MISUNDERSTOOD

Also by RACHEL TOOR

Fiction

On the Road to Find Out

Nonfiction

Admissions Confidential: An Insider's Account of the Elite College Selection Process

The Pig and I

Personal Record: A Love Affair with Running

Baby Iris. Was there ever a sweeter face?

Rachel Toor

MISUNDERSTOOD

Why the Humble Rat May Be Your Best Pet Ever

Farrar Straus Giroux
New York

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For my Pop,
and for my Hon-Fat

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Introduction

For three and a half years I was in love with someone the size of a hot dog bun. Her name was Iris. She was a rat.

Iris would follow me around the house, gallop into the kitchen to stand by the fridge and twirl for broccoli, and snuggle with me in bed. She would come when I called her name, or "Poochiesnoggins," "Little I," "Ireechi," "Honeymunchkin," "Sweet Potato," or any of the seven thousand other terms of endearment I had for her.

The poochiesnoggins would ride on my shoulder to visit friends, spar with my fingers when I typed, pounce on pieces of string like a predator, leap for the unalloyed joy of having

a physical body, and groom herself until every single hair—and I mean every single hair—was perfectly in place.

Never greedy, Iris would accept any piece of offered food, even if she wasn't hungry, in which case she'd stash it away for later, sometimes under the bed, sometimes in one of my shoes. She greeted strangers as if she were being paid to make them feel welcome.

Scooping her up like a flower, I'd hold her close to my face and inhale her scent. She smelled like perfume, something between cotton candy and lilacs. Sweet but never cloying, Iris was like a furry sachet.

She used her tiny four-fingered hands that looked like twinkling stars to hold fast on to things, me included.

In the years since Iris died—and I'm giving away the end of the story here: Iris died—she has continued to lodge in my heart.

Living with and loving Iris made me realize how many people just don't get rats. I thought about this. Talked about it. And looked for books that might help me understand the venomous hatred directed toward this benighted group. I knew I wasn't the only one who appreciated these critters. Where was the book that paid tribute to the playfulness, warmth, dignity, and intelligence of rats, perhaps the world's most unfairly reviled species? I couldn't find it.

A standard piece of advice established authors give aspiring writers is to write the book you want to read. That's what you're holding in your hand. Honestly, I would have preferred someone else to do the hard work of writing. I'm pretty lazy. But I looked and looked and couldn't find any books that set out to extol the many (many, many) virtues of domesticated rats.

It took me a long time to finish this one. More than ten years. When I started it I did so with Iris on my lap. Sometimes she'd climb onto my shoulder. Sometimes she'd chase my fingers as they tapped away at the keyboard. I read parts of it aloud to her. She tended to sleep through those sessions, perking up only when she heard her name. Like most of us, Iris listened for the sound of her name.

When I had the chance to write about another passion of mine, running, I put aside my work on rats. Then I got busy and realized that years had gone by and my rat book still hadn't gotten done. (Note that use of the passive voice: *It didn't get done*, not *I hadn't done it.* That's a writer's way of letting herself off the hook.)

Then, because I believed in this project, I got serious. My agent and I worked for a year to get a proposal into shape.

Well, sort of.

In truth, I worked for a bit, got stuck, and then a few

months later Elise, my patient and encouraging agent, would shoot me an email saying, "Just checking in! How's it going?" I'd feel guilty, do some more work, and then get stuck again. Lather, rinse, repeat.

Finally, we had a book proposal. Elise sent it to a number of publishers and to my astonishment we soon had an offer. And then while we waited to hear back from the others, I got one of those out-of-the-blue emails that can change your life. Or at least, mine.

Dear Rachel,

I've enjoyed reading your pieces in *Running Times* and in the midst of a recent running-book-reading jag, I've found your *Personal Record* to be a highlight. One of the things I like most about it is your gift for turning ordinary, easily overlooked things, such as your overstuffed drawers of running clothes or the pantry filled with energy bars and sports drinks, into material for your stories or springboards for your plots.

As a children's book editor as well as a runner, I was also interested to see your chapter about coaching the high-school XC team as well as to read in your bio about your experience dealing with (and writing for and about) college-age kids and the college experience.

All of which makes me wonder if you've ever considered writing fiction, in particular a YA novel about a high-school girl runner? I don't know what that story might be but I like the idea of a book with this subject. A book that tells a good tale and in the process gets at the heart of the magic of running for its adherents, and maybe convinces a few kids to lace up and hit the road.

Curious to hear from you if you are interested in discussing this.

Holy cow! This letter came from Wes Adams, a book editor at Farrar, Straus and Giroux, the publisher of my dreams. Of course I couldn't imagine writing a novel. I didn't write fiction, didn't know how to do that, but man oh man how flattering to be asked.

After running around the house screaming, scaring the bejesus out of my fifty-pound mutt, Helen, I wrote back an email filled with girly exclamation points and said, "YES! I would love to talk!"

As soon as I hit Send I realized this was silly. Who was I kidding? I couldn't write a novel. And I had finally gotten some traction on my rat book.

The editor and I talked and I blathered on about my self-doubt. I said, "I can't write a novel."

Wes said, "That's ridiculous."

Wait, what?

He encouraged me to try.

I tried.

I sent him pages that, the minute they left my out-box, I realized were horrible. Embarrassing. Painful.

Wes would read them and say, "Just keep going."

I'd say, "No, I already scrapped them and started again."

I could practically hear him put his head in his hands.

If Wes didn't get back to me in four hours, I'd decide he had come to his senses, realized that this was a lost cause, and given up. Turned out he had other projects, other authors, a family, you know, something besides me and my crappy attempt at a novel.

In the meantime, another editor, this one at a huge commercial publishing house, wanted to have a conversation with me about my rat book.

On a Friday afternoon I had a conference call with that editor, the marketing manager, and a publicist. The editor, young and enthusiastic, had some ideas about a different way to shape the manuscript. It was great to get her feedback.

I knew the marketing and publicity people wanted to suss out what I'd be like in terms of promoting the book. I was

thrilled to discover the publicist was superexcited about the project.

"We could make rats the new 'it' pet!" he said.

That would be . . . good? The conversation seemed to be going well. The publicist, clearly an animal person, wanted to know where he could get a rat. I gave him some suggestions.

Then he wanted to know about my rat situation.

I explained, as I had written in the proposal, that Iris had died and I now had a rodent killer of a dog.

"Well, could you get a rat when the book comes out?"

Patiently—at least I tried to be patient—I explained again about Helen, and how she'd already taken out three squirrels and nine marmots and I couldn't sleep in the same bed with her if she became a rat assassin. It was hard enough to forgive her for her outdoor trespasses.

"Well," he said, "could you borrow a rat when the book comes out?"

Good grief.

It all became clear to me. The publicity guy wanted to send me on the circuit as a crazy rat lady. I imagined him booking me on talk shows. I'd sit there with a rent-a-rat on my shoulder and the host would make a face, extend his hands in mock fear, and say, "Plague!"

I'd try to engage in a serious conversation and explain

how smart and sweet and funny rats are. The host would start in on the tail.

I'd struggle not to get, you know, rattled and he'd make some pun about being rat-tled.

When I hung up from the conference call I was, indeed, rattled.

Over the weekend I thought about what it would take to get me to write that book and endure the kind of publicity stunts the company might require of me. This publisher didn't do small, quirky books. They wanted big bestsellers. I am, as you may have already gathered, an author of small, quirky books.

Quick as you can say "No rent-a-rats!" I realized I didn't want to write the book they wanted to publish.

And working with Wes on the novel was turning out to be a blast.

But I had spent so many years on the rat project. I had tracked down academic research, talked to scientists and rat lovers, bought tons of books about diseases for the few interesting facts I could glean about the poor critters who sometimes carried them. I'd gotten two research grants from my university for this long-term project on rats. Could I forget about all of that and focus on the novel?

I sure could.

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At that point I had published three books of nonfiction. My first, *Admissions Confidential* (I wanted to call it *Admissions Impossible*), was an account of my time as an admissions officer at Duke, a book I wrote because when I left that job I felt dirty and I wanted people to understand how the application process worked, and didn't work.

