PRAISE FOR *PLAY WITH YOUR CAT!*

"Cats love to play: here is *the* book that shows you how to join in! And your cat will thank you for it."

—Dr. John Bradshaw, author of *A First Guide to Cats*

"This is essential reading for those wanting to strengthen their bond with their cat!"

—Hannah Shaw, *New York Times* bestselling author of *Tiny but Mighty*

"This book is a must-have for any cat owner . . . packed full of tips and tricks to individualize play for cats of all ages and abilities. After reading this book, you will be left knowing that play for cats isn't frivolous, it's essential."

—Dr. Sarah Ellis, feline behavior specialist and coauthor of *The Trainable Cat*

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—Hal Herzog, author of *Some We Love*, *Some We Hate*, *Some We Eat*

"You are about to enter a new dimension of cat-keeping. Cats love to play, it's fun to play with cats, and I really can't see any reason not to find out how in this engaging book. . . . If you don't think your cat is interested in play, you're about to find yourself cat-schooled."

—Alexandra Horowitz, *New York Times* bestselling author of *Inside of a Dog* and *The Year of the Puppy*

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"The best book I've ever read on this important aspect of environmental enrichment! Comprehensive information and practical advice for every kind of cat."

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"Playing is good for cats of all ages in many different ways and it's important for their individual well-being. Your cat will thank you for taking Delgado's sage advice into account."

—Marc Bekoff, PhD, author of *Dogs Demystified* and *The Emotional Lives of Animals*

"This book is a must-read for all cat lovers. Dr. Delgado goes beyond play to help you understand cats better, no matter how long you have been owned by cats!"

—Ilona Rodan, DVM, board-certified feline specialist and coauthor of *Feline Behavioral Health and Welfare*

"The go-to guide to connecting with your cat's inner hunter through play. This is the resource you and your cat have been looking for!"

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"Each chapter contains a wealth of information on cat behavior and a treasure trove of tips and tricks to help owners understand their cats better and match their cats' play style. Their cats will love them so much more for following the recommendations outlined in this book."

—Wailani Sung, MS, PhD, DVM, DACVB

"In *Play with Your Cat!*, Mikel Maria Delgado, PhD, explains why play is essential for cats' well-being and how you can make playtime even better. Everything you need to enrich your cat's life (and have fun in the process) is here."

—Zazie Todd, PhD, author of *Purr: The Science of Making Your Cat Happy*

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PLAY WITH YOUR CAT!

The expert guide to a happier and healthier feline

MIKEL MARIA DELGADO, PhD

ILLUSTRATIONS BY LILI CHIN

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DEDICATED TO SCOTT, FOR ALWAYS
SUPPORTING ME AS I'VE FOLLOWED
MY FELINE DREAMS, AND TO CLARABELLE

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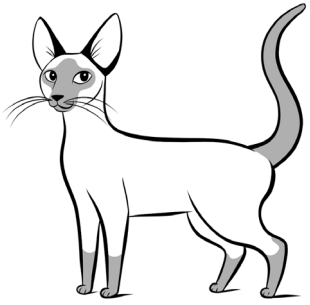
PLAY
WITH
YOUR
CAT!



CHAPTER 1

Why Play?

A rustling sound awakens the cat from his nap on the couch. He raises his head, a little bleary from sleep. His eyes slowly focus on the bird in the next room gently hopping among the leaves (or is that tissue paper?) on the floor. Suddenly alert, he rolls into an upright position and creeps to a place just behind the arm of the couch, hiding from the bird's view as he continues to observe. The bird begins to hop and flit about, and the cat silently slinks off the couch and quickly takes shelter behind a large potted houseplant, which he perceives as a shrub. He drops low to the ground, which strangely is carpeted. His pupils dilate and his ears point forward, taking in as much sensory information as he can to ensure he is prepared to catch his prey. As he plans his final attack, his back legs begin to tread and his tail twitches forcefully. He makes a leap, springing then landing just in front of the bird, simultaneously striking the feathery creature with his front paws.

The bird struggles, and the cat flops onto his side, gripping with his front paws and biting while kicking the feathers with his back feet. The cat glances up and notices his human standing nearby, holding a stick with a string attached. The string is connected to . . . the bird? How can that be? In this moment of distraction, the bird escapes his grip and flies away. The cat chases the bird, leaping into the air in hot pursuit, with all four paws off the ground, arcing into a perfect backflip, and expertly recapturing the bird.

The cat considers how odd everything seems. He's not outdoors after all, but in the living room of his home. Why is there a bird in the living room? And why is the bird attached to his human? On the other hand, the toy looks like a bird, it feels like a bird, and it's acting like a bird. Is there any harm in pretending it's a bird? The cat may realize this is play, but he also knows this feels almost as good as hunting.

Play follows humans throughout our lives. When we are children, we craft toys out of rocks and sticks, but we are also engrossed by the bright and shiny toys that come in packages. We pretend to build, cook, or perform surgery. We care for our stuffed animals as if they were children, nursing them to health or putting them to bed. We learn games and play or watch group sports. Play is considered important, even essential, to children's development, creativity, relationships, and well-being.

As adults, many of us still enjoy board games, video games, or sports. We tell stories, make jokes, and create art. We interact with the world around us, using our imaginations, testing out relationships or skills, and most of the time we're also having fun along the way. But as we age, we often deprioritize play because we have so many responsibilities we must attend to. Those bills don't pay themselves.

In cases where children aren't given the opportunity to play freely (without adult control), anxiety and depression increase. And for adults, the adage "all work and no play makes Jack a dull boy" exists for a reason: without play, we become bored and boring.

