in ten bird

species will be extinct, with another 15 percent endangered.[61] Statistics like these are usually discussed without reference to the psyches of the survivors. What would it be like to be one of the comparatively few remaining members of an endangered species? What *is* it like to have one's home chopped down unexpectedly or to arrive at one's summer home after a long journey only to find that there's no food because the flowers haven't bloomed or have already bloomed and died due to climate change? We have the same sort of limbic system as a bird. Surely we can imagine the combination of heart-pounding fear and dispiriting helplessness that must arise in birds at such moments. That is psychic trauma. Some birds must, like people in war zones, live with the psychically catastrophic conjunction of chronic arousal and helplessness. How do they cope with this? If they survive the crisis, what impact will the cumulative trauma have on the psyches of future generations?

Birds have demonstrated remarkable resilience and creativity in adapting to changed circumstance. Many have literally changed their tunes, adjusting the frequencies of their songs in order to be heard over or under the din of our noisy urban environments.[62] Presumably, such adaptability is rooted in many generations of natural selection favoring brain plasticity and behavioral flexibility. Unfortunately, we have not allowed all birds to enjoy the benefits of such natural selection. Our interference with bird reproduction—which has included such tactics as segregation, selective sterilization, and forcible impregnation and has reached its apex in genetic engineering—has profoundly influenced not only the bodies but also the psyches of individual birds while altering the course of evolution for entire species. The effects of this on the bodies of birds such as "broiler" chickens is well documented[63] and increasingly well known. The effects of so-called domestication on bird brains has received less attention but is likely substantial and tragic. For example, "there are good grounds for believing that the artificial domesticating selection that has affected pigeons for several thousand generations might have tended to blunt their intelligence."[64]

Interference with reproduction is but one way people have degenerated bird brains and psyches. The suffering of caged birds can scarcely be imagined, except perhaps by reference to the voluminous literature on the effects of solitary confinement on people, which include not only emotional unrest but significant degradation of

cognitive functioning.[65] Let us examine two examples: Parrots and other "pet" birds confined alone in cages and chickens crowded together in batteries of egg factory cages. In both instances, the constant frustration of the impulse for flight and other free movement is compounded by the absence of normal social relations. In the case of solitary caged birds, the extent of their loneliness is evident if not quite imaginable. Birds are *social* animals. Every aspect of their brain and behavior evolved to fit eco*social* environments within which *social* relationships were the the most salient and essential elements. Perhaps even more insistently than ours do, their emotions tell them to seek and maintain relationships with others of their kind. As William Blake poetically opined, "robin redbreast in a cage" does indeed "put all heaven in a rage" in the sense of perverting the natural order.

For hens crowded into egg factory cages, the interference with normal social relationships and other activities is different but no less acute. Hens often choose to sleep close together at night, but they forage widely all day, spreading out to do so. Although they often dust-bathe collectively, many prefer privacy for egg laying. Hens in egg factories spend all day every day crowded into barren cages with scarcely enough room to lie down or turn around, much less stretch their wings or walk away from one another. The cacophony of unanswered distress cries of thousands of hens is deafening. Choking ammonia fumes rise from the manure pits beneath the batteries of cages. Hence, normal social interactions are impossible. Age mates who might otherwise have been valued companions become *competitors* from whom it is impossible to escape. As I wrote in 2006:

> Have you ever been bored? Frustrated? Uncomfortable? Cranky? Imagine yourself crowded into a cage, often thirsty and always a little hungry, with nothing to do other than jostle your cage-mates. They're not your friends—they're your competitors. There's never enough space and never enough food for everybody to feel satisfied. You can't ever get comfortable. There's no place to go to get away from each other. And there's never anything to do!
>
> One of your cage-mates keeps screaming. She won't shut up! Another is slumped in a stupor. She won't move out of the way! Somebody else is dying. No—she's dead. Your eyes burn. Your

> feet throb. Your wings ache to open. You can't turn around or lie down. You wait.
>
> Ten minutes. Five hours. Three weeks. Eight months. Two years. Two years you may wait for relief from the tedium and pain. Then the cage opens but you are not released. Instead you are trucked to a painful and terrifying death at a slaughter factory or, if no buyer has been found for your bedraggled body, simply buried alive in a landfill.[66]

Hens fortunate enough to go to sanctuaries rather than landfills or slaughterhouses often spend hours or days in a dazed huddle, evidently unable to comprehend that they may now move freely. Others careen confusedly, unable to gauge distances or control their nearly atrophied muscles. Some seem sunk in a state of learned helplessness while others respond with panicked flight to every surprising stimulus. Over time, most recover both physical and emotional equilibrium by observing and interacting with other sanctuary residents. They sun bathe, lay their eggs in nests, and roost in the branches of trees. However, some remain forever psychically scarred by early deprivation and trauma, never demonstrating quite the same courage and confidence consistently evinced by feral hens.