Wes wanted a novel that would make those who didn't get what motivated us nutty runners want to give running a whirl. I was down with that, but I also wanted to atone for my admissions book, which I wrote because I thought it would be helpful for kids and parents to know that even if they did everything "right," they still probably wouldn't get into a fancy-pants school. That message depressed a lot of folks and now I wanted to say the rest of what I thought: It doesn't matter if you don't get what you think you want. The quality of your life does not depend on which sticker you put on the back of your car. There are zillions of ways to get an education, a good education.

In *On the Road to Find Out* I gave a pet rat named Walter to my main character, Alice, a girl despondent about not getting into her first-choice school who decides on a whim to take up running. I figured that Alice could become a geeky little rat researcher, just like me, and share the cool rodent knowledge she (we) loved to unearth. The funnest part (yes, I sometimes use words like *funnest*) was writing the

character of Walter, who I based, of course, on my darling Iris.

When the novel came out I decided I would consider the novel and myself a success if I got emails from girls (and women) telling me any of the following things:

1. The book helped ease some of the worry about the college admissions process;

2. The book got them to start running;

3. The book made them want a pet rat.

I am here to tell you that by my own lights, I am a big fat success.

When I talked about *On the Road to Find Out* I often told the story of how Walter the rat came into the novel. A number of folks said I should go ahead and finish the rat book. No, I countered, I'm working on another novel.

But after enough people say the same thing to you, you start to listen. I brought up the idea with Wes and he asked to see the original book proposal. After reading it, he was unconvinced. It was too long and too academic sounding. It didn't grab him. Could I come up with something more fun—something that used all the amusing facts I'd learned

about rats and let the world get to know my beloved Poochiesnoogins?

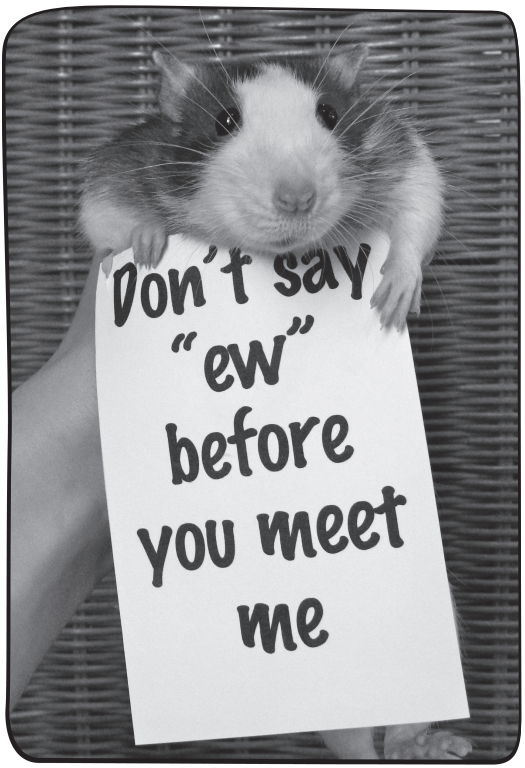
I sure could. That sounded like a book I wanted to read. And to write.

In *Misunderstood*, I hope to take you with me on my journey to find answers to my rat questions, starting with: Why do so many people hate rats?

I will consider this book a success if I get emails from folks who say that I've described the way they feel about their beloved pets, and also from those who have come to understand how and why these sweet creatures make such good companions. I want to tell you about all the cool stuff I've learned (and spare you the boring junk). I want you to get as excited as I am about the world of rats, and the people who love them.

And no, I still don't have another rat. Now, when I need a rodent fix, I visit my godrats, Fern and Laurel, whose adorableness you can see throughout this book.

When *Misundertood* comes out and I'm forced to do the inevitable public appearances, I hope that people will show up at my talks and readings with vermin on their shoulders; in my fantasy world I imagine speaking to huge roomfuls of rats and their people. Their people are, of course, my people: a diverse, fun, and fascinating group, as you will see if you keep reading.



Kara Loyd's "Ratvocates" are tiny lobbyists for rat equality

The Haters Gonna Hate, Hate, Hate, Hate, Hate

Why do so many people abhor/fear/detest rats?

Iris was my second rat.

My first, Hester, I got after college when I lived in New York City and worked in publishing. Hester and I had a rocky start. She had been raised in a laboratory and had never been handled. Early in our relationship she bit me. Twice. Not hard, not enough to draw blood, but as a signal that I needed to slow down and let her adjust to a new world order of no longer living in a lab. Her affectionate nature outweighed her fear, and we soon came to love each other.

Hester was the perfect apartment-mate. She never cared if I stayed out late, as long as I let her leave her cage for

playtime when I got home. She didn't need to go for walks, though I sometimes took her, perched on my shoulder, for strolls around Gramercy Park. When I lived with Hester I learned how misunderstood rats were by the general public—even people who claimed to love animals seemed to feel no compunction saying "ick" or "gross" when it came to rats, and not just the strangers who saw us on our infrequent rambles. My friends, all of whom knew how much I adored Hester, sometimes made mean remarks about my roomie.

When I met my future ex-husband he realized that the way to my heart was through my rat. He let her play on him, saved tasty morsels of food for her, and when she got sick at the fairly old age of three, he drove us to the vet and held me while I cried. For a long time, I couldn't drive past Hester Street in lower Manhattan without turning into a sniveling wreck.

My future ex-husband convinced me to move in with him by promising we could get a dog. We did. My wonderful mutt Hannah lasted much longer than our marriage.

Then, when Iris came into my life, I remembered how rats are basically like tiny dogs but easier to live with in many ways. Iris, so laid back, so accepting, so willing to go with the flow, became more than a pet. She was a role model.

Having a rat made me think about lots of things, not the

least being why, when rats are clearly superior companions, so many people are disgusted by them.

Try to imagine describing a friend and having people respond, *Eeeew! Redheads are soooooo gross!* Or, *People who talk with a Southern accent creep me out.* Or, *I hate tall people.* (I do, actually, hate tall people. Well, not *hate* them, but a jealousy this strong can feel like hatred. In fact, some of my best friends are tall.)

Most of us have learned it's not okay to smush a diverse group of people into an easily reduced and quickly dismissed lump. Most of us know that even in a field of daisies that look identical, small differences make each one unique if we bother to look closely enough.

When I hear smart, educated, socially aware folks say something as dumb as "I hate rats," I unfriend them.

No I don't.

Though I'd like to.

Instead I remember how bigotry and prejudice rely on ignorance to thrive. And then I try to teach them.

"If you don't like rats," I say in the gentlest, most teacherly tone I can muster, "perhaps it's because you haven't gotten to know one. Have you ever met a rat?"

Then I steel myself like a football player on the line waiting for the hike. I know what's coming. I brace myself.

I wait. It usually doesn't take more than a few seconds.

And there it is: "The tail!" they wail. "I just can't take the tail!"

Even the most articulate of my friends can't find the words to describe what they don't like about a rat's tail. So let's talk about the tail.

It's long. Yep. It's long. That's because rats use their tails for balance. They can climb ropes, maintain equipoise in precarious positions, stand on their back feet, and use their tails like the poles circus performers carry on the high wire.

It's naked, or at least that's what some people who have never examined one up close think. Why would a naked tail be so upsetting? Perhaps when we see animals missing patches of hair we believe they're sick. Maybe that's it. People think a hairless tail is less healthy than the bushy appendage found on, say, dog-taunting, birdseed-stealing, car-crash-causing squirrels.

Or maybe the naked tail reminds them of a snake. It's reasonable to be afraid of snakes, especially if you don't know which are the dangerous ones whose bites could kill you. But far from being naked and snaky, rats' tails are actually covered with tiny hairs and they do another important job. Rats can't pant like dogs, and they don't sweat like horses. They

use their tales for thermoregulation. When they get too hot, the blood vessels in their tails swell in a process called vasodilation and the hot blood loses heat through the surface, and when it returns to the furry little body, it's cooled off. When a rat is cold, the vessels in the tail constrict and keep the blood—and therefore the rat—warmer. Pretty nifty trick, huh?

Once I parry the thrusts against the tail, I expect the haters to continue with another line of attack, and I know what's coming.

Rats are dirty. Filthy. They spread disease. And then, gaining momentum, finding their footing by searching what they remember from high-school history, the haters get to where I know they're headed: *Plague! They caused plague!*

I take a deep breath. I force the corners of my mouth to tilt up. I don't want to be that girl who blames someone for not knowing any better, for being, well, unenlightened. Making myself small and unthreatening, hunching and moderating my voice from the shrill tone that wants to escape, I say, "Well, not exactly."

