

THE RACE TO SAVE BONOBOS  
IN THE CONGO AND  
MAKE CONSERVATION GO VIRAL

# EMPTY HANDS, OPEN ARMS

"A SEED OF HOPE IN OUR TIME'S GARDEN OF DESPAIR." —DALE PETERSON

DENI BÉCHARD

# **Empty Hands, Open Arms**

---

Also by Deni Béchar

---

*Cures for Hunger*

*Vandal Love*

---

# Empty Hands, Open Arms

---

The Race to Save  
Bonobos in the Congo  
and Make Conservation Go Viral

DENI BÉCHARD



© 2013, Text by Deni Béchar

All rights reserved. Except for brief quotations in critical articles or reviews, no part of this book may be reproduced in any manner without prior written permission from the publisher: Milkweed Editions, 1011 Washington Avenue South, Suite 300, Minneapolis, Minnesota 55415.

(800) 520-6455

[www.milkweed.org](http://www.milkweed.org)

Published 2013 by Milkweed Editions

Cover design by Christian Fuenfhausen

Cover photos © Christian Ziegler and Getty Images

13 14 15 16 17 5 4 3 2 1

*First Edition*

ISBN 978-1-5713-1849-7

Milkweed Editions, an independent nonprofit publisher, gratefully acknowledges sustaining support from the Bush Foundation; the Patrick and Aimee Butler Foundation; the Dougherty Family Foundation; the Driscoll Foundation; the Jerome Foundation; the Lindquist & Vennum Foundation; the McKnight Foundation; the voters of Minnesota through a Minnesota State Arts Board Operating Support grant, thanks to a legislative appropriation from the arts and cultural heritage fund, and a grant from the We Fargo Foundation Minnesota; the National Endowment for the Arts; the Target Foundation; and other generous contributions from foundations, corporations, and individuals. For a full listing of Milkweed Editions supporters, please visit [www.milkweed.org](http://www.milkweed.org).



Library of Congress Control Number: 2013944089

Milkweed Editions is committed to ecological stewardship. We strive to align our book production practices with this principle, and reduce the impact of our operations in the environment. We are a member of the Green Press Initiative, a nonprofit coalition of publishers, manufacturers, and authors working to protect the world's endangered forests and conserve natural resources. *Empire Hands, Open Arms* was printed on acid-free 100% postconsumer-waste paper by Edwards Brothers Malloy.

# Contents

---

Prologue: February 2012

## **Part I: From Iowa to the Bonobos of Équateur**

Naked Apes, Furry Apes, Godlike Apes

Kinshasa

Équateur

Mbandaka to Djolu

A Sense of Place

The Bonobos of Kokolopori

Yetee

## **Part II: Grass Roots**

Albert Lotana Lokasola

From Slave State to Failed State

Sally Jewell Coxe

Africa's Great War

Michael Hurley

Economics around the Campfire

Human Cultures and Cultured Animals

Territory and Power

## **Part III: Sankuru**

André Tusumba

Defending the Vocation

Viral Conservation

The River

Epilogue: The Red Queen

Acronyms

Notes

Author's Note

Acknowledgments

*I will take with me the emptiness of my hands  
What you do not have you find everywhere*

---

—W. S. Merwin

## Prologue: February 2012

---

On a sweltering afternoon, I reached the border that separates Gisenyi, Rwanda, from the city of Goma in the Democratic Republic of the Congo. The sky was cloudless, the sun glaring on the dusty, broken roadway and the windless lake that stretched alongside it. After receiving the Rwandan exit stamp on my passport, I walked around a metal gate raised by a single soldier for passing cars, though the cars were none.

I approached the yellow building on the other side, where an agent sat at a counter, behind an open window. He suddenly appeared engrossed in organizing his desk. He thrust his jaw and furrowed his brow, gathered papers into a pile, then spread them like a stack of cards. He scanned the pages, moving his head back and forth, as if hunting the source of a grave injustice. I'd often seen officials do this, demonstrating self-importance, making travelers wait, creating an atmosphere of disapproval and difficulty, so that when they finally took the passport, it would seem natural for them to find fault and demand an additional payment.

Across the street from the yellow building, in what appeared to be a small guardhouse, a door opened, and another agent stepped out, perspiration beading on his round face. He hurried over, smiled at me, and reached for my passport. The first one grunted and shook his head, sat back in his chair and crossed his arms, staring off in anger.

The new agent stepped into the yellow building, behind the counter, and flipped open a book on smudged graph paper. He wrote my passport information, asking my profession and, when I said *écrivain*, "writer," what I would be writing.

"A book on conservation," I replied in French, "on tropical forests and natural resources, and endangered great apes." He listened, his eyebrows raised, nodding as if I were corroborating a view he had long held. Seeing his look of genuine interest, I offered more details: my planned visit to a community-based reserve in the Congo's Équateur Province, the importance of conservation not only for the wildlife, but also for the local people.

I showed him my letter of invitation, and he studied it, the page explaining that I would help "protect biodiversity by writing a book about the Bonobo Peace Forest . . . and raise up the image of the DRC in its conservation efforts." When I'd received it a month before, the ambitious statement surprised me. The letter was necessary for my visa, and I was beginning to understand that the Congolese who composed it must have thought it important to impress officials. Now, as this one read it, he nodded repeatedly. When he finished, he flashed me a broad smile and thanked me, with which sounded like earnestness, for having come to the Congo. He stamped my passport and said, "Bon voyage."

As I walked, jumbled concrete buildings and a few sprawling hotels cluttered the descending landscape between the road and the rocky shore of Lake Kivu, its waters reaching to a hazy blue line at the horizon. Five young men on motorcycles shadowed me, asking if I wanted a ride, though I could easily reach the hotels on foot. Where the road branched inland, the city appeared empty, a ghost town broken for two white UN Land Cruisers racing in the distance, lifting plumes of dust.

It was hard not to be vigilant. From my readings, I had mixed impressions of Goma, backpackers' haven that, in the almost two decades since the Rwandan genocide, had become the



epicenter of a chronic warzone. To make matters worse, in 2002, about 40 percent of the city, the home to more than half a million people, was destroyed in the eruption of Mount Nyiragongo. A stream of lava at times two thirds of a mile wide had poured through. Even now, volcanic rock protruded from the dirt where the roads were unpaved, catching at the wheels of passing motorcycles.

