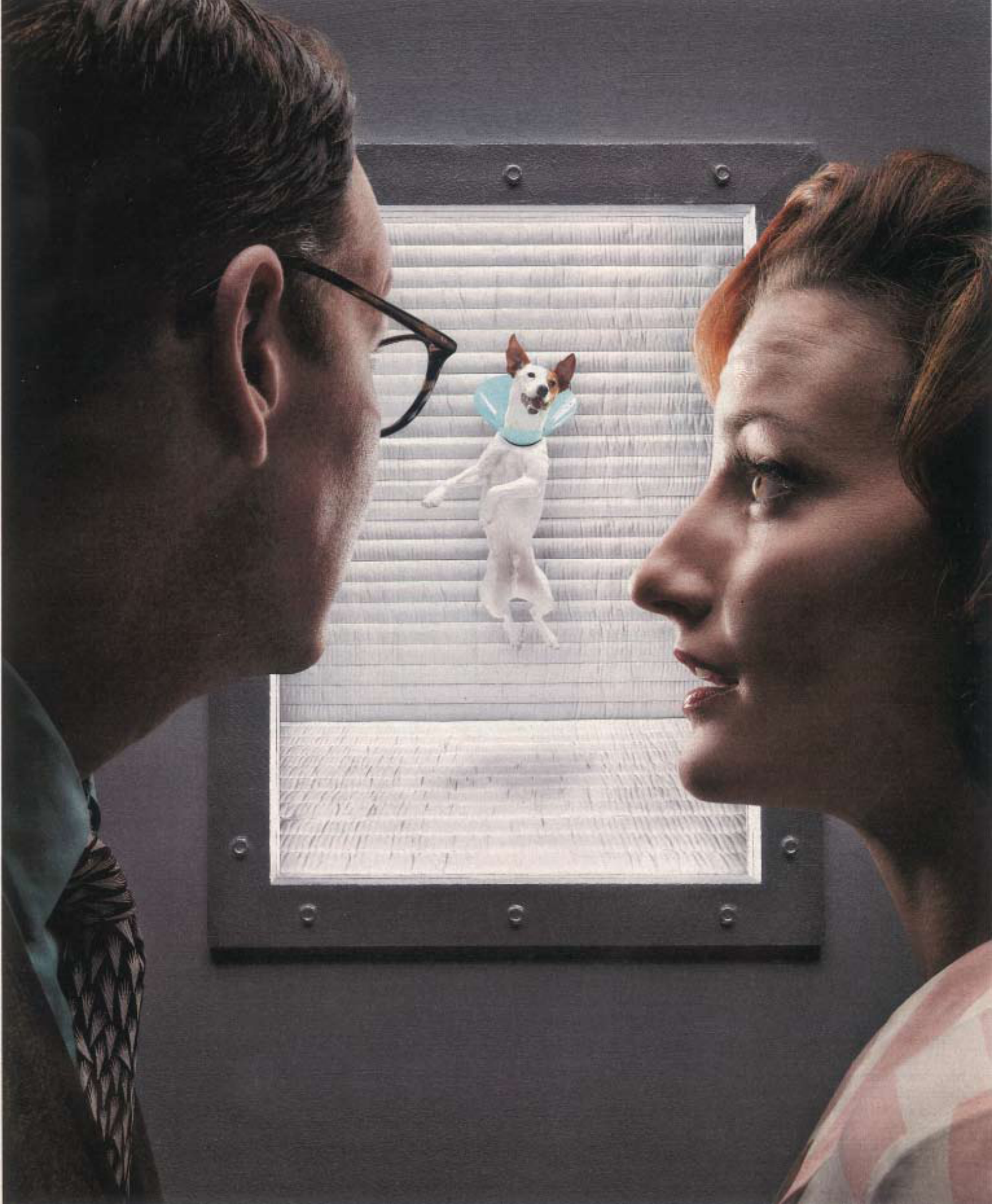
# AMERICANS ARE SPENDING MILLIONS ON MOOD-ALTERING DRUGS FOR THEIR CATS AND DOGS. IS IT BECAUSE WE'VE DRIVEN THEM MAD?

aggressive anxious compulsive impulsive obsessed depressed moody

## PILL-POPPING PETS

BY JAMES VLAHOS

PHOTO ILLUSTRATIONS BY ZACHARY SCOTT



aggressive

**DOUG NOTICED THAT HIS CAT WOULD ATTACK IF HE SMELLED STRANGE, SO HE WOULD TAKE A SHOWER AFTER COMING HOME AND THEN CHANGE INTO HIS KHAKI PANTS LINED WITH BALLISTIC NYLON.**

ited and that two-inch-long cockroaches from Madagascar can tell the difference between a familiar person and a stranger. (If the bug hisses loudly at you, it's time to introduce yourself.)