Rats are not dirty. If you see a dirty rat, he's probably sick. They live in grungy places because humans are sloppy and wasteful and throw away all sorts of great and useful stuff. Rats profit from our profligate ways. They settle in populous

areas like cities where lots of people leave lots of garbage. In places where there are fewer humans and less garbage, like the vast landscape of the American West, you don't find many rats.

Rats themselves are more fastidious about keeping clean than a heart surgeon afraid of being sued for malpractice.

They spread disease. Rats do spread disease. It's true. Hantavirus, eosinophilic meningitis, leptospirosis, rat-bite fever, Seoul virus, murine typhus, trichinosis—sure. But dogs, cats, cows, pigs, bunnies, birds, squirrels, and lots of other animals also carry these diseases, and more. Nature is filled with icky things. We've come to think that what's natural is good. But nature can kill you. If you need to be reminded of this, go for a walk outside during a big storm—rain, snow, thunder. Or stay inside during an earthquake. Or even just go for a swim in the ocean. There's some crazy scary stuff in the ocean and you'll never catch me anywhere near it.

As for plague, also scary. During the Middle Ages, when the Black Death took hold, it wiped out about a third of the population of Europe

But rats did not cause plague. They, like humans, were casualties of it. Fleas carried the disease—in the form of the bacterial microbe *Yersinia pesits*—and they infected the rats they lived on, who itched, scratched, and then died.

It's not the meek who shall inherit the earth, it's the insects. Fleas found their way from the bodies of the rats they killed to humans, who died and were too ignorant to blame the correct critter.

Fleas spread plague, people! Not rats.

If you want to know more about this, you can find a plague of books written on plague. The malady existed well before the Black Death—people afflicted with plague-like symptoms appear in the Bible, in Periclean Athens, in the ancient Fertile Crescent, in early fourteenth-century China. And it still exists on a large number of plague-infected but adorable prairie dogs in the western United States. Where there are very few rats.

New evidence links the spread of plague to—are you ready?— gerbils. I can't tell you how this delights me. I have a suspicion that the "pocket pets"—gerbils, hamsters, guinea pigs, ferrets, hedgehogs—got together and hired a public relations firm to convince people that they make better companions than rats. Hamsters are vicious, guinea pigs are spastic, gerbils are anxious, ferrets are stinky, and hedgehogs can turn themselves into medieval torture weapons. Gerbils spread plague? Hooray! I can't wait to see those jittery little creeps go down. (Not that there's anything wrong with gerbils. They just can't hold a candle to the brightness of my favorite rodents.)

They destroy things. The most knowledgeable of the rat haters may mention destruction caused by rats. It's undeniable: wild rats cost humans zillions of dollars. They eat tons of grain and chew through wires, sometimes causing and cause outages and fires. They even gnaw on concrete. Wild rats do this because they are trying to survive, just like other pests: insects, wolves, hawks, deer. But how often does someone claim to hate Bambi?

It's understandable not to like the things that scare us. Wild rats tend to come out at twilight. We don't like things that go bump in the night, or that skitter and scratch. We don't like knowing they're there and that we can't fully see them. Rats are good at staying out of our way, and at most we catch only a glance of a wild one. A tail. A dark shape scurrying in the periphery of our vision.

Rats are excellent at procreation. A single pair of rats and their offspring may produce fifteen thousand descendants in a year. Exterminators are often the biggest admirers of the success of rats. They point out that when rats are killed off, the pregnancy rate of the surviving rats increases and the survivors are hardier. They gain weight rapidly and become stronger.

I think that's amazing and impressive.

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When I talk to haters about their problems with rats, I can relate to their fears of the wild ones. I would no more bring a coyote into my home than I would a wild rat.

"But," I say, "I'm not talking about wild rats. I'm talking about domestic rats, love bugs like my little Iris."

"Same thing," they say.

"Ick," they say.

"No, no, no," I say. "You just don't understand."

Iris belonged to the species *Rattus norvegicus*, also known as the brown rat, common rat, street rat, sewer rat, Hanover rat, Norway rat, brown Norway rat, Norwegian rat, or wharf rat. Iris was not brown, did not live on streets or in sewers, and her forebears came from neither Hanover nor Norway. In fact, the critters called Norway rats are about as Scandinavian as I am. Which is to say, not at all. Iris and her kind came originally from Asia, probably China. Norway is the wrong home, people. Just another misunderstanding.

After too many of these conversations, I started wondering, is rat hating a worldwide thing? Is it a part of being human?

Um, not really.

People in other countries have profound respect for these resourceful creatures. In the Chinese zodiac, the rat is the

first animal of the year. As with many origin stories, it's not clear exactly why this is. Most of the accounts have it that someone, either the Buddha or the Jade Emperor, called on the animals to race. According to one story, the rat came in first because he got up earliest. Some say because rats have four digits on their front paws and five on their back, that makes them special and they get to be in first place.

But another story holds that when the cat and the rat, the worst swimmers, figured out they had to cross a river, they asked the good-natured ox if they could have a ride on his back. Midway across the rat pushed the cat into the water. When they neared the shore, the clever rat jumped ahead and beat the ox. So the rat is first, the ox second, and the poor cat didn't even make it into the zodiac.

Those born in the Year of the Rat are said to be ambitious, smart, quick-witted, resourceful, curious, shrewd, hardworking, careful, artistic, talky, charming, energetic, sociable, and observant. (On the not-so-good side, they may also be greedy, jealous, suspicious, selfish, critical, arrogant, amoral, edgy, and agitated.)

In Hindu mythology, Lord Ganesh, the remover of obstacles, rides a rat. Ganesh is a cool dude: he's the god of beginnings, of letters and learning, arts and culture, intellect and wisdom. It's easy to pick him out in the pantheon of

Hindu deities: he has the head of an elephant with one tusk and a trunk, a beer belly, and an indeterminate number of arms, but always more than two.

In northwest India, the temple of Karni Mata is devoted to the worship of the rat goddess, and people come from all over the world to the small town of Deshnoke to see the twenty thousand rats who are fed milk and grain by priests. It's considered an honor to eat food that has been sampled by a rat. I totally get this: each time I shared a meal or treat with Iris, I felt blessed.

So, right, not everyone in the world hates rats. But do you know who does? New Yorkers. New Yorkers hate rats. They scorn and condemn the rodents who live in close proximity to them. Even the most tolerant of animal lovers will quail at the sight of a scampering, scurrying subway rat; people who escort spiders outside or shoo flies away will often take pleasure in exterminating a varmint. This is too bad, because for people living in apartments who don't have the time or ability to take a dog for regular walks, a rat can be the perfect pet.

If you love New York and you hate rats, I have a book recommendation for you: Robert Sullivan's 2004 bestseller *Rats: Observations on the History and Habitat of the City's Most Unwanted Inhabitants.*

For a while after I'd read his book, I thought of Robert Sullivan as the enemy. The bad guy. The über-hater. He isn't, of course. He is more like my inspiration, my model, and my counterpoint. He's the reason I wanted to write this book. I'm trying here to provide the flip side of what he did.

In so many ways, *Rats* is wonderful. Sullivan is a collector of weird information and has the agility of an Olympic gymnast (or a rat) at jumping between topics and linking disparate ideas. *Rats* is a book about New York City as much as anything. He recounts the landlord-tenant wars of the 1960s; the sanitation strike of 1968; the geography of Wall Street. It's a book rich in information.

He gives us the basic history: most city rats are *Rattus norvegicus*, the brown rat, that Asian critter mistakenly thought to be originally from Norway. *Rattus rattus*, the black rat, got pushed out by its bigger brown cousin, though it still lives in some coastal southern cities and, he says, Los Angeles. Hollywood is apparently full of rats.

Montana was the last state in America to be settled by *Rattus norvegicus*. Sullivan tells us: "Several yearly rat settlements in Montana failed or were wiped out with poisons and traps, but the brown rat finally colonized Lewistown in 1920, and in 1938 the dump in Missoula became the site of an escaped colony of laboratory rats, domesticated *Rattus norvegicus*."

In fact, I got Iris when I lived in Missoula. Often my running buddies and I would do the "dump run," where we trotted from downtown, through the dump, and over Waterworks Hill. We frequently encountered mule deer, with their big ears, white tails, and funny, bouncing gait, and white-tailed deer, who looked much the same as mule deer to me. Once, I saw a coyote, and occasionally a bald eagle would soar overhead. But I never saw rats.