I was most struck by how the Congolese looked at me. Rwandans and Ugandans were used to visitors, and even those who wanted to sell something gave no more than cursory attention, whereas the Congolese I passed studied me, as if to see who was before them, to know why I was there. They carried more scars, on foreheads and cheeks, or had missing teeth, a droop in the corner of an eyelid, hints of old injuries in the way they walked, positioned themselves to pick up a bag, or rode a motorcycle. They gazed at my eyes, narrowing their own, at once cautious and curious. But when I smiled, they smiled back quickly, as if relieved.

I spent that night in the only hotel I could find with a vacancy, the others filled with the personnel of NGOs. My room was more luxurious than I expected, with polished wood cabinets and shiny bathroom fixtures, though nothing quite worked. Electric sockets sizzled when I wiggled the plug, but gave no power; the shower head dripped, and none of the doors, bathroom or wardrobe, sat well on their hinges.

I was too tired to care, but after I lay in bed, I couldn't fall asleep. The next day, I'd fly to Kinshasa, one of Africa's most populous and chaotic cities. If all went to plan, a week later I would head into the forest, either by dugout canoe or bush plane. I'd looked at maps, at satellite images of the Congo basin rainforest, the second largest on earth after the Amazon, its hundreds of rivers the real highways, far more perceptible than the occasional yellow line of a dirt road. How would it feel when the only clear space was that surrounding a few huts, each village an island of sky? If you walked out, you traveled for weeks beneath the trees, barely seeing the sun.

But to experience this place and its people clearly would require a conscious decision to look beyond the stereotypes. The Western view of the Congo remained limited by colonial mythologies of the great river, the dark heart of Africa, notions that Cold War rivalries, mineral exploitation, and the recent wars had kept alive in our minds. The Congo had come to signify savagery, and hearing its name, many shuddered without quite knowing why. But for millions of Congolese who struggled to build ordinary lives, this shudder pushed them deeper into alienation, further from the global community. The shudder increased our blindness not only to the forest and its importance to life on earth, but to the very people whose actions were crucial to saving it.

Outside my window, Goma was silent but for the occasional passing vehicle and the brief, muted voice of the guard in the hotel's entrance.

# **Empty Hands, Open Arms**

---

# Part I

---

## *Front Iowa to the Bonobos of Équateur*

# Naked Apes, Furry Apes, Godlike Apes

---

In an age when the state of the planet preoccupies us—from climate change to deforestation, and from the extinction of species to the degradation of human habitat—it's hard not to wonder whether we are capable of working through lasting challenges. Do we have the cultural staying power, or will short attention spans, coupled with our love of instant gratification, doom our attempts to rehabilitate the environment, just as the naysayers have been predicting? Having read countless dismal news reports in recent years, I wanted to know about the sorts of people and projects that aren't dominating the headlines, those developing long-term solutions to environmental destruction, their work done year in and year out, in all its routine and tiresome glory.

The Congo caught my attention early on because its rainforests are so crucial to preventing climate change, and because the country itself was at a crossroads. In 2003, it emerged from possibly the world's most devastating conflict since World War II, and with increasing political stability, its massive forests and mineral wealth were again vulnerable to large-scale exploitation. Conservationists were rushing in, and of those working there, one group, the Bonobo Conservation Initiative (BCI), was fostering a surprising number of conservation areas in spite of its small size and limited funding. Two large community-based reserves had already been established and several others were in the works, all with the goal of protecting the habitat of the bonobo, a matriarchal great ape that, like the chimpanzee, has more than 98.6 percent of its DNA in common with humans.

When I contacted BCI's president, Sally Jewell Coxe, and explained my interest in writing about new approaches to conservation, she described how she and a few others started the organization in 1998, in the spirit of bonobo cohesiveness, its goal to build coalitions so as to use resources more sustainably. Unlike national parks, the reserves contained villages whose occupants were trained to manage and protect the natural resources and wildlife. BCI's model was inclusive, she said, inviting local people in rainforest villages to participate and taking into account their histories, cultures, and needs in order to foster grassroots conservation movements.

This last detail caught my attention, that understanding another culture's values had allowed BCI to develop a self-replicating conservation model. They focused on creating forums to discuss different ways of thinking about natural resources, and encouraging the local people to take leadership roles in conservation projects. Given that populations and the global demand for raw materials were soaring, and that millions of hungry people were eager to cut down the Congo's forest for farmland and hunt the remaining wildlife, a change of consciousness was as urgent as the application of environmental law. The rainforest's importance for life on earth was undeniably clear: it protected watersheds while releasing oxygen and removing carbon from the atmosphere. As for bonobos, they were already on the verge of extinction, their habitat only in the DRC, to the south of the Congo River's curve, in an area where the national government's influence barely reached.

The portrait that Sally painted of effective conservation work was a mixture of anthropology and conservation biology, in which knowledge of the land, the people, the animals, and the country's history was essential. At the center of BCI's vision was the bonobo. As one of humanity's two closest living relatives, the bonobo was—Sally told me—important for our understanding of ourselves and humans: not only in terms of where we have come from and how we have evolved, but also in terms of what we can be.

Though I had read articles noting all that great apes might teach us about our evolution, none had said anything about how they could shed light on our future. They were often portrayed in simplistic terms. Bonobos were furry sex addicts that swung both ways, and chimpanzees waged war as best an ape could without modern weapons and the cold mathematics of organized armies. Gorillas were vegetarians, largely gentle despite gladiator physiques, and orangutans solitary forest creatures that paired up only for sex, a lifestyle that sounded uncomfortably similar to that of many writers. What those articles didn't lead me to expect was the degree to which my research on bonobos would in fact change how I understood myself. While I would learn that their social structure did offer lessons on the origins of human nature, it also said a great deal about our potential, both as individuals and as a species, and the paths we might choose.

Just seeing photos of bonobos made a strong impression on me. They have lustrous black skin and red lips, black hair neatly parted in the middle and descending like muttonchops, flaring out proudly in the style of Martin Van Buren. But it was the way they looked at the camera that I found unforgettable. The bonobos' eyes appeared curious and contemplative, unlike the often aggressively guarded look I'd found common in chimpanzees. No doubt this was reductive and I had a lot to learn, but I saw in the gaze of the bonobo evidence of a deeply social being that, if it could speak, might have a number of questions for me.