Cognitive ethologists have had more difficulty gathering evidence for animal emotion. To any pet owner who has stroked a purring cat or watched a dog cavort when his chow hits the bowl, it seems intuitively obvious that animals experience feelings. But intuition isn't hard science — it's just more humanization. Enter behavioral pharmacology, which has provided a tantalizing new window into the animal mind. Dr. Nicholas Dodman, who pioneered the field and founded the Tufts University Animal Behavior Clinic, says that skeptics of the premise that animals have emotional states used to ask him how he could say that a pacing, hyperventilating dog was actually feeling anxious. "Well, how about this?" Dodman would reply. "We'll give him an antianxiety drug and see what happens."

**THE GROUNDS OF THE CUMMINGS** School of Veterinary Medicine at Tufts sprawl over 640 acres of rolling greenery in central Massachusetts. When I arrived to visit in March, one of the first things Dodman told me was that the campus used to be the site of a state mental hospital. Like other facilities, it had been shuttered in the 1960s following the revolutionary discovery of drugs that treated schizophrenia and other disorders so effectively that many patients no longer required institutionalization. "Ironically, this paved the way for our school, our behavior program, and novel pharmacological treatments for animal behavior problems," Dodman said. Or, as he later said, "we traded one group of inmates for another."

Dodman, an Englishman, began his career in the early 1970s as a roving country vet in the tradition of James Herriot; he went on to write a popular series of advice books for pet owners, the latest of which is "The Well-Adjusted Dog." In 1981 he moved to the United States to become a professor of anesthesia at Cummings. Drugs interested him greatly but comatose patients, increasingly, did not, and he began to wonder: Could medications transform veterinary behavioral medicine just as radically as they had human psychiatric care? He says he quickly realized that the field was "completely wide open, like virgin snow." At a veterinary conference in the late 1980s, he presented his vision of the psychoactive frontier and "saw jaws drop around the room. It was like, 'Who is this strange masked man?'" Three decades later, "it's almost mainstream for behaviorists to know something about pharmacology," Dodman says.

Inside his small office, Dodman, wearing a tie-and-tasseled-loafer ensemble topped by a white lab coat, received the day's first patient. A muzzled dog on a short lead towed Joe and Mahala Richards, from Mendon, Mass., into the room. "So here we have Zoey, who's a yellow black-mouthed cur, 5 years old, and you got her at 7 months," Dodman said. "I'm already picking up that she's fearful and anxious, and that usually stems from a disturbed childhood."

"We know she was abused," Mahala said.

"There you go," Dodman replied.

Joe said Zoey's problem was that she sometimes attacked when food was around. The worst incident had happened a week ago when Mahala was watching television and reached for a piece of cheese. "She just came after me," Mahala said. Joe added, "Zoey had her on the couch — she's screaming at the top of her lungs— and Zoey just kept going at her hands." Mahala held up a scarred wrist. "My God, that's nasty," Dodman said. He listened for 20 minutes and then issued a diagnosis: something called "conflict aggression," which meant that occasionally Zoey forgot that she didn't need to fight to get her share of food. Zoey was to be kept from hot dogs, peanut-butter bones and any other culinary provocations. High places like beds were forbidden (elevated positions can make dogs feel more confident), and exercise was essential. Outlining what he called the "nothing in life is free" program, Dodman said that Zoey should be made to sit before feeding and that affection was to be rationed. The overall goal was to get Zoey to respect the leadership of her owners, which would raise her inhibition to attack. These behavior modifications alone might be enough to cure Zoey, Dodman concluded.

"We don't want to have to put her down," Mahala replied quietly.

