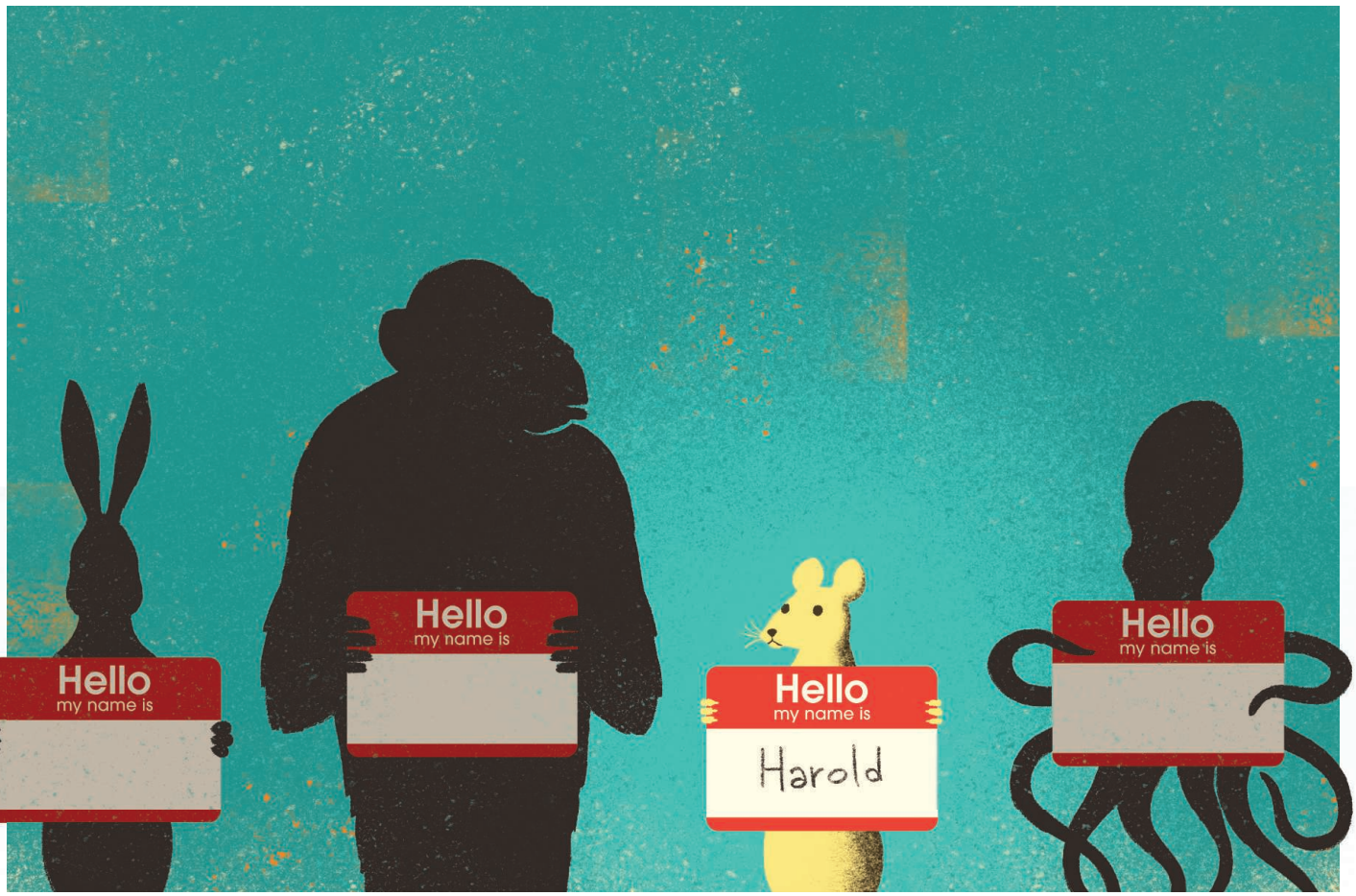

What's in a name?