Other photographs showed bonobos in a variety of familiar postures: lounging on their backs, one leg crossed over the other; or mating in the missionary position, muscles taut in their arms, the male grinning as if life couldn't be better; or a mother standing, staring off, holding sugarcane, head poised on a stretched neck. With their long, slender limbs, they appeared so humanlike that, just to get a sense of proportion, I had to look up their weight: one hundred pounds for males—a little less than chimpanzees—and seventy for females. It was difficult to imagine such a close relative being hunted for the bushmeat trade, thousands slaughtered during the two Congo wars between 1996 and 2003, possibly as few as five thousand remaining.

Both because of their highly sexual nature and because one has never been witnessed killing another of its own kind, bonobos have recently become the stars of the great ape world. Even orangutan males, when battling over females, occasionally deliver fatal wounds, as do silverback gorillas. Gorillas sometimes kill infants, and for chimpanzees this can be a matter of course. Dominant chimpanzee mothers do away with the children of others, and males wage all-out wars, they slaughter the infants and take the females for their own, a description that reads like any of a million lines out of human history.

Bonobo society, however, is matriarchal. Females forge the alliances, and a male's rank depends on that of his mother. When groups meet, males hoot but stand back while females cross over to one another in what may end up resembling an orgy. As for infanticide, it has never been witnessed; and bonobos in the group care for the welfare of their young. They have been nicknamed the "hippies of the forest" and the "Left Bank ape," owing to where they live in relation to the Congo River. Unlike other great apes, they use a variety of sexual positions and often mate face-to-face, gazing into each other's eyes. They enjoy oral sex and French kissing, and they make love for pleasure, comfort, closeness, as a means of greeting, or just because they love each other. Sex is their hug, their handshake, their massage, and their noon martini. Sometimes, it allows them to defuse social tensions, minimize violence, and resolve conflicts over resources, the females rubbing one another's clitoris and the males penis-fencing—hardly solutions our leaders would try.

Whereas gorillas, chimpanzees, and orangutans have clear places in the popular imagination, bonobos are latecomers. Their resemblance to chimps and their home far from the coast, within one

the Congo's most daunting landscapes, have prolonged our ignorance. Chimpanzees first appeared in Western literature in the sixteenth century, orangutans in the seventeenth, and the gorilla's name dates back to a Carthaginian who, in 500 BC, traveled Africa's West Coast and returned with the skins of "wild men" that the locals called *gorillae*. Though records since the 1880s show apes at the heart of the Congo basin, bonobos were not recognized as a distinct species until the twentieth century. Yale primatologist Robert Yerkes owned a bonobo named Prince Chim in the mid-1920s but thought he was a chimpanzee, albeit an extraordinary one. He wrote: "In all my experience as a student of animal behavior I have never met an animal the equal of Prince Chim in approach to physical perfection, alertness, adaptability, and agreeableness of disposition. . . . Doubtless there are geniuses even among the anthro-poid apes."

Bonobos were not identified as distinct from chimpanzees until the late 1920s. Harvard zoologist Harold J. Coolidge Jr. wrote that he visited Tervuren, Belgium, in 1928, after a long university expedition to collect gorilla specimens in the Belgian Congo. "I shall never forget, late one afternoon in Tervuren, casually picking up from a storage tray what clearly looked like a juvenile chimp's skull from south of the Congo and finding, to my amazement, that the epiphyses were totally fused." This meant that, despite its size, the skull was that of an adult. He found four more similar skulls among those of the chimpanzees and planned to write a scientific paper on the subject, describing a new type of chimpanzee. However, two weeks later, the German anatomist Ernst Schwarz visited, and Henk Schouteden, the director of Tervuren's Royal Museum for Central Africa, showed him the skulls that had interested Coolidge. "In a flash Schwarz grabbed a pencil and paper, measured one small skull, wrote up a brief description, and named a new pygmy chimpanzee race: *Pan satyrus paniscus*," he recalled Coolidge. "He asked Schouteden to have his brief account printed without delay in the *Revue Zoologique* of the Congo Museum. I had been taxonomically scooped." But reasonably enough, Schwarz had his own account: he'd been studying primates, he wrote, and had come to Tervuren specifically to examine the skulls, a recent shipment from the Congo.

Despite not receiving credit for being the first to identify the bonobo, in 1933 Coolidge published the paper that would establish it not as a subspecies of the chimpanzee, *Pan troglodytes*, but as a separate species, *Pan paniscus*. Having remarked the similarities in the torso-to-limb proportions of bonobos and humans, he wrote that the species, still known as the pygmy chimpanzee despite being marginally smaller than most chimpanzees, "may approach more closely to the common ancestor of chimpanzees and man than does any living chimpanzee hitherto discovered and described."

In 1954, German scientists Eduard Tratz and Heinz Heck proposed that, because of its marked differences from the chimpanzee, the pygmy chimpanzee should be classified under a different genus. They suggested *Bonobo paniscus*, as they believed *bonobo* to be the Congolese name for the species. Though the word *bonobo* wasn't found historically among the Bantu dialects, it may have been a misspelling on a crate shipped from Bolobo, a town on the Congo River from which bonobos were first sent.

While Tratz and Heck's classification has been generally accepted by the scientific community, some argue that bonobos and chimpanzees are so close to humans that they should be classified in the *Homo* genus. Even Carl Linnaeus, who in the eighteenth century developed the system of Latin names that botanists and zoologists still use, called the orangutan *Homo nocturnus* or *Homo sylvestris orang-outang*, though he based his evaluation on the reports of travelers who claimed that the Indonesian great ape could speak.

Until recently, bonobos lacked public champions whereas the other great apes have had Jane Goodall, Dian Fossey, and Biruté Galdikas. But with a growing number of books, documentaries, and

films now dedicated to them, bonobos are becoming media darlings even as they are being exterminated in the Congo. The attention they receive can be attributed to their peaceful disposition and their reputation as Kama Sutra apes—a reputation that is, of course, based on behavior seen through the lens of human sexuality.

The primatologist Frans de Waal writes in *Bonobo: The Forgotten Ape* of how bonobos use sex for both appeasement and affection, saying that the label *sex* might be inappropriate if perceived as “behavioral category aimed at an orgasmic climax.” A little later in his career, though, in response to an article questioning the sexual nature of bonobo behavior, he writes, “Fortunately, a United States court settled this monumental issue in the Paula Jones case against President Bill Clinton. It clarified that the term ‘sex’ includes any deliberate contact with the genitalia, anus, groin, breast, inner thigh or buttocks.” With bonobos, sex encompasses a number of tendencies—something, de Waal points out, that is also true for humans, though rarely acknowledged: “Our sexual urges are subject to such powerful moral constraints that it may have become hard to recognize how—as Sigmund Freud was the first to point out—they permeate all aspects of social life.” De Waal suggests that bonobo societies could teach us much about what human sexuality might look like without those constraints.