"No," Dodman said. "A serious bite is a risk factor for euthanasia for the dog, which is why another component of the program might be some medicine. If we were to ask Zoey: 'Look, if you slip up in the future, and you bite someone like that again, the chances are you're not going to come out of it alive. But we can make you feel better if we give you some medicine like, for example, Prozac. Would you like to have the medicine that might save your life?' And she might go, '*Grrr-rrr rrrup* — yeah, yeah, I'll take the medicine.' It's a lifesaving thing." Joe and Mahala left a half-hour later with a scrip in hand.

Aggression is the leading issue that brings animals into clinics; it and other behavior problems are the top reasons that pets are surrendered to shelters. Half of them are euthanized, roughly three to four million animals per year, and an equal number are believed to be put down in private practices. Treatment with psychoactive medications is then a very real alternative to lethal injection. Prozac, a selective serotonin reuptake inhibitor (S.S.R.I.), prolongs the effects of that neurotransmitter to reduce impulsivity, stabilize moods and lower anxiety, Dodman says. He is friends with the noted Harvard psychiatrist John Ratey, and they once compared the drugs they employ to treat violent people and animals. "You superimpose my portfolio on top of his, and it's the same thing," Dodman says. He has patented his S.S.R.I. approach and is working with a pharmaceutical company, Accura Animal Health, that plans to bring it to market as the first F.D.A.-approved treatment for canine aggression. (The current use of Prozac and similar drugs is prescribed off-label.)

Aggression is a feline problem too. A few weeks after visiting Dodman, I went to the home of a man in West Los Angeles whose pet was on Prozac. The owner, Doug, asked me not to use his last name because he didn't want business associates to know about what he called his "cougar psycho little miniature stalker" — Booboo the cat.

The first incident took place four years ago after Booboo ate some decorative dried flowers. Booboo scaled his cat tree and sat there with his eyes "a little dilated and cross-eyed," Doug said. He started "growling like a banshee," released "a high, shrill wail" and lunged. "He ripped my leg up and wouldn't let go." Doug fled, and Booboo pursued. Finally he was able to trap the cat in a bedroom. From then on Booboo was different. He would periodically ambush Doug. Over time, Doug noticed that attacks were more likely if he smelled at all abnormal — for instance, if he had been near a woman wearing perfume — so he would take a shower after coming home and then change into his designated cat-wrangling outfit.

Doug consulted a behaviorist, Dr. Karen Sueda. One hypothesis was that Booboo suffered from a feline version of schizophrenia — there is evidence that animals experience auditory and visual hallucinations and can temporarily enter deluded states in which they attack. Sueda didn't think that was likely with Booboo, nor did she think his attacks were motivated by fear, as is often the case with animal aggression. In Booboo she says she saw a dominant, confident cat who "wanted to control his personal territory." One theory about such animals is that they suffer from a neurochemical imbalance. As Dodman explained in his book "The Cat Who Cried for Help," "By engaging in and winning aggressive encounters, dominant animals drive up serotonin levels and gain in composure." Sueda prescribed Prozac to boost the effects of the neurotransmitter.

Doug led me up the stairs in his house to the second floor. He donned a pair of khakis that he had lined with heavy-gauge ballistic nylon and washed up because he had shaken hands with me. He crept toward the master bedroom, where Booboo was permanently quarantined behind a door that had been remounted to swing outward to facilitate quick escapes by Doug. "Just behind this door lurks the Tasmanian devil," Doug said before slipping inside. I squatted at ground level and watched through a transparent doggy door. The 400-square-foot room had a walk-in closet, a four-poster bed and a floor-to-ceiling view of Beverly Hills mansions dotting a scenic canyon. The suite belonged entirely to Booboo, though Doug said he was now able to sleep over a few nights a week. Booboo slinked past the window and gave me a steady gaze. He had a tuxedo coat, mostly black but with patches of white on his feet, underbelly and forehead. Doug scooped him up and they nuzzled face to face. "He's just warm, soft and fuzzy, and he purrs, and he's cuddly," he murmured.