Not surprising, according to Sullivan. Rats learned to go where there are people, and there just aren't that many folks living in the big rectangular states on the left side of the map.

In Billings, Montana, it is illegal to keep pet rats. It is also illegal for married women to go fishing alone on Sundays, and for unmarried women to fish alone at all. But if you ride your horse to school, the state must provide food and shelter for him or her while you are being educated. It's the law. That's Montana for you.

To the north, Alberta, Canada, boasts about its status as "an essentially rat-free province." If you're found aiding and abetting a rat (or a neighbor who keeps rats), you could be fined up to five thousand dollars.

Sullivan's book is an unusual and wonderful bit of nature writing set in an urban environment. He describes his excursions with exterminators as if they were out hunting grizzly bears. Sullivan doesn't actually come face-to-face

with a rat until nearly the end of the book, when, with Dan and Anne from the New York City health department, he manages to trap some rats in order to anesthetize them with halothane, take blood from their hearts, and then kill—or try to kill—them. The author and Dan are impressed by the toughness of the rats.

The only person in the book who ever says anything nice about rats is Anne. Sullivan quotes her as saying things like "I think rats are so underappreciated" and "Rats are the smartest creatures." And, when looking at a trapped rat, "Look at this rat. This rat is beautiful." Hard not to love Anne. No one else the author meets ever sees the rats as anything other than disgusting.

Sullivan writes,

> Both pet rats and laboratory rat are *Rattus norvegicus*, but they are not wild and therefore, I would emphasize, are not the subject of this book. Sometimes pet rats are called fancy rats. But if anyone has picked up this book to learn about fancy rats, then they should put this book down right away; none of the rats mentioned herein are at all fancy.

Got that? *Rats* is a book for the haters. Though anyone interested in rats would in fact like Sullivan's book because

it's freaking awesome. In an afterword to the paperback edition, Sullivan writes about his experiences on book tours and responds in print to the questions people most frequently ask him.

He says,

> Let me make this next answer perfectly clear: I think rats are really, really gross, though through no fault of their own. I think it is our fault, actually. We humans are always looking for a species to despise, especially since we can and do act despicably ourselves.

He also feels compelled to clarify something he thought he had addressed in the book (he had) but still got called out on: his interest is in wild rats. "People often brought pictures of their pet rats to share with me," he writes. "At one reading in Berkeley, California, I thought I was going to have a rat riot on my hands when a small group of people showed up thinking I was against pet rats or something—and again, I'm not, I swear. It's just that wild rats aren't at all like pet rats."

In a footnote he explains that the fancy rat came about as a result of Jack Black, who caught rats for Queen Victoria and also sold some to the ladies of the time who fancied rats, women like Beatrix Potter, author of *Peter Rabbit*.

Sullivan is such a skilled writer you're happy to read about the strength of a rat's teeth—harder, he says, than aluminum, lead, copper, or iron. Superman teeth is what they are, with the strength of steel. And he lays to rest the idea that rats gnaw to grind down their front teeth, which grow at a rate of five inches per year. He says they wear down naturally.

So lots of great, gross stuff in this book. Lots of ammunition for those who want to squeal and squawk. Plenty of information, both trivial and profound, for the haters who are gonna hate, hate, hate, hate, hate.

No one ever hated Iris. Not one person who met that darling honeymunchkin failed to be charmed. All you had to do was spend some time with her.

When she got bored and felt puppyish, she'd start messing with my fingers or the pages of my book to get attention. I always stopped what I was doing to play.

We often played Whack-a-Rat, where she would disappear into the folds of a blanket and then pop her head out. I'd tap her on the head and she'd retreat, only to come charging back a few seconds later.

I never taught her to come when called. I just said her name, sometimes I clapped my hands, and she would bound over to me like a superhero.

When I had people visit, she'd climb on their shoes. She'd

haul herself onto their laps. She'd grab their fingers and give them a gentle manicure.

When I sat at my computer she liked to park herself on my lap and sleep. Sometimes she'd leap up and patrol the desk, nosing papers out of the way, sampling a bit of pencil. She loved to chase my fingers as they flew across the keys. As charming as this was, I discouraged the behavior. Not because I minded when she added interestingly spelled words to my prose but because I feared she'd get one of her tiny digits squeezed.

When I lay in bed at night, reading or watching TV, Iris cuddled with me. Or she raced around the bed, often peering over the side. Rarely did she venture far in her explorations. When she did, she'd come charging back as soon as I called her name.

Iris was as much like the rats Sullivan hunted in New York City as you are like an Indian deity with the head of an elephant and a bunch of extra arms.

If you want to read a book about how disgusting wild rats are, pick up Robert Sullivan's *Rats*. If you want to know how and why a domesticated rat might be the pet of your dreams, stick with me.

Iris and her babysitter, Sage, in 2006

Who You Calling Cute?

What makes us think something or someone is cute?

When he first met Iris, my friend Jason expressed real surprise. "But she's so cute," he gushed. "I wasn't expecting her to be cute."

Jason is a smart guy. He had managed to insult me and compliment Iris in one sentence. Why didn't he think she'd be cute, and what made him change his mind? I'm sure her personality had something to do with it. She made everyone feel special just by paying attention to them: *Hello! Do you want to hold me? Can I climb on you? I like you! Let's be friends!*

My hunch is that Jason's reaction had something to do with

Iris's coloring. When people who don't know any better think of rats, they picture wild skitterers the color of sewers.

Another friend, Dan, a horse guy, said when he saw a photo of Iris, "You didn't tell me your rat was a paint." Iris's coat, like Dan's gelding's, was a combination of white and colored splotches. He too admitted she was cute.

Of course both of them knew that if they wanted to remain friends with me they couldn't say anything bad about Iris.

But what, I began to wonder, makes something cute? Why are hamsters considered cute and rats aren't? What does *cute* even mean?

In the 1700s, the word was a shortened version of *acute*, meaning sharp or quick-witted, clever or shrewd. Would anyone use it that way today?

Nope.

I'm going to tell you right now, I hate cute.

Cute is all earnestness and exaggerated simplicity.

Cute has no sharp edges.

Cute indulges the awkward, the ungainly, the stupid, the round, the slow, the lumbering, the static, the wide.

Cute is the opposite of threatening; one of the things most likely to make something seem cute is vulnerability. We want to pick it up and protect it.

Cute is submissive, paws in the air, throat exposed.

Cute sits upright with a big furry head and huge open eyes, paws resting on a rotund belly.

Cute has long eyelashes and a soft, curvy body.

Cute cries in ways that make you laugh.

I'm no different from anyone in that if I see a puppy, or a foal, or a baby of any animal other than a human, I lose my words and can utter only long, high, vowel sighs—*Ooooh! Eeee! Awww!*

On the other hand, the sight of dolls with faces like vegetables makes me want to barf. Big pink bows, I ♥ U notes, sweaters with cats, emojis—fine for you; not for me.

As a kid, I struggled around smart girls who did well in school, had creative impulses, and yet giggled after every sentence they uttered. I always felt like I wasn't getting the joke. What was so funny?

No doubt my approach to the world was overly serious and a perhaps a tad harsh. But inappropriate giggling seemed to diminish these friends of mine, to render them less impressive. Early on I had a feminist sensibility and bridled whenever women—girls—sought to undercut their strength. I viewed giggling, "up talking" (ending every sentence as if it's a question), and displays of cuteness as a way to say *Don't worry about me—I'm no threat. I'm just happy, silly, giggly,*

soft, cuddly. Don't fret—I won't beat you in a race or get a higher score on a math test than you, big boy. I won't outearn you or make you feel small by pointing out all the ways in which you're stupid and wrong. Look! I'm harmless!

Now when I meet girls who giggle when they speak, I understand they're trying to fit in. Most kids grow up being told by their parents they are beautiful and unique snowflakes, which is very nice and all but not so comforting when what these teens want most is to be like everyone else. Appearing nonthreatening is a way to get along.

The problem with cute is that it can shut down thought. In one of my favorite essays, "Politics and the English Language," George Orwell makes a case against using clichés because, he says, they "think your thoughts for you." Cute demands that you stop thinking and just feel all warm and fuzzy. Laziness in imbibing social values can deaden us and keep us from challenging the status quo.