As I began to gain a better understanding of bonobos, of what traits they share with humans and how they might experience the world, I encountered the work of Dr. Sue Savage-Rumbaugh, an American primatologist. Since the 1970s, Savage-Rumbaugh has been working with great apes in captivity, investigating whether they have a capacity for language. She first studied chimpanzees at Georgia State University, then bonobos that had been brought from the Congo. She developed a technology that enabled bonobos to communicate with humans by pushing a lexigram on a keyboard attached to a computer, which would log and articulate its corresponding word in English. The approach Savage-Rumbaugh developed wasn’t clinical but holistic; she used the lexigrams in conjunction with activities that gave them immediate, relevant, even urgent meaning to the bonobos. But despite her creative approaches, her work remained challenging for years until Kanzi, a baby bonobo who observed the language lessons that his adoptive mother, Matata, suffered through, revealed his skills. On a day when Matata had been taken away for breeding and Kanzi was alone with Savage-Rumbaugh, he began using the keyboard to communicate, producing “120 separate utterances using 12 different symbols.” She hadn’t realized that he’d been learning English naturally, the way human children do, just by “being exposed to it.”

Kanzi has since become a celebrity, demonstrating his talents on CNN and *The Oprah Winfrey Show*. Given that a bonobo’s vocal cords are not suited to human language, he has to communicate using his keyboard or a sheet printed with lexigrams. When a lexigram is lacking, he communicates by asking for pizza by pointing to “cheese,” “tomato,” and “bread.” He can also understand spoken language and has responded correctly to sentences such as “Could you carry the television outdoors, please?” and “Can you put your shirt in the refrigerator?” even though Savage-Rumbaugh made no gestures and had her face covered. He has also learned to make stone tools, build fires, and cook.

I spoke to Savage-Rumbaugh by Skype not long after she had been selected as one of *Time* magazine’s one hundred most influential people for a body of work that spans questions of primatology, language acquisition in humans and apes, and cognitive science. I wanted to understand what had won her a place on the list, and I began with the question that I most often heard when I told others about the project I was embarking on.

“Why bonobos? What makes them interesting?”

At first, she answered simply: “In terms of anatomy, genetics, and personality, bonobos are the most humanlike of all apes. . . . They most closely touch the origins of humankind. . . . We still carry

so much genetic heritage in common with the bonobo that only by studying them can we have an inkling of what might actually have happened in the past.”

“And this is more true of bonobos than of chimpanzees?” I asked.

“When the data is fully in,” she said, “I think it will be seen that bonobos are more fully related to humans in how their genes express themselves.”

Much of what I had read about bonobos was based on scientists’ field observations, but there’s a fine line between what we can understand as researchers and what we learn by living with another creature by sharing in its daily life. Savage-Rumbaugh had worked with bonobos for more than three decades, taking part in their culture while they studied hers, and I asked what this had taught her.

“Freeing oneself absolutely,” she said, “from any thought or tendency toward aggression, and focusing on group love and cohesion—and I don’t mean sex, I mean love—is the way of the bonobo. It’s a message that humanity needs to try to understand.”

“But don’t they have conflict the way we do?” I asked. She acknowledged that they did, often behaving like humans by screaming at each other and showing off their strength.

“But,” she added, “they tend to find ways not to actually harm each other. They search for that. . . . Working with bonobos has given me a perspective on humanity, a perspective on myself that I could never otherwise have had. . . . Jane Goodall changed humanity’s view of itself when she revealed through her efforts with *National Geographic* that humankind shared a feeling world with chimpanzees. . . . With Kanzi, it has been shown that truly for the first time there are other animals on the planet that can share a language, an intellectual, thinking world with human beings. You put those two together, and you have to ask what is human. So Kanzi is stretching the definition of human. He’s forcing a redefinition of what humanity means. And that for some is intriguing and fascinating. For others, it is very uncomfortable. In part, you can be influential because you upset the social system. Kanzi upsets the social norm.”

If *Time* had acknowledged the importance of Savage-Rumbaugh’s work, I realized, it was also because of what it says about our dynamic nature: that what we consider human can shift drastically, just as Kanzi is learning across cultures and expanding his notion of self.

“The important aspect of that message,” Savage-Rumbaugh told me, “is that humanity isn’t stuck in the current rut. . . . We might consider ourselves a naked ape, but we have the capacity to be, let’s say, a godlike ape. We can do far more than we’re doing. We have limited ourselves and our understanding of our biology—our understanding of how we must structure the world—by the past. And we don’t have to continue to do that. If Kanzi can learn a language, what can human beings learn? We can certainly learn how to get along.”

I was surprised when I heard the words *godlike ape*, but Savage-Rumbaugh’s idea wasn’t new. Humans often admire and tell stories about those with transformative powers.

“We’re just on the cusp,” she said, “of really understanding how brains interact. . . . We have thought of ourselves as individual sacks of skin. We’re far more connected than we’ve ever understood. And bonobos have almost a sixth sense. They have an understanding of the interconnectedness. And when we are able to finally grasp and measure that scientifically, I think we’ll be able to know what it means when we say humans have vibes or humans react with each other. I don’t think that’s just a phrase. I think there’s something going on that’s really happening between us, but that linguistically we have, through our culture, shut out. And bonobos haven’t shut that part of themselves out. I want people to realize that we’re just on the cusp of understanding the most fascinating species on the planet—not that elephants and dolphins and others aren’t—but we’re on the cusp of understanding that species and we’re about to decimate it in the Congo.”



In her writings, Savage-Rumbaugh explores the question of bonobo cultures, whether they, like human cultures, exist and are taught, exerting an influence on the instinctive behavior of apes. She describes how bonobos and humans who live together come to share a hybrid culture, an observation that leads naturally to speculation as to how humans might learn a new way of being. Simply looking at the history of human culture reminds us of the degree to which it shapes us, leading us to select for certain genetic traits, the most obvious being the ideas of beauty that we might value at any given time. Culture may become the most significant element of the environment to which we adapt.

I was eager to meet bonobos, to understand what bond they could share with us, how we could interact, and how spending time with them might shift my views. Savage-Rumbaugh was living with bonobos on the outskirts of Des Moines, Iowa, at the Great Ape Trust, a research facility that the philanthropist Ted Townsend had created.