For the Birds

Like most "broiler" chickens, Heartbeat died too young. Chickens bred by the poultry industry suffer a host of health problems due to decades of genetic selection for rapid and excessive growth. On what would be his last morning, Heartbeat was very still and weak but seemed to appreciate the soymilk-alfalfa-vitamin concoction I fed him by hand. But then the liquid began dribbling from his mouth and I knew the end was near. I carried him to a quiet spot, holding his body to my heart and his drooping head in my hand. Crouching in the shade of a mulberry bush, I cradled him as he went into his death throes. As his body jerked, I cried out, "No, no, don't go, don't go!" but then I said, "Go, go with the wild birds," and, "You'll never be alone." He went with his eyes open. For a while after he died I thought he was still alive because his little chest still seemed to be moving up and down. But then I realized it was just my own heartbeat.

Our habit of using birds as symbols has been and continues to be hurtful to their psyches and our own. Symbolism is a kind of

objectification. Using imaginary birds as symbols makes us more likely to treat actual animals as if they, too, were mere objects to be manipulated in service of our fantasies. On the other hand, our evolved tendency to see birds as signals may turn out to be useful to both us and them. Birds are salient features of our environment; we appear to be primed to notice and attend them. If we can clear away the clutter of cultural symbolism in order to see birds and their psyches more clearly, we may become better able to use our own brain plasticity and behavioral flexibility to cooperate with them in salvaging the wreck we've made of our shared world.

Within clinical psychology, we rightly consider people who manipulate other people as if they were objects to be sociopathic. Similarly, the belief that other people are insensate robots without thoughts or feelings is rightly considered to be psychotic thinking. Birds and other animals are sentient fellow beings but are treated by most people as insensate objects to be manipulated without remorse. The statistical normalcy of this ought not deflect us from perceiving the sociopathic and indeed psychotic character of these patterns of thought and behavior. In our beliefs and behaviors concerning birds and other denizens of our ecosocial environments, we are profoundly disordered animals. Our maladaptive destruction of our own habitat is similarly rooted in reductive objectification and the refusal to act reciprocally within relationships.

Might we, by thinking about bird psyches, reshape our own? If so, we and other species might derive substantial benefits from the exercise. Even if that is not the case, thinking about bird psyches in relation to our own may allow us to apply the insights of psychology to birds whose psyches have been damaged by people. At the Eastern Shore Sanctuary, we adapted techniques used in the treatment of traumatized people to devise a rehabilitation program for roosters used in cockfighting.[67] In brief, this process provides these unsocialized and traumatized birds safe spaces within which to become less afraid of other birds and, most importantly, learn *from* other birds the social lessons essential to peaceful coexistence within flocks.[68] Similarly, techniques used in the treatment of PTSD in people have been applied to the treatment of traumatized parrots.[69]

Given the varieties of psychic trauma suffered by birds at the hands of people, much more work remains to be done in the realm of

extending psychological care to traumatized birds. Pigeons, parrots, and other birds in captivity have long been deprived of both freedom and normal social relations by psychological researchers. Psychologists of all varieties can act to end this ongoing trauma by pressing for changes in the guidelines for ethical research. Clinical psychologists might begin the process of offering reparations for the long history of animal abuse within the field by volunteering their expertise to animal sanctuaries.

In their own practices, clinical psychologists must resist the tendency to collude with sociopathic behavior and psychotic thinking in relation to birds and other nonhuman animals. If a patient dreams of birds, don't leap to the conclusion that they must symbolize *something else*. Inquire about the client's thoughts, feelings, and behavior toward birds. Does he or she watch birds? Hunt birds? Eat birds? If she dotes on bluebirds but makes soup of duckings, look for the dissociations and delusions that facilitate that discrepancy. How does she block or blunt her awareness of bird suffering? What else *isn't* she thinking about? If you fear you may be overstepping your boundaries with such inquiries, remember that the survival of your client and her offspring depend in part on our collective ability to reorient ourselves in relation to the biosphere and its other inhabitants.

