CHARLES SIEBERT

HAVING CLAIMED DOMINANCE over the planet for centuries, human beings have, by and large, made use of the earth without much consideration for the environmental and social needs of other animals. As a result, the areas in which animals are free to move about without danger from humans have steadily declined both in size and number. Overall, most of the animal kingdom has acquiesced without substantial resistance. But what happens when an animal community responds to the destruction of its natural habitat by turning against people, other species, and themselves? Charles Siebert addresses these questions in "An Elephant Crackup?," an article that first appeared in the *New York Times Magazine.*

An essayist, a novelist, and a poet, Siebert has published numerous articles in the *New York Times Magazine*, the *New Yorker, Harpers*, and other periodicals. He has published four books, *A Man After His Own Heart* (2004), a meditation on the human heart (literally); *Angus: A Novel* (2000), an account of the inner life of a Jack Russell terrier; *Wickerby: An Urban Pastoral* (1998), which explores the fluid relationship between the urban and the rural worlds; and *The Wauchula Woods Accord: Toward a New Understanding of Animals* (2009).

"An Elephant Crackup?" is a further example of the sympathy for the emotional lives of animals that Siebert first explored in *Angus*. Here, he conducts research across Africa, India, and parts of southeastern Asia on the new phenomenon called "human–elephant conflict," which has resulted in hundreds of human deaths since the year 2000. This is especially troubling, Siebert feels, because elephants possess "a highly developed sensibility" and "a deep-rooted sense of family" that is nowhere in evidence during these violent rampages. Drawing on research into the fabric of animal society and the similarities between the emotional brains of elephants and the emotional brains of humans, Siebert weaves a compelling narrative of conflict between a species that once enjoyed dominance over its territory and the species that has the upper hand now.

If "An Elephant Crackup?" explores the surprisingly "human" psychology of elephants in distress, *The Wauchula Woods Accord* suggests that we feel ambivalence toward animals because we fear the animal in ourselves. As Siebert told an interviewer in 2009, "The more we begin to see and understand ourselves as one more extension of the greater biological forces that created and control

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Lisa G. Brown, "An Interview with Author Charles Siebert about his new book, The Wauchula Woods Accord," Animal Inventory Blog, June 22, 2009.

all life on earth, rather than as beings apart [from other species, or as] entities anointed by some higher authority, the more the 'inter-species empathy' I speak of ... will be allowed to flourish."

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An Elephant Crackup?

"We're not going anywhere," my driver, Nelson Okello, whispered to me one morning this past June, the two of us sitting in the front seat of a jeep just after dawn in Queen Elizabeth National Park in southwestern Uganda. We'd originally stopped to observe what appeared to be a lone bull elephant grazing in a patch of tall savanna grasses off to our left. More than one "rogue" crossed our path that morning—a young male elephant that has made an overly strong power play against the dominant male of his herd and been banished, sometimes permanently. This elephant, however, soon proved to be not a rogue but part of a cast of at least thirty. The ground vibrations registered just before the emergence of the herd from the surrounding trees and brush. We sat there watching the elephants cross the road before us, seeming, for all their heft, so light on their feet, soundlessly playing the wind-swept savanna grasses like land whales adrift above the floor of an ancient, waterless sea.

Then, from behind a thicket of acacia trees directly off our front left bumper, a huge female emerged—"the matriarch," Okello said softly. There was a small calf beneath her, freely foraging and knocking about within the secure cribbing of four massive legs. Acacia leaves are an elephant's favorite food, and as the calf set to work on some low branches, the matriarch stood guard, her vast back flank blocking the road, the rest of the herd milling about in the brush a short distance away.

After fifteen minutes or so, Okello started inching the jeep forward, revving the engine, trying to make us sound as beastly as possible. The matriarch, however, was having none of it, holding her ground, the fierce white of her eyes as bright as that of her tusks. Although I pretty much knew the answer, I asked Okello if he was considering trying to drive around. "No," he said, raising an index finger for emphasis. "She'll charge. We should stay right here."

I'd have considered it a wise policy even at a more peaceable juncture in the course of human-elephant relations. In recent years, however, those relations have become markedly more bellicose. Just two days before I arrived, a woman was killed by an elephant in Kazinga, a fishing village nearby. Two months earlier, a man was fatally gored by a young male elephant at the northern edge of the park, near the village of Katwe. African elephants use their long tusks to forage through dense jungle brush. They've also been known to wield them, however, with the ceremonious flash and precision of gladiators, pinning down a victim with one knee in order to deliver the decisive thrust. Okello told me that a young Indian tourist was killed in this fashion two years ago in Murchison Falls National Park, just north of where we were.

These were not isolated incidents. All across Africa, India, and parts of Southeast Asia, from within and around whatever patches and corridors of their natural habitat remain, elephants have been striking out, destroying villages and crops, attacking and killing human beings. In fact, these attacks have become so commonplace that a whole new statistical category, known as Human-Elephant Conflict, or HEC, was created by elephant researchers in the mid-1990s to monitor the problem. In the Indian state Jharkhand near the western border of Bangladesh, 300 people were killed by elephants between 2000 and 2004. In the past twelve years, elephants have killed 605 people in Assam, a state in northeastern India, 239 of them since 2001; 265 elephants have died in that same period, the majority of them as a result of retaliation by angry villagers, who have used everything from poison-tipped arrows to laced food to exact their revenge. In Africa, reports of human-elephant conflicts appear almost daily, from Zambia to Tanzania, from Uganda to Sierra Leone, where 300 villagers evacuated their homes last year because of unprovoked elephant attacks.