Separation anxiety, bane of modern home-alone dogs and target of Lilly's new Reconcile, is a problem millennia in the making. Archaeologists and geneticists estimate that the domestication of wolves (Canis lupus) into dogs (Canis lupus familiaris) began at least 15,000 years ago. One hypothesis about how this happened is that as humans settled down and established villages, piles of discarded food scraps and plant matter accumulated on the outskirts. Wolves that were genetically predisposed to be slightly less fearful of humans would feed off the free bounty, while the more skittish animals would steer clear. "At this point, natural selection would take over," Jake Page explains in "Dogs: A Natural History." "As the dump-loving wolves reproduced with each other, their tameness would probably become more and more pronounced." The gentler animals were increasingly favored and brought into our lives to the point that many dogs (42 percent, according to a survey by the American Pet Products Manufacturers Association) now sleep in the same beds as their owners. Extreme attachment to people is one of the defining traits of dogs.

Extreme attachment, unfortunately, also causes some dogs extreme suffering when deprived of their owners' company. Martha and Phil Bridges live in Sacramento with a 2-year-old lab mix named Rocco. The Bridges told me that when they left home and went to work each day from 8 a.m to 5 p.m., they would lock Rocco in a large cage in the dining room to keep the young dog from running amok. One day last fall they returned to find the dog loose with his nose bloodied from prying the cage door open. They locked him in it again. The next evening Rocco was still inside but had shredded his pillow bed and reared up so violently that the cage was destroyed. Next the Bridges used a baby gate to block off part of the house so that Rocco would have more room to roam. He stripped five feet of carpeting from the floor. They locked him in the bathroom. Shower curtain shredded, shampoo swallowed, door frame torn. Realizing they needed help, the Bridges took Rocco to see Dr. Rachel Malamed, a resident at the Behavior Service at the School of Veterinary Medicine at the University of California, Davis. She diagnosed separation anxiety, outlined a retraining program and wrote a scrip. The happy outcome: Rocco "has never had another problem since we put him on Reconcile," Martha says.

An estimated 14 percent or more of American dogs have separation anxiety. The problem signs include home and self-destruction; prolonged whining, barking or drooling; or simply standing by the front door all day in a lonely, panting vigil. ("Nannycam"-type video recorders have captured all of the above.) The terms for Reconcile's F.D.A. approval were that the drug had to be prescribed with a course of behavior modification. In Rocco's case, Malamed taught the Bridges to stage mock departures — jingling the car keys, opening the front door — while giving treats so that Rocco would associate their leaving with a yummy reward. When the Bridges left the house for real, they were to slip out with zero fuss; frantic barking and jumping were to be ignored. "We brought on this anxiety with him being so attached to us," Martha says. "Now we have to break that bond — without breaking it to the point where he won't know that we still love him."

When it comes to retraining, however, some people are slackers. Dodman estimates that 25 percent of the pet owners he sees don't take his advice. At U.C. Davis I observed one couple impatiently shrugging off Malamed's directives. I was watching the appointment via closed-circuit television with another vet, Dr. Jeannine Berger, and she sighed in exasperation. "They just want the magic pill," she said. "People always want the magic pill." The studies of Reconcile show why behavioral pharmacologists prefer not to rely on the medicine bottle — or for that matter, retraining — alone. Dr. Steve Connell, a veterinarian at Eli Lilly, told me that "behavior modification by itself works. There's not any question about that. But if you use behavior modification in conjunction with Reconcile, it works quicker and it works better."

How do researchers know that? The patients, after all, can't describe the subtleties of their moods to therapists. Efficacy studies instead rely upon people to record signs of animal distress, like barks per hour and household objects destroyed. The study Lilly submitted to the F.D.A. in support of Reconcile involved 242 dogs scattered around the United States and Canada; in the double-blind trial, neither the veterinarians nor the owners involved knew which dogs were receiving Reconcile and which ones got a placebo. All dogs received behavior retraining. The results were strong enough to demonstrate efficacy but hardly earthshaking: 72 percent of the dogs on Reconcile showed improvement after eight weeks of treatment, while 50 percent of those receiving the placebo did. The study


Rx

anxious

**FOR TREATING LONELY DOGS WITH SEPARATION ANXIETY, ELI LILLY RECENTLY BROUGHT TO MARKET RECONCILE. THE ONLY DIFFERENCE BETWEEN IT AND PROZAC IS THAT RECONCILE IS CHEWABLE AND TASTES LIKE BEEF.**

also found that more than half of the dogs on the drug experienced short-term side effects, including lethargy, depression and loss of appetite.

