

Excerpts from the novel *Ape House*, by Sara Gruen (2010)

John, Cat and Osgood are journalists on an airplane, who have just visited the Great Ape Language Lab. Cat is upset because she couldn't see the apes in person.

Apparently having three seats to herself was not enough to offset the trauma of having spent her day poring over linguistics texts when she had been expecting to meet six great apes. Although she'd tried to disguise the symptoms of her cold ahead of time and explain away the residual as allergies, Isabel Duncan, the scientist who had greeted them, sussed her out immediately and banished her to the Linguistics Department. Cat had turned on her legendary charm, which she reserved for only the most dire of circumstances, but Isabel had been like Teflon. Bonobos and humans share 98.7 percent of their DNA, she'd said, which makes them susceptible to the same viruses. She couldn't risk exposing them, particularly as one was pregnant. Besides, the Linguistics Department had fascinating new data on the bonobos' vocalizations. And so a disappointed, sick, and frustrated Cat spent the afternoon at Blake Hall hearing about the dynamic shape and movement of tongues while John and Osgood visited the apes.

"Do you have any idea what I went through today?" she continued. "Their lingo is completely incomprehensible. I was already in trouble at 'discourse.' Next thing I knew it was 'declarative illocutionary point' this, 'deontic modality' that, blah blah blah." She emphasized the "blahs" with her hands, waving the Afrin bottle in one and the crumpled tissue in the other. "I almost lost it on 'rank lexical relation.' Sounds like a smelly, overly chatty uncle, doesn't it? How on earth do they think I'm going to be able to work that into a newspaper piece?"

John didn't know Osgood's take on today's experience—they hadn't had a moment alone—but for John, something massive had shifted.

He'd had a two-way conversation with great apes. He'd spoken to them in English, and they'd responded using American Sign Language, all the more remarkable because it meant they were competent in two human languages. One of the apes, Bonzi, arguably knew three: she was able to communicate by computer using a specially designed set of lexigrams. John also hadn't realized the complexity of their native tongue—during the visit, the bonobos had clearly demonstrated their ability to vocalize specific information, such as flavors of yogurt and locations of hidden objects, even when unable to see each other. He'd looked into their eyes and recognized without a shadow of a doubt that sentient, intelligent beings were looking back. It was entirely different from peering into a zoo enclosure, and it changed his comprehension of the world in such a profound way he could not yet articulate it.

John (JT) interviews Isabel (ID), the lab manager and researcher

JT: So what made you get into this type of work?

ID: I was taking a class with Richard Hughes—he's the one who founded the lab—and he talked a little about the work he was doing. I was utterly fascinated.

JT: So anyway, this class. Was it linguistics? Zoology?

ID: Psychology. Behavioral psychology.

JT: Is that what your degree is in?

ID: My first one. Okay, so basically I was this aimless first-year kid taking a psychology class, and I heard about the ape project and I went, and after I met the apes I couldn't imagine doing anything else with my life. I can't really describe it adequately. I begged and pleaded with Dr. Hughes to be allowed to do something, anything. I would mop floors, clean toilets, do laundry, just to be near them. They just ... [long pause, faraway look] ... I don't know if I can say what it is. It just ... is. I felt very strongly that this was where I belonged.

JT: So he let you.

ID: Not quite. [laughs] He told me that if I took a comprehensive linguistics course over the summer, read all his work, and came back to him fluent in ASL he'd think about it.

JT: And did you?

ID: [seems surprised] Yeah. I did. It was the hardest summer of my life. That's like telling someone to go off and become fluent in Japanese over four months. ASL is not simply signed English—it's a unique language, with a unique syntax. It's usually time-topic-comment-oriented, although like English, there's variability. For instance, you could say [starts signing], "Day-past me eat cherries," or you could say, "Day-past eat cherries me." But that is not to say that ASL doesn't also use the subject-verb-object structure; it simply doesn't use "state-of-being" verbs.

JT: You're losing me.

ID: [laughs] Sorry.

JT: So you came back, you blew him out of the water, and you got the job. Tell me about the apes.

ID: What about them?

JT: Seeing you with them today, and then speaking with them myself, and then managing to actually insult one of them—that was an eye-opener.

ID: He got over it.