Given how crabby I am about babies and rainbows and lollipops, imagine my horror at having to spend time at ground zero of cute, what I call "The Unhappiest Place on Earth": Disney World. I used to have to go there to lead marathon pace groups and it was sheer torture. The place, not the pacing.

I know, I know, some people love all things Disney. You

may be one of them. I'm sorry. I shouldn't complain. But I do. I like very little about that industrial entertainment complex except for this: Walt Disney, the man who inflicted cute on us in ways our culture may never recover from, loved mice.

When Walt cast about for an animal to star as a cartoon character, he came up with Mortimer Mouse. His wife, Lillian, didn't balk at the species selection but found the name pretentious. Flash forward to a figure today recognizable by nothing more than three black circles. Three black circles that manage to embody cute.

It was an interesting choice. Why did Walt Disney think Mickey Mouse would be a compelling character?

As I went in search of the answer, I found a fascinating essay by the late evolutionary biologist Stephen Jay Gould.

When Gould was five years old his father took him to a place far better for kids than Disney World or Disneyland: the American Museum of Natural History, a place my grandfather took me nearly every time I visited New York City. There, instead of seeing princesses and costumed cartoon characters, a kid gets to marvel at the very real and very weird natural world. When Gould saw the skeleton of a *T. rex*, he decided to become a paleontologist. And he did. He also became one of those rare scientists who can write

books and essays for nonspecialists—a bestselling author who happened to be a professor at Harvard.

In "A Biological Homage to Mickey Mouse," a widely anthologized 1979 essay that first appeared in *Natural History* magazine, Gould uses the occasion of Mickey's birthday to chart the physiological changes in the cartoon character. Mickey, instead of aging and growing up like the rest of us, has, over the course of his career, seemed to have found the fountain not just of youth but of age regression.

Over the years, Mickey's features became more juvenile. In the beginning, Mickey looked like a rat and acted like a creep. His first film, *Steamboat Willie* in 1928, showed Mickey as a tweaker of a pig's nipples, a cranker of a goat's tail, a smasher, pounder, and banger of the other animals he encountered. (Minnie, I'm sorry to tell you, was no better.) Fan letters, and complaints from those who were not fans, caused the studio to draw Mickey into line. He became a kinder, gentler representative of what would become the Disney nation.

As Mickey got older, he turned benign and kind of boring. Gould makes a case that Mickey's transformation at the hands of Disney animators follows a "progressive juvenilization." In other words, Mickey went through the aging process in reverse. His head got bigger and more childlike, his

nose got thicker and less pointy, his eyes went from plain black dots to having pupils. His ears moved back on his head, farther from his nose, giving him a rounded face rather than a sloping forehead. His former ratlike appearance vanished into the bland profile of a chubby little kid.

Sure, it makes sense to appease the fan base and rewrite Mickey's character to be more appealing. But why draw him to look so young? I mean, he interacted in the world as a grown-up and had an indeterminate relationship with Minnie; he was a manly mouse. Why make him look like a baby?

Gould looks to the work of Konrad Lorenz, the father of ethology, the study of animal behavior, to answer this question. He cites one of Lorenz's most famous articles to help him figure out what's going on with Mickey. Gould reports Lorenz believed baby features—"a relatively large head, predominance of the brain capsule, large and low-lying eyes, bulging cheek region, short and thick extremities, a springy elastic consistency, and clumsy movements"—triggered an "innate releasing mechanism" for adult care. In other words, we see those small blobby things and it makes us go *aww* and *oochie-coochie.* Gould points out that there is much debate about whether the response is innate and inherited, or learned, but decides not to enter it. He does agree, however, with the notion that round is cute.

He shows how Lorenz generalized his ideas to fit with our responses to animals: "We are, in short," Gould writes, "fooled by an evolved response to our own babies, and we transfer our reaction to the same set of features in other animals." The argument goes that we prefer animals that look most like very young humans. "We are drawn to them, we cultivate them as pets, we stop and admire them in the wild—while we reject their small-eyed, long-snouted relatives who might make more affectionate companions or objects of admiration."

Aha! This explains the wrongheaded pet-store preference for charismatic mini pets, your eat-their-own-offspring hamsters; your darting, squeaking guinea pigs; your poop-all-over-the-place bunnies. These "pocket pets" look like babies, even when they're fully grown.

Rats get short shrift. And perhaps that's because they are pointy, not round. When we see pointy, we think wild. Domestication looks round. And round is cute. And cute is nonthreatening. Hello, Kitty!

Gould, an evolutionary biologist, spent his career in the shadow of Charles Darwin, thinking about and refining the great man's theory of evolution.

You will have heard, no doubt, of Charles Darwin. He starts his famous book, *On the Origin of Species*, by

pointing out something that might seem obvious now: how much greater variety there is among domesticated animals (and plants) than there is in corresponding wild species. He notices that domestic ducks' wings weigh less and their legs weigh more than their wild relatives', possibly because they fly less and walk more; that the udders of cows and goats develop differently in countries where those animals are milked; and that domestic critters have droopy ears, possibly because they don't have to listen as carefully for danger.

Strange things happen to animals after they've lived with humans for generations. Their bodies change in both form and function. Multicolored dark coats that allow them to blend into their environments—which helped them in the wild—start to get patches of white. Their fur becomes wavy or curly. Snouts get shorter and wider. In some cases tails shrink down to stubs. Ears turn floppy. Think about the zillions of different breeds of dogs you've seen and how much variety there is. Weiner dogs look nothing like shar-peis who look nothing like French bulldogs. Now think about canines in the wilderness: wolves, coyotes, jackals. They all appear pretty similar. That's what wild looks like. Wild does not look like a pug.

Rats in subways and sewers appear, well, wild. Domesticated rats, on the other hand, come in a buffet of exquisite

colors. They can have coats like paint horses or Siamese cats. They can be champagne-colored, or gray, or even blue like Remy in *Ratatouille*. You would no more mistake a pet rat for a sewer dweller than you would a parrot for a pigeon.

With domestication, behavior also changes. Where wild animals seem grown-up and aloof, snooty even, domesticated beasts act like needy babies—whining when they want something, barking for attention. You can't pull nonsense like that when you're out in the wilderness with others who might eat you.

There's a cool experiment about domestication I want to share with you. In 1959, Dmitri K. Belyaev, a Soviet geneticist who did not accept the Communist Party's scientific line and was forcibly "moved" to Siberia, became director of the Institute of Cytology and Genetics in Novosibirsk. (I don't know how to pronounce that either.) He set up an experiment with silver foxes to test the genetics of domestication. He selected the tamest foxes—those least fearful of human contact—and bred them with other tame-acting foxes. He did the same with the most aggressive ones.

After eight generations, the tame foxes began to tolerate human contact. The behavior of the two strains, tame and aggressive, each became more pronounced. Then Belyaev died, but his former graduate student Lyudmila N. Trut

continued with his work. She published an article in *Scientific American* in 1999 that let the rest of the world know what the Siberian scientists had been up to. Big news. They had identified body-type and behavioral changes that occur with selection for tameness. Can you guess what they were? Think about what "wild" looks like. Now imagine going to the dog park and looking at who's playing. Right! Dogs, when compared to wolves, look more like puppies.

The tame Siberian foxes, like domesticated critters, started to have spotted rather than solid coats; patches of white showed up in their fur. Their heads became broader and their ears drooped.

Belyaev, I should mention, had realized it might be easier to experiment with a species that produces generations at a fast rate. He turned, naturally, to rats, and Trut carried on his work. In 2005, the reporter Nicholas Wade wrote in the *New York Times,* "When a visitor enters the room where the tame rats are kept, they poke their snouts through the bars to be petted. The other colony of rats has been bred from exactly the same stock, but for aggressiveness instead. These animals are ferocious." He quotes an animal behavior expert named Tecumseh Fitch as saying: "Imagine the most evil supervillain and the nicest, sweetest cartoon animal, and that's what these two strains of rat are like."

You can tame a wild animal, but that's different from

domestication, a process that takes place over many generations and involves selection for particular traits linked to the specific expression of genes.

Charles Darwin himself had figured all of this out. He noticed the floppier ears, the patches of white, the smaller jaws, but he didn't have the molecular biology to back up a theory of inheritance. He did note that certain traits went together: he claimed blue-eyed cats tended to be deaf.