Naming research animals may improve their well-being—or bias experiments

By **Michael Erard**

Freckle, a male rhesus monkey, was greeted warmly by his fellow monkeys at his new home in Amherst, Massachusetts, when he arrived in 2000. But he didn't return the favor: He terrorized his cagemate by stealing his fleece blanket and nabbed each new blanket the researchers added, until he had 10 and his cagemate none. After a few months, Freckle had also acquired a new name: Ivan, short for Ivan the Terrible.

Freckle/Ivan, now at Melinda Novak's primate research lab at the University of Massachusetts, may be unusual in having two names, but all of his neighbors have at least one moniker, Novak says. "You can say, 'Kayla and Zoe are acting out today,' and everybody knows who Kayla and Zoe are," Novak says. "If you say 'ZA-56 and ZA-65 are acting up today,' people pause."

Scientists once shied away from naming research animals, and many of the millions of mice and rats used in U.S. research today go nameless, except for special individuals. But a look at many facilities suggests that most of the other 891,161 U.S. research animals have proper names, including nonhuman primates, dogs, pigs, rabbits, cats, and sheep.

Rats are Pia, Splinter, Oprah, Persimmon. Monkeys are Nyah, Nadira, Tas, Doyle. One octopus is called Nixon. Breeder pairs of mice are "Tom and Katie," or "Brad and Angelina." If you're a mouse with a penchant for escape, you'll be Mighty Mouse or Houdini. If you're a nasty mouse, you'll be Lucifer or Lucifina.

Animals in research are named after shampoos, candy bars, whiskeys, family members, movie stars, and superheroes. They're named after Russians (Boris, Vladimir, Sergei), colors, the Simpsons, historical figures, and even rival scientists. These unofficial names rarely appear in publications, except sometimes in field studies of primates. But they're used daily.

Is this practice good or bad for research? Some scientists worry that names lead to anthropomorphizing and carry associations that could trigger bias—aggressive

ILLUSTRATION: DAVIDE BONAZZI



Research celebrities. Animals of all kinds have been named and remembered by scientists. From left, chimpanzee Freud, observed by Jane Goodall as he grew to be an alpha male; Ham, a young chimpanzee who was sent into space in 1961 and managed to survive the flight; and Dolly the sheep, the first mammal to be cloned from an adult cell.

Ivan might also be seen as more cunning than Freckle. But others argue that animals that are named, and therefore seen as individuals, may be tended more carefully. That makes them less stressed and better for study, says Cindy Buckmaster, president of the American Association for Laboratory Animal Science (AALAS) and director of the Center for Comparative Medicine at Baylor College of Medicine in Houston, Texas.

Whatever its effects, for many researchers naming is a practice whose time has come. "I can count on one hand the people I run into who say, 'I work for somebody who tells me I can't name the animals,' " Buckmaster says. "I ask them if they do it anyway, and they say 'Yup.' "

WHEN HE WAS A GRADUATE STUDENT in the 1970s, ethologist Marc Bekoff worked with a cat that was able to swiftly learn visual discrimination tasks even with part of its visual system removed. Impressed, he named it Speedo. But senior researchers disapproved. "I said 'I'm naming him because he's an individual, he's really cool, he's really fast,' " Bekoff recalls. "That really pissed off a number of the professors."

In those days, emotional detachment from research subjects was prized. Few studies have analyzed lab animal naming practices, but in the late 1980s sociology graduate student Mary Phillips spent 3 years observing 23 labs that experimented on a variety of animals. She found naming was "rare," as she wrote in *Qualitative Sociology* in 1994. Only two labs used proper names; in one, names were given as jokes, while in the other, the namer was the student assistant rather than the researcher. Researchers told Phillips that they didn't name because they dealt with so many animals and were interested in them as sources of enzymes or data points, not as individuals. Six out of 27 researchers said they wanted to maintain emotional distance from animals they were going to kill.