Perhaps because so many of its theorists and practitioners are analytic psychologists, ecopsychology tends to share the Jungian neglect of the body. Given that the impact of human bodies on the body of the planet is or should be at the heart of ecopsychological concerns, the disembodied quality of ecopsychology theory and practice is both curious and dangerous.[70] One can read anthologies[71] of ecopsychology without encountering a word about the effect of pollutants such as lead on our brains (and, therefore, psyches) or the impact of our food choices on our bodies (and, therefore psyches), animal bodies, or the body of the planet. The ideas about archetypes and the collective unconscious put forward here remind us that these are *bodily* processes rooted in *material* history, which is *ongoing*. What we think and feel both reflects and is shaped by what we *do,* including what we do to other animals. At present, ecopsychology as a field is woefully incomplete due to its wholesale neglect of actual human-animal relations. Like other clinical psychologists, practicing ecopsychologists can begin to remedy this by by speaking with clients about birds and other animals *not* as symbols

of the wished-for wild but as fellow beings whose own wishes must be recognized if we are to wrest ourselves out of ecologically destructive wishful thinking.

No animal sanctuary needs to be reminded that animals seeking refuge often arrive with psychic damage. The good news is that the psychic similarity of people and birds opens up new avenues of treatment for psychologically disturbed birds. The natural sociality and behavioral plasticity of birds, in conjunction with the remarkable ease with which they may view a member of another species as *mother* or *friend*, means that we often can extend psychologically reparative care to them. However, because birds are social animals with brains and bodies evolved for flock life, other birds must be part of the process of recovery. Full recovery can only be achieved within the context of relationships with other birds, ideally including integration into a pair bond or flock. At the Eastern Shore Sanctuary, people could help former fighting roosters become less afraid of other birds. But only other birds could model for them the social behavior through which roosters naturally mediate their relations.

Many birds at the sanctuary demonstrated both the desire and the ability to "rewild" themselves, shifting gradually from reliance on the sanctuary to living freely in self-selected flocks within which they raised successive generations of young, some of whom were never touched by human hands. Similarly, I have seen wild flocks of chickens (presumably the offspring of cockfighting industry escapees) living happily in a forest in Maui. While the norm for animal sanctuaries is to limit the reproduction of their residents, full psychological recovery—for individual and for species—cannot be achieved in the context of continued reproductive control. Hence, for birds at least, sanctuaries where space and circumstances make this feasible ought to restore reproductive freedom to their inhabitants, thereby returning to them the freedom to forge their own flocks and families.

One fine September afternoon, the founder of another sanctuary stopped by to pick up some brochures. She was distraught, having just come from euthanizing a bird at the animal hospital. People always ask her, she said, "How can you keep going without getting upset?" What they don't understand, she said, her voice rising, is that "I'm always upset!" Casting around for something, anything, to bring a little cheer into her day, I suddenly

remembered: The feral chicks! Over the summer, the hen we called Minya had gone missing for so long we feared her dead. Suspecting she might be brooding eggs, we'd searched the underbrush for her with no luck. Just when we'd given up and begun to mourn her, Minya reappeared, trailing seven chicks in her wake. Thus we got our first chance to see chicks as the young birds they we meant to be. Minya encouraged them to forage rather than rely on the feed bowls. We watched as she showed them how to perch on higher and higher bushes. We gasped with wonder and trepidation one night at twilight when Minya decided it was time to return to the trees. Jumping onto a low branch, she called to her chicks. All but one followed readily, and the straggler made it eventually. Minya then led them to successively higher branches until they roosted, the young birds arrayed on either side of their mother, and fell asleep far from the reach of any predator. Wanting to share the wonder of that moment with my friend, I dragged her into the backyard, where Minya and her chicks usually could be found foraging. They were so nimble and clever at fading into the shadows that we were only able to catch a glimpse of their tail feathers as they advanced into the woods.[72]

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72. The author thanks Miriam Jones for cofounding and continuing to operate the Eastern Shore Sanctuary and for helpful comments on a draft of this essay. Grateful thanks for generous feedback also go out to Greta Gaard and G.A. Bradshaw. Dedicated to the memories of Zami, Samhain, Hearbeat, Simone, and other sanctuary participants who taught me about cross-species empathy by demonstrating it themselves. Offered in solidarity with caged birds everywhere.

Psychology

Minding *the* Animal Psyche

VOL. 83, SPRING 2010

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ISBN 978-1-935528-07-4
90000 >
9 781935 528074

printed in Canada