It was April when I visited, the sun warm though the air was still cool, the land yet to bloom. A grove of leafless trees and a small lake separate the tall, electrified fence topped with barbed wire from the Trust's two concrete buildings. Tyler, the laboratory supervisor, a man in his twenties, showed me into the bonobo building and let me watch as he ran experiments with a fourteen-year-old female bonobo, Elykia ("hope" in Lingala, the lingua franca of the western Congo). He told me I had to sit in the hallway and stay still, that bonobos were generally shy. He went into a small room next to a glass-walled chamber with a computer touch screen.

A doorway in the back of the chamber opened into the area where the bonobos lived. Elykia entered through it on all fours, craned her neck, scanning the inside, then moved fluidly, rapidly, onto the platform near the touch screen. She gazed out and saw me, her large black eyes opening wide before she fled in a black blur.

"She's just being dramatic," Tyler called to me. "She'll be flirting with you in no time."

She neared again, looking in, and made a high-pitched, birdlike sound before bounding to sit on the platform. Though I'd read Japanese primatologist Takayoshi Kano's description of hearing bonobos in the Congo, like "hornbills twittering in the distance," I was startled by how different the calls were from the barks and low hoots of the chimpanzees I had seen in zoos.

Elykia glanced around and settled in. Lexigrams appeared on the screen, and she hesitated before touching one with a fingertip. Her hands resembled my own but were long, with more distance between each knuckle. The muscles of her arms were finely shaped, like those of an athlete. She had somewhat less hair than the wild bonobos I had seen in pictures, since captive bonobos can become restless and overgroom. In zoos and sanctuaries, they are sometimes nearly naked, revealing how similar their musculature is to ours, or at least how some of us might like ours to be.

My expectations were high. I'd heard stories of human-bonobo interactions, of bonobos blowing kisses in zoos and staring into people's eyes. But Elykia forgot about me as she touched the screen, selecting one of several lexigrams, none of which I could understand. Each time, Tyler released a grape through a slot in the wall, near the floor, to reward her. She scooped it with speed and dexterity, barely pausing before refocusing on the screen. I couldn't imagine a human moving so immediately in response to a stimulus; it was almost as if Elykia's body were doing the thinking. She touched the lexigrams a few more times, and then, hardly looking, she shot her arm out and captured a grape as it began to roll. If we humans have gained brainpower in our evolution, we've certainly lost physicality.

After the session with Elykia, Tyler took me through the hallway to the outdoor enclosures, a series of large cages attached by corridors of steel mesh to a yard of yellowed grass. Speaking as he would to a person, he introduced me to an eleven-year-old male, Maisha ("life" in Swahili), who, Tyler explained, was basically a teenager. (Bonobos become sexually mature at nine but do not reach the

full adult size until after the age of fifteen.) From watching TV, Tyler explained, Maisha had become obsessed with motorcycles. He didn't understand why he couldn't have one. In the same enclosure was Matata, "tough" or "trouble" in Lingala, the group's wild-born matriarch, now at least forty years old. She rested as Maisha ran back and forth, dragging his laminated sheet of lexigrams across the ground. Seeing me, he threw a paisley cloth over his head and swung along the cage's ceiling, playing the stooge, then raced out into the sunlit grass.

The differences among the bonobos—the distinctness of their personalities—was undeniable. The way she held her body, Matata exuded a wild energy, as if her limbs remembered the rainforest. There was authority in her presence even as she dozed, like an old chieftain closing her eyes, barely interested in people like me. She glanced only once before lying on her belly in the sun and going to sleep. Finally, Maisha came over to greet me shyly, lowering his eyes, his fingers hooked in the mesh of the enclosure wall.

Kanzi and his half sister, Panbanisha, whose name meant "cleave together for the purpose of contrast" in Swahili, appeared more curious. As I spoke, I could sense Panbanisha studying me. Her dark eyes peered into my own with a mix of wariness and curiosity that I'd seen on first dates. Female bonobos have pink genital swellings that grow large and pillowlike as they mature, and Panbanisha was infected. I asked her how she was, and she stood up and showed me the inflamed area, then sat down and crossed her arms, staring at me, as if it might be my turn to reveal something intimate.

As for Kanzi, he was a handsome, well-built bonobo with a wide forehead and barrel chest. He was used to media attention, and when I walked in and he saw my camera, he flashed a photogenic grin and lifted a hand. I failed to snap him in time, and he sighed, appearing exasperated. He studied me, as if to determine just how interesting this encounter might be. After all, he'd played music with Paul McCartney and Peter Gabriel.

Despite their relatively peaceful nature, I wasn't allowed into the enclosures. Bonobos are significantly stronger than we are, and they can accidentally injure us. There is also confusion around their putative benevolence. The media describe them as sexy, peace-loving creatures, but like us, they can be violent. People are shocked to hear this, since there is a general tendency to simplify, as when we think of someone as "nice" and imagine her, therefore, without anger or jealousy. The same is true of the way we think of bonobos, though by human and chimp standards, they do display remarkable restraint.

My encounters with the bonobos were pleasant, all of them according me some time. They used frequent eye-contact, looking into my eyes as if trying to figure out why I was there. But they didn't react to me in any dramatic way, except for Elykia, who, as I walked through the building, hooted and peeked from every corner of her enclosure, finally flirting, excited to see a new male.

Kanzi pushed his belly against the mesh and motioned to Tyler, who crouched and tickled him. Kanzi picked up his laminated sheet of lexigrams. Each time he pointed to one, Tyler explained it to me. Kanzi was requesting grape Kool-Aid and celery now, but he was also pointing at lexigrams that indicate that he wanted strawberries before bedtime. Watching, I recalled words from a book Savagely Rumbaugh had co-written with two fellow researchers, Pär Segerdahl and William Fields: "That Kanzi lives in a world permeated with language is visible in his physiognomy. . . . The way his eyes meet your eyes, the way he glances at other persons or cultural objects, the way he gestures towards you, the way he manipulates objects with his hands: everything bears witness to his language." As Tyler went to the kitchen to get Kool-Aid and celery, I sat on one side of the mesh, Kanzi on the other, a few inches between us. He glanced over and sighed, then just stared off, content with my company on this sleepy afternoon.