Still, it is not only the increasing number of these incidents that is causing alarm but also the singular perversity—for want of a less anthropocentric term—of recent elephant aggression. Since the early 1990s, for example, young male elephants in Pilanesberg National Park and the Hluhluwe-Umfolozi Game Reserve in South Africa have been raping and killing rhinoceroses; this abnormal behavior, according to a 2001 study in the journal *Pachyderm*, has been reported in "a number of reserves" in the region. In July of last year, officials in Pilanesberg shot three young male elephants who were responsible for the killings of sixty-three rhinos, as well as attacks on people in safari vehicles. In Addo Elephant National Park, also in South Africa, up to ninety percent of male elephant deaths are now attributable to other male elephants, compared with a rate of six percent in more stable elephant communities.

In a coming book on this phenomenon, Gay Bradshaw, a psychologist at the environmental sciences program at Oregon State University, notes that in India, where the elephant has long been regarded as a deity, a recent headline in a leading newspaper warned, "To Avoid Confrontation, Don't Worship Elephants." "Everybody pretty much agrees that the relationship between elephants and people has dramatically changed," Bradshaw told me recently. "What we are seeing today is extraordinary. Where for centuries humans and elephants lived in relative peaceful coexistence, there is now hostility and violence. Now, I use the term 'violence' because of the intentionality associated with it, both in the aggression of humans and, at times, the recently observed behavior of elephants."

For a number of biologists and ethologists who have spent their careers studying elephant behavior, the attacks have become so abnormal in both number and kind that they can no longer be attributed entirely to the customary

factors. Typically, elephant researchers have cited, as a cause of aggression, the high levels of testosterone in newly matured male elephants or the competition for land and resources between elephants and humans. But in "Elephant Breakdown," a 2005 essay in the journal *Nature*, Bradshaw and several colleagues argued that today's elephant populations are suffering from a form of chronic stress, a kind of species-wide trauma. Decades of poaching and culling and habitat loss, they claim, have so disrupted the intricate web of familial and societal relations by which young elephants have traditionally been raised in the wild, and by which established elephant herds are governed, that what we are now witnessing is nothing less than a precipitous collapse of elephant culture.

It has long been apparent that every large, land-based animal on this planet is ultimately fighting a losing battle with humankind. And yet entirely befitting of an animal with such a highly developed sensibility, a deep-rooted sense of family and, yes, such a good long-term memory, the elephant is not going out quietly. It is not leaving without making some kind of statement, one to which scientists from a variety of disciplines, including human psychology, are now beginning to pay close attention.

Once the matriarch and her calf were a comfortable distance from us that morning, Okello and I made the twenty-minute drive to Kyambura, a village at the far southeastern edge of the park. Back in 2003, Kyambura was reportedly the site of the very sort of sudden, unprovoked elephant attack I'd been hearing about. According to an account of the event in the magazine *New Scientist*, a number of huts and fields were trampled, and the townspeople were afraid to venture out to surrounding villages, either by foot or on their bikes, because elephants were regularly blocking the road and charging out at those who tried to pass.

Park officials from the Uganda Wildlife Authority with whom I tried to discuss the incident were reluctant to talk about it or any of the recent killings by elephants in the area. Ecotourism is one of Uganda's major sources of income, and the elephant and other wildlife stocks of Queen Elizabeth National Park are only just now beginning to recover from years of virtually unchecked poaching and habitat destruction. Tom Okello, the chief game warden at the park (and no relation to my driver), and Margaret Driciru, Queen Elizabeth's chief veterinarian, each told me that they weren't aware of the attack in Kyambura. When I mentioned it to the executive director of the wildlife authority, Moses Mapesa, upon my initial arrival in the capital city, Kampala, he eventually admitted that it did happen, but he claimed that it was not nearly as recent as reported. "That was fourteen years ago," he said. "We have seen aggressive behavior from elephants, but that's a story of the past."

Kyambura did look, upon our arrival, much like every other small Ugandan farming community I'd passed through on my visit. Lush fields of banana trees, millet, and maize framed a small town center of pastel-colored, single-story cement buildings with corrugated-tin roofs. People sat on stoops out front in the available shade. Bicyclers bore preposterously outsize loads of bananas, firewood, and five-gallon water jugs on their fenders and handlebars. Contrary to what I had read, the bicycle traffic along the road in and out of Kyambura didn't seem impaired in the slightest.

But when Okello and I asked a shopkeeper named Ibrah Byamukama about elephant attacks, he immediately nodded and pointed to a patch of maize and millet fields just up the road, along the edges of the surrounding Maramagambo Forest. He confirmed that a small group of elephants charged out one morning two years earlier, trampled the fields and nearby gardens, knocked down a few huts, and then left. He then pointed to a long orange gash in the earth between the planted fields and the forest: a fifteen-foot-deep, twenty-five-foot-wide trench that had been dug by the wildlife authority around the perimeter of Kyambura in an attempt to keep the elephants at bay. On the way out of town, Okello and I took a closer look at the trench. It was filled with stacks of thorny shrubs for good measure.

"The people are still worried," Byamukama said, shaking his head. "The elephants are just becoming more destructive. I don't know why."