JT: No. He didn't. But do you understand how strange that whole thing would seem to your average, everyday person? The concept that you can insult an animal in a social situation and have to make it up to him? And possibly fail? That you can have a two-way conversation with apes, in human language no less, and they're doing it simply because they want to?

ID: By Jove, I think he's got it!

JT: I suppose I had that coming.

ID: I'm sorry. But yes, that's the entire point of our work. Apes acquire language through exposure and a desire to communicate, just like human infants, and age-wise there is approximately the same window of opportunity. Although I'd like to branch out a little going forward.

JT: How so?

ID: Bonobos have their own language. You saw that today—Sam told Bonzi exactly where he'd hidden the key, even though they were in separate rooms and couldn't see each other. She went straight for it and never looked anywhere else. We may never be able to use their vocalizations to communicate with them for the same reasons they can't use spoken English—our vocal tracts are shaped too differently, which we think is related to the HAR1 gene sequence, but I think it's high time someone made an attempt to decode it.

Isabel (the researcher) interacts with the bonobos. All-caps means sign language.

Isabel and Bonzi were in the kitchen. Celia had recorded them surreptitiously on her cell phone.

GOOD DRINK. ISABEL GIMME.

"You want a drink?" said Isabel. "How about some juice?"

Bonzi opened and closed her fist in front of her chest, and then brushed her chin with her index and middle fingers: MILK, SUGAR.

"No, Bonzi. I can't give you milk and sugar. You know that." Bonzi had recently been declared overweight by Peter and put on a diet.

GIMME MILK, SUGAR.

"I can't. I'm sorry. I'd get in trouble."

WANT MILK, SUGAR.

"I can't, Bonzi. You know I can't. Here, have some milk."

ISABEL GIVE MILK, SUGAR. SECRET.

Isabel threw her head back and laughed before slipping a little sugar into Bonzi's milk.

She sat cross-legged on the cement floor now, facing Sam. The cameraman was behind Plexiglass, but from the footage you'd never know it. The glass was invisible. The camera panned in, first to Sam's face, and then to hers.

"Sam, I want you to open the window now. Can you do that for me?" she said sweetly, signing simultaneously.

Sam's hands moved: SAM WANT ISABEL GIVE GOOD EGG.

"But Isabel wants Sam to open the window. Please? Now?"

NO. SAM WANT ISABEL GIVE GOOD EGG.

"Please open the window."

NO.

Her eyes flashed to the camera. She was clearly working hard to suppress a grin.

"Yes," she said emphatically. "Sam. Please make the window open."

YOU—

Isabel cut him off. "Sam, please open the window."

YES.

Isabel sighed with visible relief, but Sam did nothing. He sat sullenly, scanning the people around him, worrying his toes with his fingers, and finally averting his gaze.

"Sam, please open the window," she said again.

"Sam, please open the window," she said again.

SAM WANT JUICE.

"No. Isabel wants Sam to open the window."

NO. SAM WANT ISABEL MAKE WINDOW OPEN.

At this, Isabel burst out laughing, and Sam got his juice and egg.

Animal rights protestors attack the lab and the bonobos escape. They are re-captured and sold. Some time later, Isabel sees them on a billboard...

As she waited for the tow truck, she studied the billboard. It was cycling pictures of the bonobos, but otherwise displayed only a date, time, and what appeared to be the address of a Web site: www.apehouse.tv.

Information regarding the project appeared to be carefully guarded, but the campaign was pervasive—viral, even—not only on billboards, but on television commercials and automatically generated Internet ads that clicked through to the same mysterious site. Animal activist boards were overrun with speculation about where the bonobos were and what Faulks was up to.

The show begins...

"Welcome to Ape House," boomed an exaggerated baritone voice, "where the apes are in charge and you never know what's coming up next! Fifty-nine cameras! Six apes! One computer, and unlimited credit! And unlimited ... Well, you know what they say about bonobos"—the voice paused long enough for the double-squonk of an old-time bicycle horn—"or do you? Find out what our 'Kissin' Cousins' get up to next, right here, on Ape House!"

The cartoon house disappeared in a poof of cartoon smoke, and suddenly there they were, the real apes, huddled together in the corner of a steel cage, a hairy black mass of long arms, long fingers, and even longer toes.