Now that we know so much about genetics, scientists have figured out how these changes occur. When humans started living with animals and then breeding them, they selected those not inclined to fight or flee, animals who were less fearful. These traits linked to genes that also called for depigmentation (white spots) and—it pains me to say this—smaller forebrains. So when domesticated animals became friendlier, they may also have lost a bit of their smarts.

When the Siberian scientist Lyudmila Trut continued the work done by her mentor, Belyaev, she found that after fifteen years and more than thirty generations of rats, their fur became increasingly white. More than 70 percent of the rats had white bellies. Depigmentation goes along with domestication.

Learning this provoked in me another Aha! moment. When it comes to dogs, I prefer those whose ears stand up.

I have always believed they're smarter, though I never had any proof of this except for anecdotal evidence based on my own experience and prejudice. I'll take a supersmart wild-looking mutt over a slobberingly happy but dumb, droopy-eared Lab any day. Not that there's anything wrong with Labs.

Iris, a homey and domesticated rat, was mostly white except for her head and shoulders and some big splotches on her back. I always had a hard time explaining the color of her spots. I called them "fawn," because they looked like the coat of a baby deer. A light mixture of brown, honey, tan, and gray. I never knew how to describe her coat other than to say it was luminescent and rich.

Now I know the nonwhite parts of Iris were called "agouti," which is the color of wild rats. Agouti fur consists of hairs with bands of different colors.

Iris. Sweet, compliant, fearless Iris.

Cute? Yes, she sure was cute. But she also had just a touch of the wild.

Laurel checking out her own image

In Search of Positive Images

Are there any good representations of rats?

I often thought I should have a bracelet made that read "WWID? What Would Iris Do?" That rat was a role model for me, and could be one for you, too.

Iris was:

Fastidiously clean (except for occasional tail-hygiene issues)
Always in a good mood
Welcoming to strangers
Eager to explore
Considerate of friends
Willing to share

Empathetic

Industrious

Athletic

Fearless

Funny

Gorgeous

A good sleeper

A thoughtful eater

Not a biter

Able to endure pain without complaint

Tender to dogs

Benevolent to children

I made this list of Iris's attributes years ago. It sounded to me like the description of a superhero, or of a celebrity I'd love to meet. Why then, I wondered, did I have to search so hard to find positive representations of rats in books, movies, and art?

When I saw *Ratatouille* I jumped for joy. Finally someone got it! If you haven't seen that movie, stop reading now and go get your hands on it. Do not go to school or work. Do not eat or sleep until you've watched it. You'll thank me.

Despite the snarky things I've said about Disney, this Oscar-winning film was a co-production between that

producer of too much cuteness and Pixar; I bet old Walt would have loved it. The filmmakers studied how rats move and got it exactly right. Those animated characters embody the essence of ratness. Plus, the movie sends a message you can't argue with: everyone can do it (*it* being pretty much any art form), but not everyone will be great. And greatness can come from anywhere. It's a portrait of the artist as a young rat. If you get the DVD, you'll be treated to a short film called *Your Friend the Rat* in which the filmmakers, like me, try to help get the haters' heads out of their butts.

So that's one.

What other movies star rats in positive roles?

Waiting.

Waiting.

Waiting.

Right.

It's hard to come up with any. Though you may by now have thought of a bunch of films where rats make an appearance, we're not interested in that kind of nasty business.

If we turn to other art forms, we're similarly shortchanged. Historically, most images of rats are of the wild variety and they're about as far from warm and fuzzy as pictures of cockroaches.

Until recently, that is.

If you have access to a computer, you may have seen certain rat photographs that cause you to emit long vowel noises. Three women in particular have done much to showcase the charm and beauty of these amazing animals.

When you see Ellen Van Deelen's work, it's impossible not to squeal and coo. If you're reading this book now, chances are you squealed and cooed when you saw the cover. That's Moppy, one of Ellen's rats, holding a teddy bear. And on page 90, he's getting ready for a road trip.

Ellen lives in Holland. Her rat pictures have traveled the world and the World Wide Web. She has taken photos of rats playing miniature musical instruments, pushing grocery carts and baby carriages, sitting at tiny tables with tiny teacups and saucers, checking out a goldfish bowl, holding stuffed animals, and wearing sunglasses and straw hats.

It's hard not to wonder about the woman who created this amazing art. So I contacted her.

Did she always like rats? I asked.

Ellen replied, "I never liked rats! When I had to be in the pet shop, I even tried not to look at the cage where the rats were."

What happened?

"One day, I came, and saw in a cage a little dark brown animal curled up in a corner. I asked what it was, and the owner told me it was a rat. He was alone in the cage."

You see where this is going.

"The next week, I came again, and he was still in his corner. I asked how long he was in the shop, and the owner told me, he was there already for half a year, and nobody wanted to buy him because of his brown color."

An impulse buy? No.

Ellen did what any thoughtful person would do. "I went to the library and read a pet manual about rats," she said. "I went back to the shop, after reading about how smart and sweet they are, and bought him!"

One rat? Not enough for Ellen.

"To make a long story short," she said, "in another shop I bought him a friend, and they lived very happy together. I was getting used to them, and thought they were the most sweet animals."

When I asked how she got them to pose she confessed, "I put vanilla pudding on the musical instruments. They have a good memory, I think, so after a few times they remembered what I wanted them to do."

She added, "They are also very intelligent. I have to be fast in taking photos and have to be patient sometimes."

I know what she means. When I tried to take photos of my always-busy Iris, mostly what I got was a blur of action.

Jessica Florence, who lives in England, solved this problem. Many of her wonderful photos are of her rats fast asleep.

They're snoozing in piles with other rats, or in piles with stuffed animals, or napping under covers. My favorite may be Jessica's picture on page 114 of two rats on top of each other, holding a teddy bear. There's something about seeing their hands, the delicate and dainty nails at the end of long fingers, that makes us read ourselves into her photos. *That could be me. That could be my baby. That could be someone I love.*

When I asked her about her life with rats, Jessica revealed that she had to be persistent at first:

> I first got a pet rat when I was thirteen after my parents finally relented to my begging. I had seen a rat on a TV show which was testing various pets' intelligence and I fell in love with the creatures instantly. I then had eleven rats over the course of the following eight years. I've been without rats for the last two years due to the fact I was busy with my new son, but now that he is two I will be getting two new females in the coming weeks. I'm very excited about that!
>
> The photographs came about because I had discovered a new interest in photography at the time and I had no human models that would pose for me. It was actually a last resort that I began

photographing my then pet rat, Bug. But the photos took off online and I started to really enjoy photographing her. She was very easy to pose and the ideal model really.

It's nice that I am still so associated with rats online, because they are animals I am really passionate about and I love changing the odd person's opinion about them. The best thing is when I get emails from those who have been inspired to get pet rats themselves because of the photos.

Don't forget that Jessica is British. When she says "the odd person's opinion," I think she means the random person. Not a weirdo who doesn't like rats. Though that might be what she means.

With her photos Jessica is on to something important here. It's hard for anyone to look threatening when sleeping. We are at our most vulnerable and unguarded when we're asleep. If Jessica's photographs don't make you think rats are adorable, I give up.

Actually, I don't. Not yet.

I'm going to keep trying to convert you. And to do that, I'll refer you to a teen from Philadelphia who has wowed the world with her YouTube video "15 Incredible Rat Tricks."

Abby Roeser taught her rats Nami and Pepper a bunch

of tricks. As one of over a million viewers, I have spent time I couldn't afford to waste watching them perform the following tricks: spin, fetch, hurdle jump, open the cabinet by pulling a string, jump into Abby's hand, circle around an object, scoot a ball along a wire, dive underwater for peas, go through a hoop, weave around an obstacle course, untie Abby's shoe, roll over, do the laundry (put tiny "socks" into a tiny "washing machine"), perform a dramatic teddy-bear rescue, and play doctor by opening a first-aid kit, removing a Band-Aid, and bringing it to Abby.

After I watched Abby's videos I wondered if Iris would have enjoying learning tricks. I never bothered teaching her anything. She did her own thing—like twirling for broccoli and coming when I clapped and called her name. Mostly I just wanted her company, snuggling with me when I watched TV, sleeping on my lap when I sat at my computer, resting against a book when I lay in bed reading. I spend a lot of time reading.

Why, I wondered, were there no good books with rats as the main characters? I mean, after all, *rats* spelled backward is *star.*

Mice, small and unthreatening, often appear in children's books. Like kids, they are easily squished and need protection. But it's rare a rat is the hero.