Three years ago, Gay Bradshaw, then working on her graduate degree in psychology at the Pacifica Graduate Institute outside Santa Barbara, California, began wondering much the same thing: was the extraordinary behavior of elephants in Africa and Asia signaling a breaking point? With the assistance of several established African-elephant researchers, including Daphne Sheldrick and Cynthia Moss, and with the help of Allan Schore, an expert on human trauma disorders at the department of psychiatry and biobehavioral sciences at UCLA, Bradshaw sought to combine traditional research into elephant behavior with insights about trauma drawn from human neuroscience. Using the few remaining relatively stable elephant herds in places like Amboseli National Park in Kenya as control groups, Bradshaw and her colleagues analyzed the far more fractious populations found in places like Pilanesberg in South Africa and Queen Elizabeth National Park in Uganda. What emerged was a portrait of pervasive pachyderm dysfunction.

Elephants, when left to their own devices, are profoundly social creatures. A herd of them is, in essence, one incomprehensibly massive elephant: a somewhat loosely bound and yet intricately interconnected, tensile organism. Young elephants are raised within an extended, multitiered network of doting female caregivers that includes the birth mother, grandmothers, aunts, and friends. These relations are maintained over a life span as long as seventy years. Studies of established herds have shown that young elephants stay within fifteen feet of their mothers for nearly all of their first eight years of life, after which young females are socialized into the matriarchal network, while young males go off for a time into an all-male social group before coming back into the fold as mature adults.

When an elephant dies, its family members engage in intense mourning and burial rituals, conducting weeklong vigils over the body, carefully covering it with earth and brush, revisiting the bones for years afterward, caressing the bones with their trunks, often taking turns rubbing their trunks along the teeth of a skull's lower jaw, the way living elephants do in greeting. If harm comes to a member of an elephant group, all the other elephants are aware of it. This sense of cohesion is further enforced by the elaborate communication system that elephants use. In close proximity they employ a range of vocalizations, from low-frequency rumbles to higher-pitched screams and trumpets, along with a

variety of visual signals, from the waving of their trunks to subtle anglings of the head, body, feet, and tail. When communicating over long distances—in order to pass along, for example, news about imminent threats, a sudden change of plans or, of the utmost importance to elephants, the death of a community member—they use patterns of subsonic vibrations that are felt as far as several miles away by exquisitely tuned sensors in the padding of their feet.

This fabric of elephant society, Bradshaw and her colleagues concluded, had effectively been frayed by years of habitat loss and poaching, along with systematic culling by government agencies to control elephant numbers and translocations of herds to different habitats. The number of older matriarchs and female caregivers (or "allomothers") had drastically fallen, as had the number of elder bulls, who play a significant role in keeping younger males in line. In parts of Zambia and Tanzania, a number of the elephant groups studied contained no adult females whatsoever. In Uganda, herds were often found to be "semipermanent aggregations," as a paper written by Bradshaw describes them, with many females between the ages of fifteen and twenty-five having no familial associations.

As a result of such social upheaval, calves are now being born to and raised by ever younger and inexperienced mothers. Young orphaned elephants, meanwhile, that have witnessed the death of a parent at the hands of poachers are coming of age in the absence of the support system that defines traditional elephant life. "The loss of elephants' elders," Bradshaw told me, "and the traumatic experience of witnessing the massacres of their family, impairs normal brain and behavior development in young elephants."

What Bradshaw and her colleagues describe would seem to be an extreme form of anthropocentric conjecture if the evidence that they've compiled from various elephant researchers, even on the strictly observational level, wasn't so compelling. The elephants of decimated herds, especially orphans who've watched the death of their parents and elders from poaching and culling, exhibit behavior typically associated with post-traumatic stress disorder and other trauma-related disorders in humans: abnormal startle response, unpredictable asocial behavior, inattentive mothering, and hyperaggression. Studies of the various assaults on the rhinos in South Africa, meanwhile, have determined that the perpetrators were in all cases adolescent males that had witnessed their families being shot down in cullings. It was common for these elephants to have been tethered to the bodies of their dead and dying relatives until they could be rounded up for translocation to, as Bradshaw and Schore describe them, "locales lacking traditional social hierarchy of older bulls and intact natal family structures."

In fact, even the relatively few attempts that park officials have made to restore parts of the social fabric of elephant society have lent substance to the elephant-breakdown theory. When South African park rangers recently introduced a number of older bull elephants into several destabilized elephant herds in Pilanesburg and Addo, the wayward behavior—including unusually premature hormonal changes among the adolescent elephants—abated.

But according to Bradshaw and her colleagues, the various pieces of the elephant-trauma puzzle really come together at the level of neuroscience, or

what might be called the physiology of psychology, by which scientists can now map the marred neuronal fields, snapped synaptic bridges, and crooked chemical streams of an embattled psyche. Though most scientific knowledge of trauma is still understood through research on human subjects, neural studies of elephants are now under way. (The first functional MRI scan of an elephant brain, taken this year, revealed, perhaps not surprisingly, a huge hippocampus, a seat of memory in the mammalian brain, as well as a prominent structure in the limbic system, which processes emotions.) Allan Schore, the UCLA psychologist and neuroscientist who for the past fifteen years has focused his research on early human brain development and the negative impact of trauma on it, recently wrote two articles with Bradshaw on the stress-related neurobiological underpinnings of current abnormal elephant behavior.