The bonobos clung together in silence. A lone peep rang out, followed by a series of high-pitched squeaks, which bounced off the empty walls. Bonzi extracted her callused and dark-knuckled hand from the mound to pat reassurance. She raised her head and met Sam's worried eyes, which darted from blinking camera to blinking camera, taking it all in.

Bonzi went to the front door and sniffed it, touched it, ran her fingers along the seal at the bottom. At the far end of the room, she found a doorway that led into another all-beige room. When she entered, her eyes lit on a computer. Her large-knuckled fingers slid beneath the Plexiglass shield and poked at the touch-sensitive screen, finding and selecting, finding and selecting.

Isabel leaned even closer to the TV screen, trying to make out the symbols Bonzi was pressing. It was a bastardization of the software they used in the lab. How in the hell had Faulks gotten hold of that? But while the lexigrams in the lab allowed for complex utterances, this one merely displayed categories of abstract nouns with the ability to drill down to specific items. Bonzi chose among symbols that stood for food, electronics, toys, tools, and clothing, navigating subcategory after subcategory without pause.

All the while Lola sat on Bonzi's head, peering at the screen and reaching out with tiny hands to press symbols of her own. The "handwritten" list grew until it began to scroll:

Eggs
Pears
Juice
M&M's
Onions
Milk
Blankets
Wrench
Doll
Screwdriver
Magazine
Bucket

Bonzi stared thoughtfully at the screen, carefully making her selections.

The show continues...

The show gave every indication of becoming the biggest phenomenon in the history of modern media, and not simply because of the astonishing language and computer skills of the bonobos. It was the sex. Having witnessed it firsthand, John was not surprised, but apparently the rest of the world was. The bonobos incorporated sex into every aspect of their lives, and as a result, human audiences were hooked. The bonobos had sex to say hello. They had sex before eating. They had sex to alleviate tension. They had sex in so many combinations, so frequently, and in so many positions that after three days the FCC forced the show off the air. But Ken Faulks was no stranger to the FCC: he had a secondary system set up and ready to go, and without a second's interruption in broadcasting, Ape House was made available by satellite and the Internet, beyond the FCC's reach, and—not coincidentally—only to paying subscribers.

The things they ordered arrive.

Isabel watched from her place on the floor until the bonobos formed nests out of their new blankets, surrounded by discarded fruit boxes, milk and juice jugs, candy wrappers, and other detritus. An unbearable ache seized her heart when she realized that Bonzi had gathered exactly six blankets and was folding their edges as she always had. Then she called to Lola, who was investigating the hinges of a kitchen cabinet with a wrench. When Lola looked, Bonzi signed, **BABY COME!** and Lola bounded over and into the nest to let Bonzi groom her into slumber. Isabel wondered if any of the viewing audience had any idea what they had just witnessed: one of the most exciting discoveries to come from the language lab was that once bonobos acquired human language they passed it on to their babies, communicating with a combination of ASL and their own vocalizations.

Someone in the media had finally clued in to the fact that although the bonobos were no longer in a bi-species environment, they continued to pepper their conversations with ASL, and this—coupled with Bonzi’s extraordinary computer literacy (she took frequent breaks from shopping for a round or six of Ms. Pac-Man)—had resulted in a growing segment of viewers who were fascinated by the apes’ cognitive abilities rather than their sexual displays. Faulks Enterprises, never known to miss an opportunity, hired ASL interpreters around the clock and began providing subtitles that appeared in thought bubbles above the appropriate bonobo’s head.

Makena was in the courtyard, lying on her back in the sunshine and flipping through a magazine, which she held with her feet. She signed to herself about its contents, which came up instantly as subtitles:

SHOE, SHIRT, LIPSTICK, KITTEN, SHOE.

She turned the page and continued to browse. SHIRT, FLOWER, SHOE, SHOE. Finally she got up and emitted a high-pitched squeak.

Bonzi was across the courtyard playing airplane with Lola. She paused with Lola overhead to peep peep in response.

Makena walked over and bumped her fists together in front of her chest. Then she did it again, accompanied by a volley of squeaks. Bonzi handed Lola to Makena, went to the computer, and ordered a pair of women’s shoes.