One thought had haunted me as I listened to the Bridges' story: If I were locked inside the bathroom all day, I'd swallow the shampoo, too. Although most animal-behavior problems are believed to have genetic roots, their expressions are typically triggered by the unnatural lives that people force their pets to lead. "A dog that lived on a farm and ran around chasing rabbits all day would be more prone to being stable than a dog living in an apartment in Manhattan," Dodman says. Undomesticated canids, neither confined nor excessively attached to people, don't suffer from separation anxiety. Some captive horses endlessly circle their stalls or corrals — a compulsive behavior similar to Max's tail chasing — but such purposeless repetitions have never been observed in the wild.

Pharmacological treatments, furthermore, are sometimes more for the convenience of owners than they are for the health of pets. When the dog bites, when the cat pees — "a lot of the 'behavior problems' we see are actually normal behaviors for the animal," Dodman says. Cats aren't mentally ill if they attack a new feline in the household or claw furniture to mark their domain. Food guarding and aggression toward strangers boost a dog's survival rate in the wild but don't cut it in the living room. And both cats and dogs demarcate territory with urine. "If a dog goes to the bathroom on a bush outside, you don't mind as long as it's not your bush," Dodman says. "But when he comes back to the house and lifts his leg on your chair, it's like, 'Is the dog mentally sick?'"

In many other situations, however, a medicated animal may be a better-off one — for his own sake and not just for his master's peace of mind. Obsessive dogs like Max sometimes injure themselves by spinning right into furniture or chewing their legs or tails until they're bloody. You could also argue that Max would be happier not spinning and chasing squirrels instead — an anthropomorphic judgment, perhaps, but one that is hard to dispute after seeing the panting, possessed animal on the whirl. Medicating dogs like Rocco, meanwhile, makes some people queasy because separation anxiety is so clearly related to the absentee lifestyles of owners. Dr. Jean Donaldson, director of the San Francisco S.P.C.A. Academy for Dog Trainers, told me that she has always insisted that people who don't have enough free time shouldn't own dogs. But she recognizes that many ill-equipped people will do so anyway and supports employing drugs. In her view, our complicity in the problem's creation doesn't absolve us of responsibility for finding solutions, even ones with mild side effects. "Can you imagine having separation anxiety?" she asked. "We're talking 'Silence of the Lambs' here, being in the pit so that you rip off your own fingernails and break your teeth because of the degree of panic attacks you're having. Do we really think that the problem here is a dry mouth from Reconcile?"

**NOT EVERYBODY AGREES THAT** America's pets are facing a major mental-health crisis — or that whatever their problems, that drugs are necessarily part of the solution. One of the most passionate voices in the just-say-no camp belongs to Dr. Ian Dunbar, a veterinarian who has his doctorate in animal behavior and is the founder of a highly regarded instructional empire called Sirius Dog Training. "I have never in my life had to resort to using drugs to resolve a behavior problem," he says. The rush to the medicine bottle for easily resolved problems like canine obesity — "Just feed the dog less!" — shows a disturbing parallel to the human approach to health care, he says. "We lead an unhealthy lifestyle and then rely on drugs to correct it."

Dunbar lives down a winding lane high in the Berkeley Hills. When I arrived to visit, he led me into the living room, where we were joined by his three bounding dogs, Claude, Hugo and Dune. Claude had been a troubled S.P.C.A. shelter dog. He bit, was often anxious and had a problem known as pica, meaning he compulsively devoured nonfood items. When Dunbar rescued him a few years ago, Claude was recovering from an operation to remove a basketball from his intestines. "He would have been the ideal candidate for a drug treatment, but to me that was unnecessary if you know some of the simplest things about dog training," Dunbar said.

Pharmacological aids are helpful in extreme circumstances, Dunbar acknowledged, but for the vast majority of cases, behavior modification alone does the trick. For problem dogs like Claude, he employs the simple, unswerving strategy of a trainer: Ignore unwanted behaviors and reward desired ones. The magic pill in Dunbar's arsenal is a rubber chew toy stuffed with food. As I took a seat on the couch, he tossed three of them on the floor. The dogs ignored me completely — there was none of the usual canine pouncing on the visitor — and set to work. Absorbed, they gnawed and shook the toys, which slowly released kibble. It would take 45 minutes before the supply was exhausted. Claude, his attention refocused with the help of chew toys, no longer bit people or gobbled indigestibles. He was calm and the best-behaved of the household's three canines. "The dog is creating endorphins of his own, his own natural drug therapy, while enjoying a totally acceptable activity," Dunbar said.