"We know that these mechanisms cut across species," Schore told me. "In the first years of humans as well as elephants, development of the emotional brain is impacted by these attachment mechanisms, by the interaction that the infant has with the primary caregiver, especially the mother. When these early experiences go in a positive way, it leads to greater resilience in things like affect regulation, stress regulation, social communication, and empathy. But when these early experiences go awry in cases of abuse and neglect, there is a literal thinning down of the essential circuits in the brain, especially in the emotion-processing areas."

For Bradshaw, these continuities between human and elephant brains resonate far outside the field of neuroscience. "Elephants are suffering and behaving in the same ways that we recognize in ourselves as a result of violence," she told me. "Elephant behavior is entirely congruent with what we know about humans and other mammals. Except perhaps for a few specific features, brain organization and early development of elephants and humans are extremely similar. That's not news. What is news is when you start asking, What does this mean beyond the science? How do we respond to the fact that we are causing other species like elephants to psychologically break down? In a way, it's not so much a cognitive or imaginative leap anymore as it is a political one."

Eve Abe says that in her mind, she made that leap before she ever left her mother's womb. An animal ethologist and wildlife-management consultant now based in London, Abe (pronounced AH-bay) grew up in northern Uganda. After several years of studying elephants in Queen Elizabeth National Park, where decades of poaching had drastically reduced the herds, Abe received her doctorate at Cambridge University in 1994 for work detailing the parallels she saw between the plight of Uganda's orphaned male elephants and the young male orphans of her own people, the Acholi, whose families and villages have been decimated by years of civil war. It's work she proudly proclaims to be not only "the ultimate act of anthropomorphism" but also what she was destined to do.

"My very first encounter with an elephant was a fetal one," Abe told me in June in London as the two of us sipped tea at a cafe in Paddington Station. I was given Abe's contact numbers earlier in the spring by Bradshaw, who is currently working with Abe to build a community center in Uganda to help both elephants and humans in their recovery from violence. For more than a month before my

departure from New York, I had been trying without luck to arrange with the British Home Office for Abe, who is still waiting for permanent residence status in England, to travel with me to Uganda as my guide through Queen Elizabeth National Park without fear of her being denied re-entry to England. She was to accompany me that day right up to the departure gate at Heathrow, the two of us hoping (in vain, as it turned out) for a last-minute call that would have given her leave to use the ticket I was holding for her in my bag.

"My dad was a conservationist and a teacher," explained Abe, a tall, elegant woman with a trilling, nearly girlish voice. "He was always out in the parks. One of my aunts tells this story about us passing through Murchison Park one day. My dad was driving. My uncle was in the front seat. In the back were my aunt and my mom, who was very pregnant with me. They suddenly came upon this huge herd of elephants on the road, and the elephants just stopped. So my dad stopped. He knew about animals. The elephants just stood there, then they started walking around the car, and looking into the car. Finally, they walked off. But my father didn't start the car then. He waited there. After an hour or more, a huge female came back out onto the road, right in front of the car. It reared up and trumpeted so loudly, then followed the rest of the herd back into the bush. A few days later, when my mom got home, I was born."

Abe began her studies in Queen Elizabeth National Park in 1982, as an undergraduate at Makerere University in Kampala, shortly after she and her family, who'd been living for years as refugees in Kenya to escape the brutal violence in Uganda under the dictatorship of Idi Amin, returned home in the wake of Amin's ouster in 1979. Abe told me that when she first arrived at the park, there were fewer than 150 elephants remaining from an original population of nearly 4,000. The bulk of the decimation occurred during the war with Tanzania that led to Amin's overthrow: soldiers from both armies grabbed all the ivory they could get their hands on—and did so with such cravenness that the word "poaching" seems woefully inadequate. "Normally when you say 'poaching,'" Abe said, "you think of people shooting one or two and going off. But this was war. They'd just throw hand grenades at the elephants, bring whole families down, and cut out the ivory. I call that mass destruction."

The last elephant survivors of Queen Elizabeth National Park, Abe said, never left one another's side. They kept in a tight bunch, moving as one. Only one elderly female remained; Abe estimated her to be at least sixty-two. It was this matriarch who first gathered the survivors together from their various hideouts on the park's forested fringes and then led them back out as one group into open savanna. Until her death in the early 90s, the old female held the group together, the population all the while slowly beginning to rebound. In her yet-to-be-completed memoir, *My Elephants and My People,* Abe writes of the prominence of the matriarch in Acholi society; she named the park's matriarchal elephant savior Lady Irene, after her own mother. "It took that core group of survivors in the park about five or six years," Abe told me, "before I started seeing whole new family units emerge and begin to split off and go their own way."

In 1986, Abe's family was forced to flee the country again. Violence against Uganda's people and elephants never completely abated after Amin's regime collapsed, and it drastically worsened in the course of the full-fledged war that developed between government forces and the rebel Lord's Resistance Army. For years, that army's leader, Joseph Kony, routinely "recruited" from Acholi villages, killing the parents of young males before their eyes, or sometimes having them do the killings themselves, before pressing them into service as child soldiers. The Lord's Resistance Army has by now been largely defeated, but Kony, who is wanted by the International Criminal Court for numerous crimes against humanity, has hidden with what remains of his army in the mountains of Murchison Falls National Park, and more recently in Garamba National Park in northern Congo, where poaching by the Lord's Resistance Army has continued to orphan more elephants.