The show evolves

“Ape House Prime Time.” He gave them all a moment to let their imaginations take flight. “The apes are in charge twenty-three hours a day. Then, once a day, we do something to affect their environment. Something,” he said, sitting forward, “voted on by the audience. The paying audience. People who have bought the monthly package. Twenty-three hours of doing whatever they want, and then one hour a day of doing something chosen by monthly subscribers.”

“Twenty-three for one.”

“Ostensibly, yes.”

“Ostensibly?”

“Presumably the repercussions would continue until the next ... intervention. We throw in a wrench, then make the show available for free for the hour that immediately follows. We hook the audience, then they have to subscribe to see what happens next. A twenty-four-hour package brings them to the next Prime Time segment. But if they want to vote on what happens in the next Prime Time segment, they need to subscribe to the monthly package.”

“We need something to start with,” said the CFO, snapping his fingers. “Porn, cap guns, something.”

“War footage and cap guns. Porn and sex toys.”

One corner of Faulks’s mouth lifted almost imperceptibly and then stuck there, twitching. “Go on,” he said.

John plans his story

An accessible summary of the language research, set forth not in the impenetrable vocabulary of linguistics but rather in the language of the experience itself, of making eye contact with members of another species and the startling and discomfiting realization that there was something damned close to human in there. Of knowing not only that they understood every word you said but if moved to answer would do so—and in your own language. Of trying to capture the wonderment, near-watershed, of it. It had not escaped John that the bonobos had managed to acquire human language, but that humans had not crossed over in the other direction. It had also not escaped him that Isabel Duncan also recognized this.

And then the seismic shift in fortune: the horrors of the bombing, the terrorist tactics, the complete lack of resolution. The swooping away and unexplained absence, the media circus and parasitic publicity junkies.

They are as closely related to humans as chimpanzees, sharing more than 98.7% of our DNA. Perhaps not surprisingly, bonobos have an extraordinary capacity for human language and abstract thought. These particular bonobos understand spoken English, and communicate using American Sign Language, having acquired human language in the same manner as human infants and for the same reason—a desire to communicate. They are also more computer-literate than some of their human counterparts.

One of the bonobos is about to have a baby, and wants Isabel to help

Makena leaned against the wall and began signing: she banged the knuckles of one hand against her other palm. It was the sign for “bell,” which was how the bonobos referred to Isabel.

ISABEL HURRY. BONZI MAKE ISABEL COME. ISABEL HURRY COME NOW.

Bonzi turned back to the computer and searched in vain. The computer in the lab had included a symbol for Isabel, distinct from the symbol for a bell, but this one did not. Bonzi’s dark, callused fingers drilled down through every category, following each path to its end, and even then she did not give up. She started over, methodically searching for a way to order what Makena had requested.

Isabel dropped her head in her hands and wept. Makena, knowing she was about to have her baby, was trying to order her.

John uncovers a conspiracy and sends his story about it to the magazine editor

It was 3:56 A.M. when John finally pressed Send, and the read receipt came back instantly.

Three minutes later, Topher called and with no preamble whatsoever said, “Holy shit. Is this real? Or did you make it up?”

“One hundred percent real.”

“It’s not the old ‘sources said’ routine?”

“The sources are real.”

“Can you prove it?”

“Absolutely. But I’m not giving them up.”

“What do you have? I want to see it.”

“Yeah, I’ll forward it, but I’m serious about protecting my sources. I’m not giving them up under any circumstances.”

“Fine. What have you got?”

“Topher?”

“I hear you. We’ll protect them. What do you have?”

“I have corresponding email archives from both Benton and Faulks proving that they were in contact before and after the explosion at the lab, that Benton was demanding more money after the fact, and that Faulks began bouncing his emails before finally rehiring him. And I have at least one expert who saw the bonobo identify one of Faulks’s henchmen on TV as one of the people involved in the initial explosion. Somewhere, somebody has it on DVR, and I’ll put money on Sam being able to pick him out of a lineup.”

“Who is Sam?”

“One of the bonobos.”

Topher whooped, called him a golden boy, told him to get drunk, treat himself, whatever, and hung up.

John was a little apprehensive as he turned the pages, but Topher had indeed published his piece word for word. It was all there, from the title, “Language-Proficient Ape Fingers Faulks Associate in Laboratory Bombing,” right down to the “Close sources have provided indisputable evidence that Peter Benton, former head scientist of the Great Ape Language Lab, conspired with Ken Faulks, media mogul turned pornographer, in a New Year’s Day bombing that grievously injured another scientist and turned the six resident bonobo apes into prisoners of America’s insatiable appetite for the phenomenon known as reality television.”