Such attitudes were once typical in science, Buckmaster says. "An old guard used to preach detachment," she says. "In their mindset, you could not collect objective data if you allowed emotion to become part of anything you did."

That's why Jane Goodall's chimpanzee names (Bare Bum, Paleface, Freud, Fifi), were controversial when she first studied the Kasakela chimpanzee community in Tanzania in the early 1960s. "They are as distinct, one from another, as human beings," Goodall wrote, an observation that sparked skepticism at the time.

And yet even then, some lab animals were unofficially named. In the late 1950s, when psychologist Harry Harlow did his famous, often-vilified experiments removing infant monkeys from their mothers, he named as well as numbered the animals. The first infants were named after stones (Mill Stone, Grind Stone, Sand Stone, Moon Stone) because the work of hand-rearing them proved more difficult than anticipated.

Harlow knew that names matter—he had changed his own last name from "Israel" to avoid being perceived as Jewish, which he wasn't. In his lab at the University of Wisconsin, Madison, naming of individual animals was part and parcel of a key discovery, says Steve Suomi, a former Harlow graduate student who is now director of comparative ethology at the National Institute of Child Health and Human Development.

Harlow's group began to appreciate that individual monkeys differed in scientifically meaningful ways. Some monkeys were highly stressed; others were playful. "We would have certain manipulations where we wanted everybody to react the same way, but they never worked," Suomi recalls. "There was always predictable variation, based on the individual subject."

Recognizing these individual differences led to the discovery of the genetics and epigenetics of personality in monkeys, which has clinically relevant implications for humans, too, Suomi says. These insights "probably wouldn't have been possible if we hadn't gone through this individual difference route," he says.

Today at his institute, Suomi encourages naming as a useful tool and also as an emblem of the science of individual differences. "Working closely with monkeys who do have individual characteristics and personalities, it's almost impossible for them to not acquire names one way or another," he says.

Naming comes naturally with other animals, too. When AALAS's Buckmaster put out a call to the researchers, technicians, and veterinarians on her Listserv asking about naming rodents, she got dozens of replies listing rodent names, among them Copernicus ("a smart rat"), Harold ("he looked just like a Harold"), Snow and Blizzard ("albino rats born during a snow emergency"), and Dudley ("a breeding rat that was sterile"). Said one person: "I personally give rodents names when they need to be euthanized, just as a sort of courtesy."

Naming improves animals' lives, argues Brenda McCowan, a scientist at the California National Primate Research Center at the University of California, Davis, who manages the behavioral enrichment program for 5000 rhesus and titi monkeys. "Naming helps create positive human-animal interaction, which is better for the welfare of those animals," she says. Buckmaster adds that naming has become more accepted because "people realized the scientific value of the stress-free animal. … We have to make sure these are really

PHOTOS (LEFT TO RIGHT): © KENNETH LOVE/*NATIONAL GEOGRAPHIC*; NASA; © NAJLAH FEANNY/CORBIS/SABA

happy animals, or none of the information that we get from them will be valid."

Buckmaster and others were unable to cite a study that compares research outcomes in named and unnamed animals, however. One study, in *Anthrozoos* in 2009, found a small but significant effect in 516 dairy farms in the United Kingdom: On the 46% of farms where cows were called by name, milk production was 3% higher than on farms where cows weren't named, suggesting that the use of names reflects an environment in which the cows get better care. (Study author Catherine Douglas of Newcastle University's School of Agriculture, Food and Rural Development in the United Kingdom notes that one farmer proffered this advice: Never name an animal after your mother-in-law.)

Lab animals are highly sensitive to environmental factors, notes University of Alabama, Birmingham, psychologist Robert Sorge, but no one is claiming that the animals themselves respond to their names. At a National Institutes of Health (NIH) facility in Poolesville, Maryland, infant monkeys move into cages elaborately decorated with their new proper names, but animal care manager Michelle Miller acknowledges that the monkeys never learn their names. Naming "is more for the humans," she says.