"I started looking again at what has happened among the Acholi and the elephants," Abe told me. "I saw that it is an absolute coincidence between the two. You know we used to have villages. We still don't have villages. There are over 200 displaced people's camps in present-day northern Uganda. Everybody lives now within these camps, and there are no more elders. The elders were systematically eliminated. The first batch of elimination was during Amin's time, and that set the stage for the later destruction of northern Uganda. We are among the lucky few, because my mom and dad managed to escape. But the families there are just broken. I know many of them. Displaced people are living in our home now. My mother said let them have it. All these kids who have grown up with their parents killed—no fathers, no mothers, only children looking after them. They don't go to schools. They have no schools, no hospitals. No infrastructure. They form these roaming, violent, destructive bands. It's the same thing that happens with the elephants. Just like the male war orphans, they are wild, completely lost."

On the ride from Paddington that afternoon out to Heathrow, where I would catch a flight to Uganda, Abe told me that the parallel between the plight of Ugandans and their elephants was in many ways too close for her to see at first. It was only after she moved to London that she had what was, in a sense, her first full, adult recognition of the entwinement between human and elephant that she says she long ago felt in her mother's womb.

"I remember when I first was working on my doctorate," she said. "I mentioned that I was doing this parallel once to a prominent scientist in Kenya. He looked amazed. He said, 'How come nobody has made this connection before?' I told him because it hadn't happened this way to anyone else's tribe before. To me it's something I see so clearly. Most people are scared of showing that kind of anthropomorphism. But coming from me it doesn't sound like I'm inventing something. It's there. People know it's there. Some might think that the way I describe the elephant attacks makes the animals look like people. But people are animals."

Shortly after my return from Uganda, I went to visit the Elephant Sanctuary in Tennessee, a 2,700-acre rehabilitation center and retirement facility situated in the state's verdant, low-rolling southern hill country. The sanctuary is a kind of asylum for some of the more emotionally and psychologically disturbed former zoo and circus elephants in the United States—cases so bad that the people who

profited from them were eager to let them go. Given that elephants in the wild are now exhibiting aberrant behaviors that were long observed in captive elephants, it perhaps follows that a positive working model for how to ameliorate the effects of elephant breakdown can be found in captivity.

Of the nineteen current residents of the sanctuary, perhaps the biggest hard-luck story was that of a forty-year-old, five-ton Asian elephant named Misty. Originally captured as a calf in India in 1966, Misty spent her first decade in captivity with a number of American circuses and finally ended up in the early 80s at a wild-animal attraction known as Lion Country Safari in Irvine, California. It was there, on the afternoon of July 25, 1983, that Misty, one of four performing elephants at Lion Country Safari that summer, somehow managed to break free of her chains and began madly dashing about the park, looking to make an escape. When one of the park's zoologists tried to corner and contain her, Misty killed him with one swipe of her trunk.

There are, in the long, checkered history of human-elephant relations, countless stories of lethal elephantine assaults, and almost invariably of some gruesomely outsize, animalistic form of retribution exacted by us. It was in the very state of Tennessee, back in September 1916, that another five-ton Asian circus elephant, Mary, was impounded by a local sheriff for the killing of a young hotel janitor who'd been hired to mind Mary during a stopover in the northeast Tennessee town of Kingsport. The janitor had apparently taken Mary for a swim at a local pond, where, according to witnesses, he poked her behind the left ear with a metal hook just as she was reaching for a piece of floating watermelon rind. Enraged, Mary turned, swiftly snatched him up with her trunk, dashed him against a refreshment stand, and then smashed his head with her foot.

With cries from the townspeople to "Kill the elephant!" and threats from nearby town leaders to bar the circus if "Murderous Mary," as newspapers quickly dubbed her, remained a part of the show, the circus's owner, Charlie Sparks, knew he had to do something to appease the public's blood lust and save his business. Among the penalties he is said to have contemplated was electrocution, a ghastly precedent for which had been set thirteen years earlier, on the grounds of the nearly completed Luna Park in Coney Island. A longtime circus elephant named Topsy, who'd killed three trainers in as many years—the last one after he tried to feed her a lighted cigarette—would become the largest and most prominent victim of Thomas Edison, the father of direct-current electricity, who had publicly electrocuted a number of animals at that time using his rival George Westinghouse's alternating current, in hopes of discrediting it as being too dangerous.

Sparks ultimately decided to have Mary hanged and shipped her by train to the nearby town of Erwin, Tennessee, where more than 2,500 people gathered at the local rail yard for her execution. Dozens of children are said to have run off screaming in terror when the chain that was suspended from a huge industrial crane snapped, leaving Mary writhing on the ground with a broken hip. A local rail worker promptly clambered up Mary's bulk and secured a heavier chain for a second, successful hoisting.

Misty's fate in the early 80s, by contrast, seems a triumph of modern humanism. Banished, after the Lion Safari killing, to the Hawthorn Corporation, a company in Illinois that trains and leases elephants and tigers to circuses, she would continue to lash out at a number of her trainers over the years. But when Hawthorn was convicted of numerous violations of the Animal Welfare Act in 2003, the company agreed to relinquish custody of Misty to the Elephant Sanctuary. She was loaded onto a trailer transport on the morning of November 17, 2004, and even then managed to get away with one final shot at the last in her long line of captors.