The story gets national attention

“Apparently this story relies heavily on the word,” said the woman, “if that’s even the right term, of an ape who appeared to recognize one of Faulks’s employees as involved in the laboratory bombing. Do you think the courts would consider evidence from an ape?”

Topher composed his tanned face into a look of deep concentration. “Keep in mind that these apes are proficient in human language, and while they might not be permitted to testify in a court of law, they can certainly testify in the court of public opinion. An interview with Katie Couric might prove interesting indeed.

The apes get a new home in Hawaii. Isabel gives an interview about it.

“Can you tell us more about your plans for the Great Ape Language Project?”

“We’re in the process of vetting the best scientists in the field, and are committed to continuing our work on language acquisition and cognition in the tradition begun by the late Richard Hughes, who believed it’s our duty to provide great apes with dignity, autonomy, and the quality of life they so obviously deserve.”

“The press release mentioned your collaboration with the Children’s Clinical Language Center in Boston. Can you expand on that?”

“There is strong evidence that nonverbal children benefit greatly by using alternative methods of expressing themselves, such as signing, and using lexigrams. We are sharing our data with the CCLC, and are excited about potential advances in this field.”

Author's Note

Right before I went on tour for Water for Elephants, my mother sent me an email about a place in Des Moines, Iowa, that was studying language acquisition and cognition in great apes. I had been fascinated by human-ape discourse ever since I first heard about Koko the gorilla (which was longer ago than I care to admit) so I spent close to a day poking around the Great Ape Trust's Web site. I was doubly fascinated—not only with the work they're doing, but also by the fact that there was an entire species of great ape I had never heard of. Although I had no idea what I was getting into, I was hooked.

During the course of my research, I was fortunate enough to be invited to the Great Ape Trust—not that that didn't take some doing. I was assigned masses of homework, including a trip to York University in Toronto for a crash course on linguistics. Even after I received the coveted invitation to the Trust, it didn't necessarily mean I was going to get to meet the apes: that part was up to them. Like John, I tried to stack my odds by getting backpacks and filling them with everything I thought an ape might find fun or tasty—bouncy balls, fleece blankets, M&M's, xylophones, Mr. Potato Heads, etc.—and then emailed the scientists, asking them to please let the apes know I was bringing “surprises.” At the end of my orientation with the humans, I asked, with some trepidation, whether the apes were going to let me come in. The response was that not only were they letting me come in, they were insisting.

The experience was astonishing—to this day I cannot think about it without getting goose bumps. You cannot have a two-way conversation with a great ape, or even just look one straight in the eye, close up, without coming away changed. I stayed until the end of the day, when I practically had to be dragged out, because I was having so much fun. I was told that the next day Panbanisha said to one of the scientists, “Where's Sara? Build her nest. When's she coming back?”

Most of the conversations between the bonobos and humans in this book are based on actual conversations with great apes, including Koko, Washoe, Booeey, Kanzi, and Panbanisha. After two years of research, I came away realizing that I have only seen the tip of the iceberg, and to anyone who wants to learn more, I highly recommend the following books as a starting point: *Kanzi: The Ape at the Brink of the Human Mind* by Sue Savage-Rumbaugh and Roger Lewin, and *Next of Kin: My Conversations with Chimpanzees* by Roger Fouts with Stephen Tukul Mills. You can also find information about bonobos at the Web sites for the Great Ape Trust (www.greatapetrust.org) and the Friends of Bonobos (www.friendsofbonobos.org).

Many of the ape-based scenes in this book are also based on fact—such as the Philadelphia Zoo fire, the gorilla (Binti Jua) who saved the fallen toddler, the types of experiments performed on chimpanzees and the conditions under which they were kept, the treatment and discarding of the Air Force chimps—although I have taken the fiction writer's liberty of fudging names, dates, and places. Many of the worst conditions have now been outlawed, but they demonstrate how we've traditionally treated our closest relatives—as “hairy test tubes,” is how Dr. Fouts put it. We've come a long way, but given that all four species of great ape are either endangered or critically endangered, we still have a long way to go.