Even before my experiences here, my definition of humanity was larger than the one prevalent a few decades ago. Philosopher and anthropologist Raymond Corbey, in his essay “Ambiguous Apes” describes how, in the 1950s, Belgian cinemas showed a film in which a scientist kills a mother gorilla and skins her body as her infant, soon to be sent to a zoo, sits crying next to her. He writes, “Ten or fifteen years later, such a scene, in a film meant to be seen by Western families with their children, had become unthinkable.” He reflects on French philosopher Emmanuel Lévinas’s theory that the gaze of another “appeals directly, without mediation, to our moral awareness,” and he asks whether this holds true when it is not the gaze of “a human child but that of a gorilla child or an orang-utan child.” However, human attitudes are changing, and if we were exposed to the suffering of hunted and imprisoned great apes rather than to glossy photos of wildlife beauty on NGO fund-raising calendars—and if we understood the causes, frequency, and severity of this suffering—we might respond in greater numbers.

A firsthand experience, of course, has a different level of power, and for me, even during my short visit to the Great Ape Trust, there was no doubting the intelligence in the gazes of the bonobos. When we look into another’s eyes, we can tell whether her mind is spacious, holding room to consider, to see things from different angles and evaluate them, or whether she is simply carrying through motions confined, driven by instinct and habit.

How would the bonobos in the Congo appear to me? Kanzi and Panbanisha were used to human visitors; my own visit insignificant to them. They’d taken a step into our world despite the gap between us, a gap made clear by the steel mesh of the enclosures—one no doubt smaller for those who worked with them. Though I was curious to know how I would perceive bonobos in the abundant rainforest that had formed their bodies, instincts, and cultures, I also wanted to see how conservation efforts could protect them. I was only beginning to understand that bonobos lived in social groups not so different from those of humans, sharing many behavioral traits with us: playing games, daydreaming, teaching children, establishing friendships, caring for each other’s injuries, or grieving for the loss of loved ones. It was hard to imagine their families broken apart, the adults shot, their bodies butchered and smoked, sold in bushmeat markets; the traumatized infants tied in baskets, starving for weeks until traders attempted to sell them. This, too, was part of the story, and I wondered if, when I saw the bonobos in the rainforest, it would affect the way they looked at me.

For many Westerners, it would be hard to travel to the Congo without confronting the way our culture's narrative portrays it: through a media rap sheet of barbarism so long it predates Joseph Conrad's *Heart of Darkness*. But what our fear blinds us to is that these descriptions say less about how the Congolese traditionally lived, and still live, than about the result of their living in one of the most fertile, mineral-rich, and strategically important nations on earth.

Before Western colonization, the area that now constitutes the DRC was home to dozens of complex societies. Over four hundred years ago, the Kongo Kingdom had ambassadors in Portugal, Spain, and the papal courts, as well as organized and trained militaries. The slow rise of the Portuguese slave trade—in conjunction with the spread of cash crop plantations in the New World—eroded the kingdom. In the late nineteenth century, rather than export the Congolese, the Belgians enslaved them at home, further disintegrating the social fabric. From there, the story of the Congo is one of constant exploitation: of humans, rubber, ivory, lumber, cotton, coffee, copper, cobalt, gold, diamonds, and now coltan, used in computers and handheld electronics. Since the colonial period and all through the Cold War, the West has fed the country a steady flow of weapons and bought its raw materials, whether from the regime of Sese Seko Mobutu, its president from 1965 to 1997, or from Belgium, Uganda, and Rwanda, usually to the detriment of the Congo's people. Even the recent wars have had less to do with the Congolese than with the outside world, with Western industrial and military interests, rivalries between developed nations, and the increased global demand for minerals. And yet, though the ambitions and material needs of other nations have charted the Congo's decline, we often misread *Heart of Darkness*, telling ourselves that the darkness is in the Africans.

Being familiar with the West's fears, I tried to consider the situation from the African point of view and realized that the obvious question was, what are the Congolese afraid of? One answer—being exploited and manipulated by outsiders—makes clear the challenges of large-scale conservation here. Building trust is no easy task. Africa's most brutal colonial history and its most corrupt Cold War-era dictator have left the Congolese both wary and desperate. After the United States ceased to prop up Mobutu and he lost power in 1997, war killed as many as five and a half million people, the majority from disease and starvation. Soldiers, whether those of the Congo's government or the numerous rebel forces, pillaged and raped, often as a means of controlling local populations, and spread HIV into even the most remote areas. Villagers abandoned their fields and hid in forests to protect their families from hunting for survival and decimating the wildlife. By 2011, the DRC received the lowest rating on the UN Development Programme's Human Development Report, which tracks progress in health, education, and basic living standards.

For conservationists to work successfully here, they have to understand the people well enough to build trust and at the same time harness their desire for change. In our conversations, Sally Jewell and Coxe of the Bonobo Conservation Initiative distinguished between two basic conservation approaches: one that the Congolese often see as colonial in attitude, whereby outsiders come with money and impose change, and the other whereby outsiders integrate with local communities, respecting their values and supporting their leaders in order to achieve shared goals. However, conservation often requires a quid pro quo: the local people taking the pressure off the forests and wildlife in exchange for new means of survival. Conservationists can foster trade, health care, education, even law

enforcement, and yet if they want to build a deeper sense of community investment, they need insight not just into the problems that arise but into how those problems came to be. Part of finding a new way of relating to people, Sally suggested, lies in seeing how much damage was caused by the old way.

In telling me about BCI's projects, she spoke of the Bongandu, the Congolese ethnic group with whom she'd worked primarily. She described their respect for bonobos and their knowledge of the rainforest, emphasizing that we must not equate poverty with ignorance. As for bonobos, they served as a flagship species, a concept that elevates the profile of one animal to protect the biodiversity of its habitat. The bonobos' charismatic nature made it possible for BCI to rally support around them as a symbol of the rainforest.

Through 2010, I researched rainforest and bonobo conservation, and on several occasions, interviewed Sally by Skype. I listened carefully, trying to determine if BCI's projects could create lasting change, and what could be learned from the solutions they were finding. In mid-2011, I proposed accompanying them on an expedition to a bonobo reserve. I wanted to understand how their model differed from those of other NGOs, and how building coalitions and social capital could make up for a lack of funds. Sally told me that such a trip could be a stunning experience, but she also emphasized that the reserve was set up with only the bare minimum, for the purpose of work. And she warned me to budget well. Just getting to Kinshasa would be expensive since so few airlines served it. Then we would have in-country flights, and because there was little infrastructure for trade, food and supplies would be costly.