"The details are kind of sketchy," Carol Buckley, a founder of the Elephant Sanctuary, said to me one afternoon in July, the two of us pulling up on her all-terrain four-wheeler to a large grassy enclosure where an extremely docile and contented-looking Misty, trunk high, ears flapping, waited to greet us. "Hawthorn's owner was trying to get her to stretch out so he could remove her leg chains before loading her on the trailer. At one point he prodded her with a bull hook, and she just knocked him down with a swipe of her trunk. But we've seen none of that since she's been here. She's as sweet as can be. You'd never know that this elephant killed anybody."

In the course of her nearly two years at the Elephant Sanctuary—much of it spent in quarantine while undergoing daily treatment for tuberculosis—Misty has also been in therapy, as in psychotherapy. Wild-caught elephants often witness as young calves the slaughter of their parents, just about the only way, shy of a far more costly tranquilization procedure, to wrest a calf from elephant parents, especially the mothers. The young captives are then dispatched to a foreign environment to work either as performers or laborers, all the while being kept in relative confinement and isolation, a kind of living death for an animal as socially developed and dependent as we now know elephants to be.

And yet just as we now understand that elephants hurt like us, we're learning that they can heal like us as well. Indeed, Misty has become a testament to the Elephant Sanctuary's signature "passive control" system, a therapy tailored in many ways along the lines of those used to treat human sufferers of posttraumatic stress disorder. Passive control, as a sanctuary newsletter describes it, depends upon "knowledge of how elephants process information and respond to stress" as well as specific knowledge of each elephant's past response to stress. Under this so-called nondominance system, there is no discipline, retaliation, or withholding of food, water, and treats, which are all common tactics of elephant trainers. Great pains are taken, meanwhile, to afford the elephants both a sense of safety and freedom of choice—two mainstays of human trauma therapy—as well as continual social interaction.

Upon her arrival at the Elephant Sanctuary, Misty seemed to sense straight off the different vibe of her new home. When Scott Blais of the sanctuary went to free Misty's still-chained leg a mere day after she'd arrived, she stood peaceably by, practically offering her leg up to him. Over her many months of quarantine, meanwhile, with only humans acting as a kind of surrogate elephant family, she has consistently gone through the daily rigors of her tuberculosis treatments—involving two caregivers, a team of veterinarians, and the use of a

restraining chute in which harnesses are secured about her chest and tail—without any coaxing or pressure. "We'll shower her with praise in the barn afterwards," Buckley told me as Misty stood by, chomping on a mouthful of hay, "and she actually purrs with pleasure. The whole barn vibrates."

Of course, Misty's road to recovery—when viewed in light of her history and that of all the other captive elephants, past and present—is as harrowing as it is heartening. She and the others have suffered, we now understand, not simply because of us, but because they are, by and large, us. If as recently as the end of the Vietnam War people were still balking at the idea that a soldier, for example, could be physically disabled by a psychological harm—the idea, in other words, that the mind is not an entity apart from the body and therefore just as woundable as any limb—we now find ourselves having to make an equally profound and, for many, even more difficult leap: that a fellow creature as ostensibly unlike us in every way as an elephant is as precisely and intricately woundable as we are. And while such knowledge naturally places an added burden upon us, the keepers, that burden is now being greatly compounded by the fact that sudden violent outbursts like Misty's can no longer be dismissed as the inevitable isolated revolts of a restless few against the constraints and abuses of captivity.

They have no future without us. The question we are now forced to grapple with is whether we would mind a future without them, among the more mindful creatures on this earth and, in many ways, the most devoted. Indeed, the manner of the elephants' continued keeping, their restoration and conservation, both in civil confines and what's left of wild ones, is now drawing the attention of everyone from naturalists to neuroscientists. Too much about elephants, in the end—their desires and devotions, their vulnerability and tremendous resilience—reminds us of ourselves to dismiss out of hand this revolt they're currently staging against their own dismissal. And while our concern may ultimately be rooted in that most human of impulses—the preservation of our own self-image—the great paradox about this particular moment in our history with elephants is that saving them will require finally getting past ourselves; it will demand the ultimate act of deep, interspecies empathy.

On a more immediate, practical level, as Gay Bradshaw sees it, this involves taking what has been learned about elephant society, psychology, and emotion and inculcating that knowledge into the conservation schemes of researchers and park rangers. This includes doing things like expanding elephant habitat to what it used to be historically and avoiding the use of culling and translocations as conservation tools. "If we want elephants around," Bradshaw told me, "then what we need to do is simple: learn how to live with elephants. In other words, in addition to conservation, we need to educate people how to live with wild animals like humans used to do, and to create conditions whereby people can live on their land and live with elephants without it being this life-and-death situation."

The other part of our newly emerging compact with elephants, however, is far more difficult to codify. It requires nothing less than a fundamental shift in the way we look at animals and, by extension, ourselves. It requires what Bradshaw somewhat whimsically refers to as a new "trans-species psyche," a commitment to move beyond an anthropocentric frame of reference and, in

effect, be elephants. Two years ago, Bradshaw wrote a paper for the journal *Society and Animals,* focusing on the work of the David Sheldrick Wildlife Trust in Kenya, a sanctuary for orphaned and traumatized wild elephants—more or less the wilderness-based complement to Carol Buckley's trauma therapy at the Elephant Sanctuary in Tennessee. The trust's human caregivers essentially serve as surrogate mothers to young orphan elephants, gradually restoring their psychological and emotional well-being to the point at which they can be reintroduced into existing wild herds. The human "allomothers" stay by their adopted young orphans' sides, even sleeping with them at night in stables. The caregivers make sure, however, to rotate from one elephant to the next so that the orphans grow fond of all the keepers. Otherwise an elephant would form such a strong bond with one keeper that whenever he or she was absent, that elephant would grieve as if over the loss of another family member, often becoming physically ill itself.