Think about one of the most famous literary rats. Templeton, from *Charlotte's Web*, is hard to like. The author, E. B. White, writes, "The rat had no morals, no conscience, no scruples, no consideration, no decency, no milk of rodent kindness, no compunctions, no higher feeling, no friendliness, no anything." Not exactly the hero I'm looking for.

You'd think that Beatrix Potter, lover of rodents, creator of Peter Rabbit, a woman who dedicated *The Tale of Samuel Whiskers or The Roly-Poly Pudding* to her own pet rat, Sammy, would have come through for us.

Sadly, no.

In that book, the title character is indeed a rat, but he's a snuff-taking, thieving, domineering old guy who, with his wife, tries to eat kittens.

And who could forget the most horrific rat-infested tale of all, that of the Pied Piper of Hamelin? In the poet Robert Browning's version, the town of Hamelin was in trouble:

> *Rats!*
> *They fought the dogs and killed the cats,*
> *And bit the babies in the cradles,*
> *And ate the cheeses out of the vats,*
> *And licked the soup from the cooks' own ladles,*

Split open the kegs of salted sprats,
Made nests inside men's Sunday hats,
And even spoiled the women's chats,
By drowning their speaking
With shrieking and squeaking
In fifty different sharps and flats.

In other words, these guys were simply doing what rats do—trying to stay alive. The townspeople hired the piper to lure the rats away. He did. He led them into the river where they drowned. When the citizens refused to pay him for his services, the musician, dressed in his multicolored (pied) clothes, blew into his pipe and lured away the children. Horrors!

Even my idol, George Orwell, goes to the dark side when it comes to rats. In *1984*, the imprisoned hero Winston is threatened with a torture device straight out of his worst nightmares—a mask attached to a cage of "carnivorous" rats. Oh, George. Really. Did you have to go there?

Over the years, I've accumulated a big stack of books about rats. Far too many of them, in my opinion, are about plague. Or about the destruction rats cause, the havoc they can wreak.

In *More Cunning Than Man*, Robert Hendrickson writes,

> What is certain is that any history of the rat is a history of human misery. More numerous than man on earth, sustained by human food, living largely by human sloth, the dread black plagues that rats deliver have alone killed billions throughout history, more than all man's wars and revolutions combined. Rats are as deadly and fecund as germs; a single pair can potentially produce 359 million heirs in three years.

Okay. If you want to read that kind of thing, go to his book.

Jerry Langton devotes a chapter—well, almost a chapter—to the people who love their pet rats in his book *Rat: How the World's Most Notorious Rodent Clawed Its Way to the Top*. Langton reduces the "hundreds" of rat lovers in the world to a caricature—the tattooed and pierced outcast. Even as he realizes he's flattening the terrain of rat-ownership into a simple one-dimensional picture, he maintains this is true for *every one* of the people he met. For instance, he speaks to a rat owner named Maura, a young woman who keeps

apologizing for referring to him as "normal," because she's not used to talking to people who are mainstream and are interested in rats.

No normal people, Langton implies, choose to live with rats.

Langton starts out by describing Maura in a way that seems oddly dismissive. He says she insists on being called "Raven," and he sizes her up as five feet three inches and about 260 pounds. (He feels her weight is important to mention—why?) He says that she has multiple piercings and keeps expecting him to be afraid of her rat.

> Like all other rat owners I've met, she [Raven] explains she likes rats because they are smart, affectionate, and clean. And, like all the others, she's adamant about these claims. Rat owners love to talk about their pets and use the word "extremely" more than any group of people I've ever met. Their rats are "extremely" clean, "extremely" affectionate, "extremely" intelligent, and "extremely" cute, among other extreme claims.

Even after claiming he hates to "paint an entire group with such a wide brush," he goes on to do just that. He describes the rat owners he's met—and he says he's talked

to more than a hundred individuals—as eccentric and misunderstood, and their sense of being hated for no good reason is, he says, their reason for choosing rats as pets. Perhaps revealing more about himself than about his subject, he goes on to say,

> All had strong, usually antiestablishment, political views they were pleased to share. Many had tattoos, piercings, or other look-at-me adornments. Many expressed an interest in science fiction, fantasy and/or medieval times. Many were vegetarians.

Gotta watch out for those vegetarians.

In a book about rats, he devotes very few pages to representing the other side of the rats-are-vile-and-disgusting creatures argument. Indeed, even in Raven's chapter, clearly unconvinced of the charms of both rats and their people, he scurries on to the topics of rat baiting and rat eating. He seems more eager to leave the company of the tattooed rat lovers than he did the sewers he crawled around in, filled with human feces, used condoms, and wild rats.

There are plenty of rat-care and even training guides—more on that later—but really, I've found only two novels that

portray rats in their full humanity. One, published in 1986, is called *A Rat's Tale*. It is a delightful satire of New York social circles whose characters happen to be rats.

I was so enchanted by the book that I emailed the author, Tor Seidler, told him how much I loved the book and the gorgeous illustrations done by a famous artist and book designer, Fred Marcellino, and said that surely someone who was able to write a book that sees these critters for the kind, nurturing, brave, and industrious souls they are has had a rat friend or two.

Tor wrote back right away and explained,

> I never actually had a rat as a pet, but I did have a good friend with a white rat that I grew quite fond of. The impetus for writing *A Rat's Tale* came from jogging in Central Park. I used to live uptown and often ran around the reservoir. I would spot rats from time to time, particularly in the fall when you could hear them in the fallen leaves (no bushy squirrel tails). Then I started to notice flyers posted on trees advising dog owners to keep out of certain areas on account of rat poison. I felt for the rats. It seemed to me they were being unfairly persecuted.

My kind of guy! And a fellow runner! Tor also said rats appealed to him because he liked the idea of writing about an "uncuddly creature." He wrote, "Back then it seemed most anthropomorphic tales featured mice or rabbits or such."

It's true. Mice and bunnies are more often heroes in kids' books. As I said earlier, I think that's because mice and bunnies are small and defenseless and need looking out for. In other words, they're a lot like children. Rats, I think, are more like teenagers. They're bold and unafraid. They like to explore. They're eager to try new things. They're curious. They're physically tough. Sometimes they make mistakes and get themselves into trouble, but they're rarely malicious. They have big, strong hearts.

Among those in the know when it comes to rat-friendly books, there is one everyone mentions: Robert C. O'Brien's *Mrs. Frisby and the Rats of NIMH*. It's a book I'd never read, had heard of only in a vague sort of way, but it sounded sci-fi-ish and it was, after all, for children. In other words, not my kind of book.

Then I read it.

Mrs. Frisby is a widowed mouse. She goes in search of help for her ailing son, Timothy, who may be too weak for their seasonal move to escape the farmer's plow. Here we go

again, I thought. Those mice always need to be safeguarded. And as with many animal fables, *Mrs. Frisby* has a cast of different critters around to help (crow, owl) and to threaten (cat). But when Mrs. Frisby gets to the rats things become interesting.

A rat named Nicodemus describes how he and his brethren lived happy, peaceful lives near a farmers' market. They created their own society and didn't bother or infringe on anyone else. The farmers left a wake of waste—the trimmings of meat and vegetables, the guts of fish—and so they had plenty of food and a good place to play: "There were empty boxes for hide-and-seek, there were walls to climb, tin cans to roll, and pieces of twine to tie and swing on. There was even, in the middle of the square, a fountain to swim in when the weather was hot."

One day people came in an odd white truck with the letters NIMH on it. The rats didn't pay much attention until men bearing nets captured them.

Researchers from the National Institute of Mental Health (NIMH) kidnapped Nicodemus and the others and enslaved them to science. The rats came to live in a way totally dissimilar to what they were used to. The scientists busted up the rats' family structures and forced them to live in solitary confinement, cut off from communication with one another

and the world they knew. The rats were given new names, different from and simpler than the names they called themselves and one another. And the scientists subjected the rats to torture: a daily needle stick. While these captors were mostly benevolent, and the rats couldn't complain too much about their lives—they had housing, they had food, though not what they would have chosen to eat, nothing delicious—what they missed most was their freedom.