BCI had been going through a difficult period, struggling to fund its operating costs. The continuing aftershocks of the global financial crisis had diminished the flow of charitable donations. The wars in Afghanistan and Iraq exhausted the US economy and political will, and with the Arab Spring, then the tsunami and nuclear meltdown in Japan, the media's attention wasn't on conservation. Not until late 2011 did BCI have the funds for its next expedition into the rainforest.

But in November, the DRC held its second free multi-party elections since not only the end of the Second Congo War in 2003 but the country's independence in 1960. The Congolese were dissatisfied with their current leaders, and the media anticipated violence and conflict over ballot rigging by each candidate's supporters. Given that we would be as far off the grid as possible, we needed to be careful not to get caught in the rainforests if conflicts reignited. BCI's contacts in the reserves said that the atmosphere was tense, with local politicians looking for ways to leverage power, and they warned us to postpone the trip.

I was already overseas, and I flew by way of Doha, Qatar, to East Africa. I took my time in Uganda and Rwanda, learning about conservation efforts there. Election results were announced in December and Joseph Kabila, the incumbent president since January 2001, was reelected to a second term despite allegations of fraud. Though the DRC's security forces killed at least two dozen protesters, and residents of the capital stoned a Westerner's car, blaming the election results on foreign intervention, the peace held. The Congolese, it seemed, were sick of war.

Finally, on February 3, 2012, the day after my arrival in Goma, and after two trips to the offices of the Compagnie Africaine d'Aviation (CAA) to make sure my flight to Kinshasa would be departing, I took a taxi to the airport. One side of it was heaped with broken chunks of volcanic rock, and a few junked planes had been shoved off the runway, brown with dust, their noses to the sky.

Beyond security, a man at a desk again recorded the details of my passport. I noticed a single bullet hole in the top of the window behind him. He interrogated me on my reason for being in the Congo just as another agent would do when I arrived in Kinshasa, as if the sky above the DRC were

different country and each return to earth required a new visit to customs.

~~The plane was on time, and as it took off, I stared out the window: a military helicopter parked~~ the distance, khaki cargo planes, a cannon and a tank, both draped with dun tarp, set back in the trees. A narrow neighborhood of clustered homes with tin roofs passed beneath us, then the city of Gombe with its wide avenues and desolate roundabouts, and the shore of Lake Kivu, the dark volcanoes of the Virungas to the east. Soon we were above hills, the unbroken thatch of the forest, before we lifted through a bank of clouds.

For a while, we glided just above them, working our way into a dense, otherworldly terrain. Dozens of cumulonimbus rose above the white plain, casting long clefts of shadow over it. All across the glowing horizon, at the luminous blue line between the clouds and the sky, further cumulonimbuses soared, red at their edges, flattened by the cold air above, like mesas in a primeval vision of the American Southwest.

Though I fly often, I've never tired of cloudscape, and I'd never seen one like this. It seemed an expression of the Congo basin, 695,000 square miles, approximately 20 percent of the planet's remaining tropical forest, spanning Gabon, Cameroon, Equatorial Guinea, the Central African Republic, the Democratic Republic of the Congo as well as its similarly named neighbor, the Republic of Congo. We were crossing over its edge, thousands of feet down, heat and humidity boiling up as we breathed dense air into the atmosphere.

It's hard to imagine forests like this vanishing, though farmland and plantations have replaced them in most of the world. What makes the impact of deforestation difficult to grasp is that it's once gradual and rapid. Humans have cut down much of the world's forests, including the vast majority of old growth, and we can no longer fully comprehend how they influenced regional climates, regulating humidity, preventing drought, and protecting rivers, watersheds more likely to dry up if exposed to the sun. The vast quantity of carbon released from felled and burned trees escalates climate change and is absorbed into the oceans, gradually acidifying them.

Even now, massive swaths of forests are vanishing. In Southeast Asia, where the human population is booming, forests are being decimated for palm oil plantations, diminishing the orangutan habitat by 50 percent each decade. In Brazil, forests are being cleared for logging, cattle grazing, and soy. In the Congo, with the new political stability, logging companies are again seeking concessions. At a time when industrial powers are charting this forest's worth, a conservation plan for it is urgent.

For more than an hour, the plane flew above the clouds, larger cumulonimbuses muscling up, the sun flaring at their edges, falling quickly now, a blinding disk edging against the white landscape. And then we passed beyond the clouds, into a clear sky, and in the twilight, we swooped low over Kinshasa, the nation's capital, the rolling savannah beyond it scattered with homesteads, before landing at N'Djili Airport.

Over the years, the articles and books I'd read about the DRC described aggressive people-pushing, shouting, asking for bribes, travelers shoving each other in airport lines. This wasn't my impression, neither here nor at the border crossing. People apologized for bumping into me, and even the security agents, notorious for extortion and made-up taxes, were courteous, one telling me he was a poet, adjusting his glasses as he explained that he wrote about AIDS, inequality, and handicapped children. Maybe the DRC was changing. Life here certainly used to be worse. But I'd traveled enough not to fixate on media reports, which rated Kinshasa as one of the most dangerous cities in Africa and described the Congo with a daily fare of spectacularly depressing statistics and stories of inhumanity—massacres, slavery, mass rapes, cannibalism, and brutal witchcraft. These reports, though necessary and true in certain regions, easily blind outsiders to the great majority of the country's people, who

work hard to feed themselves and their families.

Eric Epheni Kandolo, a Congolese conservationist in his late twenties and BCI's communication coordinator, was waiting for me at the airport. Short and solidly built, he spoke as if we'd known each other for years. This immediate familiarity, I was soon to learn, is one of the most endearing qualities of the Congolese. Eric explained that his taxi had refused to wait, and he asked if I'd like a beer while he found another. I declined, but he led me to a beer stall anyway and said I should wait there since I needed to negotiate with taxi drivers.

"If they see a white man," he told me, "the price won't be very good."

He found one, a car of no discernible make, its windshield webbed as if hit by a brick, every panel a different color. When I opened the rear passenger door, the smell of the dark, musty, tattered interior cast me decades back to the rural Virginia junkyards I prospected in as a teenager, looking for parts to rebuild my car and motorcycle.

Beyond the airport, men gathered around booths selling Vodacom, Tigo, and Airtel phone cards, talking and laughing, money changing hands. In the shade of a concrete building, a teenage boy lounged on a swatch cut from a car rug next to a stack of used tires for sale. Women carried bundles of market goods on their heads, their spines drawn long, necks as elegant as those of ballerinas.