To date, the Sheldrick Trust has successfully rehabilitated more than sixty elephants and reintroduced them into wild herds. A number of them have periodically returned to the sanctuary with their own wild-born calves in order to reunite with their human allomothers and to introduce their offspring to what—out on this uncharted frontier of the new "trans-species psyche"—is now being recognized, at least by the elephants, it seems, as a whole new subspecies: the human allograndmother. "Traditionally, nature has served as a source of healing for humans," Bradshaw told me. "Now humans can participate actively in the healing of both themselves and nonhuman animals. The trust and the sanctuary are the beginnings of a mutually benefiting interspecies culture."

On my way back to New York via London, I contacted Felicity de Zulueta, a psychiatrist at Maudsley Hospital in London, who treats victims of extreme trauma, among them former child soldiers from the Lord's Resistance Army. De Zulueta, an acquaintance of Eve Abe's, grew up in Uganda in the early 1960s on the outskirts of Queen Elizabeth National Park, near where her father, a malaria doctor, had set up camp as part of a malaria-eradication program. For a time she had her own elephant, orphaned by poaching, that local villagers had given to her father, who brought it home to the family garage, where it immediately bonded with an orphan antelope and dog already residing there.

"He was doing fine," de Zulueta told me of the pet elephant. "My mother was loving it and feeding it, and then my parents realized, How can we keep this elephant that is going to grow bigger than the garage? So they gave it to who they thought were the experts. They sent him to the Entebbe Zoo, and although they gave him all the right food and everything, he was a lonely little elephant, and he died. He had no attachment."

For de Zulueta, the parallel that Abe draws between the plight of war orphans, human and elephant, is painfully apt, yet also provides some cause for hope, given the often startling capacity of both animals for recovery. She told me that one Ugandan war orphan she is currently treating lost all the members of his family except for two older brothers. Remarkably, one of those brothers, while serving in the Ugandan Army, rescued the younger sibling from the Lord's Resistance Army; the older brother's unit had captured the rebel battalion in which his younger brother had been forced to fight.

The two brothers eventually made their way to London, and for the past two years, the younger brother has been going through a gradual process of recovery in the care of Maudsley Hospital. Much of the rehabilitation, according to de Zulueta, especially in the early stages, relies on the basic human trauma therapy principles now being applied to elephants: providing decent living quarters, establishing a sense of safety and of attachment to a larger community, and allowing freedom of choice. After that have come the more complex treatments tailored to the human brain's particular cognitive capacities: things like reliving the original traumatic experience and being taught to modulate feelings through early detection of hyperarousal and through breathing techniques. And the healing of trauma, as de Zulueta describes it, turns out to have physical correlatives in the brain just as its wounding does.

"What I say is, we find bypass," she explained. "We bypass the wounded areas using various techniques. Some of the wounds are not healable. Their scars remain. But there is hope because the brain is an enormous computer, and you can learn to bypass its wounds by finding different methods of approaching life. Of course there may be moments when something happens and the old wound becomes unbearable. Still, people do recover. The boy I've been telling you about is eighteen now, and he has survived very well in terms of his emotional health and capacities. He's a lovely, lovely man. And he's a poet. He writes beautiful poetry."

On the afternoon in July that I left the Elephant Sanctuary in Tennessee, Carol Buckley and Scott Blais seemed in particularly good spirits. Misty was only weeks away from the end of her quarantine, and she would soon be able to socialize with some of her old cohorts from the Hawthorn Corporation: eight female Asians that had been given over to the sanctuary. I would meet the lot of them that day, driving from one to the next on the back of Buckley's four-wheeler across the sanctuary's savannalike stretches. Buckley and Blais refer to them collectively as the Divas.

Buckley and Blais told me that they got word not long ago of a significant breakthrough in a campaign of theirs to get elephants out of entertainment and zoos: the Bronx Zoo, one of the oldest and most formidable zoos in the country, had announced that upon the death of the zoo's three current elephant inhabitants, Patty, Maxine, and Happy, it would phase out its elephant exhibit on social-behavioral grounds—an acknowledgment of a new awareness of the elephant's very particular sensibility and needs. "They're really taking the lead," Buckley told me. "Zoos don't want to concede the inappropriateness of keeping elephants in such confines. But if we as a society determine that an animal like this suffers in captivity, if the information shows us that they do, hey, we are the stewards. You'd think we'd want to do the right thing."

Four days later, I received an e-mail message from Gay Bradshaw, who consults with Buckley and Blais on their various stress-therapy strategies. She wrote that one of the sanctuary's elephants, an Asian named Winkie, had just killed a thirty-six-year-old female assistant caretaker and critically injured the male caretaker who'd tried to save her.

People who work with animals on a daily basis can tell you all kinds of stories about their distinct personalities and natures. I'd gotten, in fact, an elaborate breakdown from Buckley and Blais on the various elephants at the sanctuary and their sociopolitical maneuverings within the sanctuary's distinct elephant culture, and I went to my notebook to get a fix again on Winkie. A forty-year-old, 7,600-pound female from Burma, she came to the sanctuary in 2000 from the Henry Vilas Zoo in Madison, Wisconsin, where she had a reputation for lashing out at keepers. When Winkie first arrived at the sanctuary, Buckley told me, she used to jump merely upon being touched and then would wait for a confrontation. But when it never came, she slowly calmed down. "Has never lashed out at primary keepers," my last note on Winkie reads, "but has at secondary ones."