The experiment turned out to be about creating superrats—the best specimens you could imagine. The drugs given to the first group, which included our hero, Nicodemus, and his closest friends, were designed to make the rats smarter and strong enough to beat the aging process. And they did. (Rats on 'roids—live strong, live long!) The experimenters began teaching the rats the basics of reading—recognizing letters and then putting them together into simple words, *RAT*, *CAT*. But the rats caught on more quickly than expected, and soon could read complicated sentences. They were shrewd enough not to give themselves away; like oppressed people everywhere they let perceived ignorance protect them. Allowing oneself to be underestimated has long been a strategy of the marginalized.

Once the rats of NIMH start learning to read, we can predict what will come next.

They are able to understand the instructions on their cages—"To release door, pull knob forward and slide right"—and figure out how to open them and ultimately escape.

The band of fugitive rats makes it to the outside world and is faced with a problem: "We don't know where to go because we don't know what we are." The big question is: "Where does a group of civilized rats fit in?"

Isn't that what each of us wonders at some point? *Where do I fit in?*

Here's my interpretation of *Mrs. Frisby and the Rats of NIMH*: it's a classic slave narrative and carries in it echoes of themes and events in Frederick Douglass's famous autobiography.

Huh?

For Douglass, as for the rats of NIMH, the path from slavery to freedom was literacy. Born on a slave plantation in 1817 or 1818, Douglass lived in the big house until he was seven, when his owner gave him away. His new mistress, Sophia Auld, had not been raised under the rigid rules of slavery and treated young Frederick more kindly than most slaves could expect. She even began to teach him to read, until her husband put a stop to it: educated slaves are unmanageable slaves, the argument went.

Eventually Sophia turned out to be as vile as her slave-owning husband, but twelve-year-old Frederick had learned enough to hatch a plan to get the white boys he met on the street to continue to teach him how to read. Ultimately Douglass grew into one of the great American stylists. Please do yourself a favor and get a copy of *Narrative of the Life of Frederick Douglass, an American Slave.* Then write me an email and tell me how much you loved it. I promise: you will love it.

The author of *Mrs. Frisby*, the magazine writer Robert Leslie Conly, published the book under the name Robert C. O'Brien. He may or may not have had in mind Frederick Douglass when he wrote it. But the capturing of the rats, the changing of their names and uprooting of their lives, the "benevolent" dictatorship of life in the laboratory, and the idea that the way out of this mess was through literacy strike me as similar to the narratives of many freed slaves. One of the great things about books is that we get not only to read them, but to read things into them. They become living objects apart from what the author intended.

Many readers believe Conly based his novel on the work of a scientist at the National Institute of Mental Health (NIMH) named John B. Calhoun. Again, the author may or may not have done that. He may have heard about Calhoun's

work and it settled somewhere in his subconscious, and when he started to write, it sprang up, transformed and translated into something he could use. That's often the way the creative process works.

Regardless of whether or not the work was the basis for *Mrs. Frisby and the Rats of NIMH*, what Calhoun did is fascinating. He began to watch rats and in 1947 got his neighbor to agree to let him do research in a quarter-acre pen he called a "Garden of Eden." He designed a series of experiments to look at what happened to breeding under ideal or utopian conditions. As a scientist, he wanted to see what would happen when rats could breed in the presence of plentiful resources. Because rats are such baby-making machines, the colony could have expanded to five thousand. But for the two years he watched them, the population stayed around one hundred and fifty, never going higher than two hundred. The rats arranged themselves into living groups of ten to twelve.

Under natural circumstances, the population level managed to stay stable. But Calhoun wanted to know what would happen when they lived in more cramped quarters. What goes on when a bunch of critters are forced into uncomfortably close proximity?

Well, weird behavioral stuff went down. Some of the

swaggering boys formed gangs and attacked women and children. Mothers abandoned their kids. The misfits banded together and formed a sort of Breakfast Club. This group of rats, who had been picked on, withdrew from the larger society and got creative. In fact, they became artists and visionaries. When these rats dug in the dirt they didn't just leave messy piles around. Instead, they packed the dirt into a big ball and rolled it out of their area.

The way I've described Calhoun's experiments makes the rats sound pretty human. Calhoun did this himself. He personified and anthropomorphized his types of rats so we could readily recognize them: the females who chased after objects he called the "pied pipers," and the ones who groomed themselves obsessively he dubbed the "beautiful ones." He described "social dropouts" and "autistics." Members of the gangs of youngsters who attacked and pillaged he called "juvenile delinquents" and "probers."

Here's the big finding of Calhoun's early work: circumstances of overcrowding lead to what he called a "behavioral sink," where normal rules of good conduct wash down the drain. This, as you've already probably realized, became analogous to what happens when people live too closely together in cities.

In 1968, the great writer Tom Wolfe figured this topic

would make for a good magazine article. The essay, "O Rotten Gotham—Sliding Down into the Behavioral Sink," appears as the last chapter in his 1968 collection *The Pump House Gang.*

Where most writers might make the notion of overpopulation and urban blight seem dreary, Wolfe lights up the page: "I have just spent two days with Edward T. Hall, an anthropologist, watching thousands of my fellow New Yorkers short-circuit themselves into hot little twitching death balls with jolts of their own adrenaline."

The scientist Hall explains to Wolfe that it's overcrowding that does it, gets the adrenaline going. Wolfe reports, "And here they are, hyped up, turning, bilious, nephritic, queer, autistic, sadistic, barren, batty, sloppy, hot-in-the-pants, chancred-on-the-flankers, leering, puling, numb—the usual in New York, in other words."

Wolfe and Hall stand on the balcony in Grand Central Terminal and look down: "The floor was filled with the poor white humans, running around, dodging, blinking their eyes, making a sound like a pen full of starlings or rats or something."

Dr. Hall had learned, of course, from Dr. Calhoun's rats, and had extrapolated the findings to describe the situation when many people live in too small a space. He also told the

story of what happens after the population moves beyond the behavioral sink and goes to the next stage: collapse.

Calhoun never let his rats get to that point, but another researcher started observing related behavior among Sika deer on a small island off the Maryland shore. These deer each needed about three acres of space; the island was 280 acres. From an original group of four or five deer, they did what critters do and bred until they reached, in 1955, a herd of about three hundred. Suddenly, in 1958, more than half of them died. A year later even more perished, and the population leveled off at around eighty.

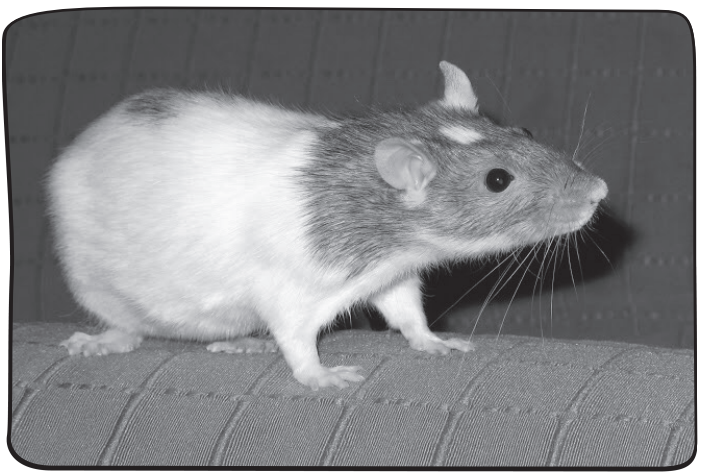
Here's the weird part: autopsies revealed that all the deer who died were healthy. They had plenty to eat and showed no signs of disease. The scientists found that living in overcrowded conditions caused deer to die of adrenaline overdose.

You might see how this kind of research could be used if applied to humans, especially humans who lived in overcrowded cities. The world wasn't thrilled to hear that overpopulation might cause people to behave badly and then die of stress.

In a scholarly article on Calhoun's work, "Escaping the Laboratory: The Rodent Experiments of John B. Calhoun and Their Cultural Influence," two economists, Edmund

Ramsden and Jon Adams, claim Calhoun didn't get a fair shake. Because his early work on the bad effects of overcrowding captured the imagination of writers like Tom Wolfe and the public, it is only his pessimistic conclusions that are remembered. But Calhoun never thought humanity was doomed to wallow in a behavioral sewer. Once we understood the problem, he believed we could seek to find a way to solve it—to start a revolution in the way we live. As the authors of the article write, "Everyone wants to hear the diagnosis, no one wants to hear the cure."

I know, it's a long way from *Ratatouille* to *Mrs. Frisby* to slavery to population science to a writer like Tom Wolfe, but I learned from Iris the importance of being able to jump around.



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