Mrs. Stone, a female rhesus monkey in Harry Harlow's laboratory at the University of Wisconsin in the 1950s, and a number of her adopted offspring.

PHOTO: ROBERT O. DODSWORTH

THE RHESUS MONKEY called Teefour was an outlier. Mean and nasty, he forced low-ranking females to groom him, and then yanked out chunks of their hair. "He would have been considered an abusive husband," recalls primatologist Novak. In her lab, every monkey gets a proper name. But not Teefour. No name ever stuck to him, not "Darth," not "Horrible." He was known only by the alphanumeric sequence tattooed on his chest: T-4.

Did his lack of a name affect what researchers observed about him? It could have, depending on the study, says psychologist Matthew Novak (no relation to Melinda Novak) of Central Oregon Community College in Bend. When he was a researcher at the NIH rhesus facility in Poolesville from 2002 to 2011, he argued that none of the monkeys should be named, and when they were, he didn't want to know the names, because he feared it would bias data collection. His argument: Say you're studying reaching behaviors in infant monkeys named Moose and Peach. Both make a random motor movement. It's coded as a deliberate reach for Peach but not for Moose, who's supposed to act big and dumb. "Naming not only changes our expectations, it changes what we see the animal doing," he says.

But as with the advantages of naming, there's no research to directly back up this idea. "To my knowledge, not a single study has been conducted to support the assumption that research data are at risk of being biased if names have been given to the research subjects; this applies to animals and humans," says Viktor Reinhardt, a veterinarian and former member of the scientific committee of the Animal Welfare Institute in Washington, D.C.

Still, Matthew Novak and others say it's possible to extrapolate from the social psychology literature, which is replete with experiments showing the subtle psychological effects that names exert on humans. Recent research shows that a poem with the name of a famous writer attached is perceived to be more poetic; food described with appealing adjectives is judged more nutritious; faces shown next to exotic-looking names are judged more multiracial.

In certain social settings, such as prisons and the military, people have been deliberately referred to by numbers in order to dehumanize them. Some argue that this is a factor even in medicine, where patients may be referred to by date of birth, Social Security or medical record number, or illness ("the appendicitis in room 312"). Such "deindividuating practices" can make doctors less sensitive to patients' pain and generally less empathetic, social psychologists Adam Waytz of Northwestern University in Evanston, Illinois, and Omar Sultan Haque of Harvard University argued in 2012 in *Perspectives on Psychological Science*.

The converse is also true: Names can make objects like robots and self-driving cars seem more human, Waytz says. People judged self-driving cars to be safer when the cars had some attributes of human agency, such as voices, genders, and names, he and colleagues reported in the *Journal of Experimental Social Psychology* in 2014. The voice is the strongest cue to humanness, but "a name goes a long way as well," Waytz says.

The effect is rooted in the brain. "Whether people are looking at robots or gadgets or animals, you get more activity in regions of the brain involved in social cognition" when they're perceived as more human, Waytz said. The brain's medial prefrontal cortex, he says, is activated when we make inferences about what others might be thinking—that is, when we perceive them to have minds as we do. That's true for everyone. "Even if people don't think they're anthropomorphizing by naming an animal, subconsciously, they are likely doing so," Waytz says.

If so, scientists need not worry that names will bias some researchers more than others. But naming might still skew how researchers perceive individual animals. Scientists routinely control for such potential sources of bias with study design, but haven't focused on names. One obvious solution, says Matthew Novak, is to assign names randomly, not based on personality or looks. "Make the names as unattachable to meaning as possible," he says, "and then train your staff as well as possible." In that case, Teefour had the right name all along. ■

Michael Erard is based in South Portland, Maine, and is the author of Babel No More: The Search for the World's Most Extraordinary Language Learners.