Bradshaw's e-mail message concludes: "A stunning illustration of trauma in elephants. The indelible etching."

I thought back to a moment in Queen Elizabeth National Park this past June. As Nelson Okello and I sat waiting for the matriarch and her calf to pass, he mentioned to me an odd little detail about the killing two months earlier of the man from the village of Katwe, something that, the more I thought about it, seemed to capture this particularly fraught moment we've arrived at with the elephants. Okello said that after the man's killing, the elephant herd buried him as it would one of its own, carefully covering the body with earth and brush and then standing vigil over it.

Even as we're forcing them out, it seems, the elephants are going out of their way to put us, the keepers, in an ever more discomfiting place, challenging us to preserve someplace for them, the ones who in many ways seem to regard the matter of life and death more devoutly than we. In fact, elephant culture could be considered the precursor of our own, the first permanent human settlements having sprung up around the desire of wandering tribes to stay by the graves of their dead. "The city of the dead," as Lewis Mumford once wrote, "antedates the city of the living."

When a group of villagers from Katwe went out to reclaim the man's body for his family's funeral rites, the elephants refused to budge. Human remains, a number of researchers have observed, are the only other ones that elephants will treat as they do their own. In the end, the villagers resorted to a tactic that has long been etched in the elephant's collective memory, firing volleys of gunfire into the air at close range, finally scaring the mourning herd away.

QUESTIONS FOR MAKING CONNECTIONS WITHIN THE READING

1. What evidence does Siebert provide to support the claim there is such a thing as an "elephant culture"? In making this claim, is Siebert guilty of anthropomorphism? That is, does he ascribe to animals the thoughts and emotions that only humans have? Or is he guilty of the opposite mistake,

the error of anthropocentrism—treating human beings as the standard by which all other species should be measured? Is it possible that these "mistakes" are really not mistakes at all, especially because we *Homo sapiens* are in fact animals, too? Would you agree that understanding other minds—human or otherwise—requires us to start with what we know about own mental processes? Can we even prove that our fellow human beings have thoughts and emotions like our own?

2. As Siebert's discussion unfolds, he describes elephants who experience acute trauma and then become deliberately aggressive. He also shows that they respond to psychotherapies that were initially developed to assist human beings. Do you find these developments surprising? Is Siebert seeking to establish that humans and elephants are part of a continuum? Does he mean to imply that the minds of the two species are identical? Or does he see them on parallel paths?
3. Siebert's essay ends with two acts of violence: a caretaker killed by an elephant in captivity, and a villager killed and buried by an elephant herd. Why does he structure the piece in this way? Since he also began by describing violence, has Siebert come full circle? Or has he put his readers in a better position to understand the violence?

QUESTIONS FOR WRITING

1. Throughout "An Elephant Crackup?" Siebert gestures towards modes of consciousness that differ significantly from the model of an individual thinking. He describes a herd of elephants as "in essence, one incomprehensibly massive elephant." He observes that saving elephants from extinction "will demand the ultimate act of deep, interspecies empathy." And he cites Gay Bradshaw's call for the development of a "trans-species psyche" that will allow humans to "be elephants." How would one go about creating these new modes of consciousness? Does Siebert's narrative provide any hints about how the two species might begin to share the same conceptual world?
2. Siebert notes that those who are concerned with the effects of trauma on the elephant population are now focusing on the "physiology of psychology"—that is, on the neurological foundation for psychological development. Based on the preliminary results of these studies, would you say that the turn to neurology provides cause for optimism about the possibilities of overcoming trauma? Or does the fact that trauma during the formative years results in "a literal thinning down of the essential circuits in the brain" mean that there's no saving young victims of trauma, be they elephant or human?

QUESTIONS FOR MAKING CONNECTIONS BETWEEN READINGS

1. In Selections from *Love 2.0*, Barbara Fredrickson describes the way our brains operate below the level of consciousness to produce our conscious experience of resonating with others. In what ways does Fredrickson's account complicate our tendency to think about the mental life of *Homo sapiens* as fundamentally different from the mental lives of animals like the elephants whose decline Siebert chronicles? Does Fredrickson's account of our emotions justify Gay Bradshaw's willingness to violate the rule in animal studies against anthropomorphism—against imposing on animal behavior the thoughts and motivations of humans? In view of the possible parallels between displaced humans and the young elephants raised without the guidance of adults, would you agree that our way of life might be doing damage to us?
2. In Selections from *Alone Together*, Sherry Turkle contemplates the ways that contemporary children interact with their Tamagotchis and Furbies. She describes her own experience, as well:

> My Tamagotchi liked to eat at particular intervals. I thought it prospered best with only small doses of amusement. I worked hard at keeping it happy. I did not anticipate how bad I would feel when it died. I immediately hit the reset button. Somewhat to my surprise, I had no desire to take care of the new infant Tamagotchi that appeared on my screen.

Will our embrace of technology make us more receptive, or less, to the predicament of the elephants? If we should lose the ability to distinguish between biological life and its simulations, will the extinction of species matter to us at all? Does the belief that a "singularity" that will free our minds from all material constraints express an unacknowledged loathing for our humanity and, perhaps, even for life itself?