We drove into the most densely populated neighborhoods of Kinshasa, the wide, uneven streets of broken asphalt littered with trash and rubble and crammed with vehicles. Many of these were patched together, their varied panels so dented they appeared as if they'd been beaten into place with hammers. People ran through traffic that didn't slow or swerve. Huge unbranded trucks rumbled past, looking as if assembled from dozens of old vehicles, their engines half exposed. At least one hundred yellow jerry cans were tied to their sides and the cargo was lashed down beneath blue tarps, young men sitting on top.

Eric launched into a political discussion with the taxi driver, a rail-thin man with a weathered, angular head and veins so prominent that his forearms appeared twined with electrical wire. In excellent, mildly academic French, the driver debated President Kabila's merits, pointing out that though he wasn't popular in Kinshasa, he was gaining support. As he and Eric broached the topic of whether the president was promoting the country's development while protecting its national resources, a red passenger van with a rectangular opening in its side cut into our path. Our driver braked and swerved, and Eric told me that these vans, group taxis, were called *les esprits des morts*—"the spirits of the dead." They were the most salvaged-looking vehicles on the road, their headlights and grilles missing, people crammed into them, a few clutching the edges of the doorless openings.

Suddenly, our taxi hit a border of raised asphalt and we were in a different city, one of smooth, dark, wide avenues with fresh white crosswalks painted on them, symmetric lines of streetlamps, and an immense lit-up hospital off to the left. Eric told me that it was the largest hospital in Central Africa and that all of this, the perfect boulevard and the hospital, was the work of the Chinese, who were opening mines and building highways into the continent's interior. The vehicles, though, remained dented, and the red or yellow vans, *les esprits des morts*, raced ahead, the eyes of their passengers shining through the open sides.

We finally stopped at a drab concrete building that looked uninhabited. It stood at a curve in the busy two-lane street where vendors sold grilled meat on sticks and men and women lined up to hail any car with an empty seat. But just past the metal gate, a flight of stairs climbed to BCI's office. When I followed Eric inside, I expected to see the small operation they were when I began researching their work several years ago. At that time, BCI consisted of two or three people in the US and a few in the Congo. Now, I saw five Congolese, two women and three men, sitting at desks, working

computers. They introduced themselves: Evelyn Samu, BCI's national director; Dieudonné Mushagalusa, deputy national director; Richard Demondana, finance manager; Dominique Sako, accounting assistant; and Corinne Okitakula, legal officer. Two others, Bienvenu Mupenda, chief of operations, and Papy "Pitchen" Kapuya, program assistant and logistician, had flown to Équateur's capital, Mbandaka, a city 365 miles up the Congo River, to join BCI staff stationed there, and would soon be on boats, taking supplies upriver to the Kokolopori Bonobo Reserve.

Michael Hurley, BCI's executive director, left his computer and shook my hand. He pushed his glasses down to speak, pale indentations on the bridge of his nose where the skin had been damaged after many years in the sun. He was maybe six feet tall, with wavy gray-blond hair, and though fifty-nine, he had a boyish smile, his front teeth slightly overlapped.

"This week has been overwhelming," he told me. "Sally rushed here from DC for a meeting with the national government. Now we have deadlines with the African Development Bank, and we are working to meet their criteria."

Standing at a map, Michael pointed out fifteen conservation areas under development within the bonobo habitat, 193,000 square miles of dense forest to the south of the Congo River. BCI's goal, he explained, was to create a chain of protected areas that, linked by wildlife corridors, would become the Bonobo Peace Forest. Over a period of ten years, during which their annual budget had grown from about \$100,000 to a million dollars, BCI had helped establish three times as much government-recognized protected area as all of the big NGOs in the DRC combined: the Kokolopori Bonobo Reserve (larger than Rhode Island at 1,847 square miles) and the immense Sankuru Nature Reserve (11,803 square miles, bigger than Massachusetts). A number of other reserves were under development and would eventually link up to Kokolopori and Sankuru, protecting a huge swath of the bonobo habitat.

Michael put his index finger on the area we would be visiting: the Kokolopori Bonobo Reserve in the upper reaches of the Maringa River, a tributary that flows northwest before curving south with the Congo's great riverine arc. The dark green of the Congo basin covers much of Central Africa, in many tributaries trending west as the Congo River flows north and then turns toward the Atlantic Ocean before veering south, picking up the tributaries and growing in size. I gradually charted our path within this labyrinth that, more than anything else, mapped out the uniform expanse of the rainforest.

From the office down the hall, Sally Jewell Coxe, whose voice I recognized from our numerous telephone conversations, called out a question I missed because part of it sounded like Lingala, maybe someone's name. Michael crossed the room, shouting out information for a report she was about to deliver. He realized he left his coffee mug on his desk and, still talking, reached back for it even as he seemed to be moving forward.

Sally was fifty-one, eight years younger than Michael, with sandy hair and large green eyes that gave an impression of someone who loved observing the world. Like Michael, she got lost in her train of thought, and over the next few days I would see her checking budgets, writing grant applications, and contacting donors while fielding calls from Mbandaka to prepare the boats that would take supplies on the ten-day trip to the reserve, then following up with staff to make sure those supplies were ready: hand pumps and ultraviolet SteriPENS for drinking water; medicine for the reserve clinic and for BCI's staff in case anyone got malaria; headlamps, machetes, and new rain ponchos for trackers and eco-guardians; batteries for everything and everyone. The list went on.

Another concern was transporting fuel to the reserve. Because of its high price in the DRC, the fuel for the outboard motors and for a month in the reserve, where it would be needed to power generators



---

sample content of Empty Hands, Open Arms: The Race to Save Bonobos in the Congo and Make Conservation Go Viral

- [click The Plantagenets: The Warrior Kings Who Invented England pdf, azw \(kindle\)](#)
- [read The 12th Science Fiction MEGAPACK pdf, azw \(kindle\), epub, doc, mobi](#)
- **[download Be Safe I Love You](#)**
- [Foxbat \(Paul Richter, Book 3\) here](#)
  
- <http://tuscalaural.com/library/Esoteric-Anatomy--The-Body-as-Consciousness.pdf>
- <http://qolorea.com/library/The-12th-Science-Fiction-MEGAPACK.pdf>
- <http://crackingscience.org/?library/English-the-American-Way--A-Fun-ESL-Guide-to-Language-and-Culture-in-the-U-S--.pdf>
- <http://aircon.servicessingaporecompany.com/?lib/Stuck-in-the-Middle-with-You--A-Memoir-of-Parenting-in-Three-Genders.pdf>