To critics like Dunbar, separation anxiety is the attention-deficit disorder of the pet world, a problem that is overzealously pathologized, carelessly diagnosed and liberally medicated. His critique is unabashedly Skinnerian: "We're confusing behavior problems, which are observable and quantifiable, with terms like 'anxiety,' which describe the dog's internal mental state, for which we have absolutely zero proof," he says. On a personal level, Dunbar suspects that animals do have thoughts and feelings and can become genuinely anxious when their owners are gone. But he is careful to not let assumptions cloud his professional judgment, because not every situation that looks like separation anxiety is in fact that condition. Lilly's Web site for Reconcile states that "separation anxiety is a clinical condition in your dog's brain." Dunbar offers possible alternate explanations: Some dogs that are physically punished have inadvertently learned that they can get away with whatever they want when the humans are gone. Others are just bored and *Continued on Page 54*

PHOTO ILLUSTRATION BY ZACHARY SCOTT FOR THE NEW YORK TIMES

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having fun. "What do we expect dogs to do when we go to work — watch the telly, do the crosswords or read the paper?" he asks. Hiding stuffed chew toys around the house is a good way to keep dogs occupied. "In the wild, the dog's major activity is looking for food," he says. "What most owners do is they feed the dog in the bowl, and within two minutes you've stolen his raison d'être. So now the dog is looking for activity, which we label 'trouble' and diagnose as all sorts of things like compulsion and separation anxiety."

Dunbar is working with a pet-products manufacturer on an electronic dog-sitter that combines the reward elements of a classic Skinner box with the unblinking surveillance of Bentham's Panopticon. Employing a network of sensors, the device monitors when the dog barks, how many steps it takes during the day, how long it lies down in its bed and when it plays with chew toys. Acting as a sort of robo-Dunbar, the gizmo automatically dispenses small treats when the animal is calm and well behaved. "Rather than the very general deadening of an anxiolytic or tranquilizing drug, what I want is a very specific education effect to teach the dog how he should act," Dunbar says.

Modern owners are increasingly trying to "sterilize" pet ownership, he adds, trying to pharmacologically control dogs so that they don't act like dogs. "What people want is a pet that is on par with a TiVo, that its activity, play and affection are on demand," he says "Then, when they're done, they want to turn it off."

Back in the living room, we watched Claude and his housemates work at the chew toys. "Training is basically about forming a relationship, but for some people, that interactive process is now giving the dog a pill."

**TWO YEARS AGO,** on the Fourth of July, a dog named Dixie was sitting in the backyard of her owners, Pat and Jen Morphy of Martinez, Calif. Around dusk, the sky above her exploded with the flashes and percussive booms of fireworks. Perhaps kids detonated firecrackers on the street nearby as well. Whatever happened, Dixie hasn't been the same since.

Earlier this year the Morphys brought Dixie to see Rachel Malamed at the U.C. Davis Behavior Service. The Morphys reported that they take Dixie for a walk every day after work and then put her in the backyard. As soon as the sun sets, Dixie bolts for the house and cannot be dragged from it for the rest of the evening. She paces, stares and scans the air overhead. "You can just tell she's waiting for something to happen," Pat said. Dixie is eager for bedtime and scootches under the couple's bed to sleep. But in the middle of the night, Dixie often jumps up on the bed and walks on Jen's head. When she turns the lights on, the dog looks terrible, shivering and blank-eyed. It takes anywhere from 15 minutes to four hours to calm her enough to go back to sleep. "I can't live with this dog any more how she is," Jen said.

Malamed put a sound-effects CD into a boom box and set the volume to low. Dixie sat serenely through a trumpet fanfare, a toilet flush, a metal saw, ringing bells and raspy hinges. But at the sound of fireworks, during the long whistle and well before the climactic pop, Dixie tensed up; she tried to climb into Jen's lap and began trembling. Malamed hit stop. "I'm sorry I had to do that," she said. Noise phobias, especially those related to thunderstorms, are fairly common in dogs, and Malamed determined

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