FOREVER YOUNG

When play isn't high on the priority list for us, we tend to minimize its importance to our companion animals. But our cats and dogs (and other pets) don't "grow up"—they are never going to take care of themselves and leave home and get a job! Through the process of domestication, we have selected cats for neoteny, or infant-like features, such as large eyes, a round face, a shorter nose, and likely even for friendly behaviors like cuddling and meowing.

When we spay and neuter our pets, we also block adult sex hormones from circulating throughout the bloodstream. By doing so, we've increased the odds they will retain juvenile behaviors, making them less likely to express some "adult" tendencies

(such as roaming and marking their territory). We call them "fur babies" for a reason. As a result, our pets remain perpetually young at heart to an extent, and that includes a lifelong desire to play!

PLAY TO LIVE

When we think of behaviors that are important for survival (especially in other species), we tend to focus on mating, acquiring food, defending territory, and avoiding being eaten by other animals. Play doesn't often rank high on that list.

Perhaps this is because the word *play* implies frivolity: wasted time, something that only children do, something that we do when the serious parts of life (work, school, hygiene, sleep) are taken care of. But what about when we consider play as creative and imaginative, as practice for the "real world," to safely test situations that might otherwise be risky?

Play can help animals grow into competent adults. Animals can improve their motor skills by interacting with structures and three-dimensional spaces while exploring their environments (locomotor play). Animals can learn how to acquire food or hunt by interacting with objects (object play). Young animals often learn how to interact with other individuals through rough-and-tumble activities (social play).

When we look at play through this functional lens, animal play begins to make sense. That said, play might not *always*

serve a greater purpose—I have no doubt that sometimes play's function is nothing more than "it is fun" or "it feels good."

Some research has even shown that animals play when they are stressed out—making play a bit of an outlet for that stress, or a way to cope. For some it's preventive medicine, and for others it's a cure. Neuroscientists have pointed to the fact that when animals play, parts of the brain related to motivation, emotions, and reward are activated. Some animals play when they feel good, and others might play *to* feel good.

PLAYING MAKES YOU SMART

Just as play may provide cognitive benefits for humans, play in other animals is associated with larger brains—the more elaborate a species' play life is, the larger the relative brain size they have. Although "bird smarts" are often attributed to their ability to use tools, it turns out that it is not tool use that predicts bird brain size but play. Birds who engaged in social play had the largest brains of all, but even the birds who engaged only in object play had measurably larger brains than those of birds who did not play at all.

Why would play help brains? Play and exercise are associated with increases in the amount of gray matter, tissue that is predominant in areas of the brain (such as the cerebral cortex and cerebellum) that are associated with learning, memory, and coordination. Play may protect brain cells from dying or, in some

cases, may even promote growth or reassignment of existing brain cells. Those same feel-good brain chemicals that are released during play also aid in learning, further cementing life lessons and making the brain more receptive to absorbing new information.

WHY PLAY

BENEFITS FOR ALL

- Prepares individuals for "real-life" experiences
- Promotes brain growth and health
- Feels good
- Improves mental health
- Increases creativity

PLAY: IT'S GOOD FOR ALL OF US

There are good reasons that play is found throughout the animal kingdom. It can help with depression and anxiety, it can help prepare us for life experiences, and it may even make us smarter. All of these benefits are likely true for our cats as well. Just as importantly, as we'll learn in chapter 6, an absence of play can be a warning sign that all is not well with your cat or their environment.

Although the focus of this book is how to improve your cat's life through play, my motives are many here. I hope this book,

through encouraging a fresh look at how you play with your cat, will help you have a better relationship with them. I know that when I'm playing with my cats there are lots of smiles and laughs on my end, so I'd like to think this book could improve your life as well. Play lightens our hearts and can help take our minds off things that are bothering us. Play is fun for you and it's fun for your cat. Play is good for you and it's good for your cat.

Let's begin, shall we?

CHAPTER 2

Cats Play Because They Hunt!

We don't like to think about the fact that our cute, purring, cuddly cats are actually stone-cold killers. But it is a fact: Cats hunt. Without hunting, they would never have survived as a species, for it was how they fed themselves. It is a hardwired instinct in the core being of all cats. No, we don't have to let them hunt. Yes, it is good to keep them far from our bird feeders. But we cannot take their desire to hunt away from them. It doesn't go away just because we may have clipped their nails and kept them in our apartments and homes. Hunting makes them happy. And for cats, hunting is the root of playing.

To understand how to play with our cats, we need to understand how they hunt. There are a lot of misconceptions and mysteries surrounding cat-hunting behavior (Do they torture their prey? Do they bring me dead animals because they think I am hungry?); and to be certain, there are individual differences between cats in how skilled and interested they are in hunting.

Research shows that hunting is an innate behavior that almost all cats will put into practice given the opportunity, regardless of lifestyle or previous experience. Even cats who are cared for and fed by humans will hunt and kill given the chance, despite not always eating what they catch. And although it may not be readily apparent when your cat is lounging belly-up on the couch, the killer instinct is just below the surface, waiting to reveal itself.

Luckily there are plenty of ways to engage with that instinct—without bloodshed—through interactive play!

HOW AN ASSASSIN IS BORN

Kittens are born *altricial*, meaning they are helpless and depend on Mom for warmth, safety, and food. (Precocial animals are born ready to go, without a need for maternal care. Guinea pigs and horses are two such examples.) Although kittens are born blind, deaf, and only able to wiggle around, within a matter of months, they grow into competent, self-sufficient hunters.

How do kittens get from A to B? During their first few weeks, kittens spend most of their time nursing and sleeping. They are guided primarily by the senses of smell and touch. By two weeks of age, kittens' eyes and ears are functioning, allowing them to begin to interact with the world around them. In the third week of life, kittens are becoming more coordinated, helping them to engage in play with littermates and small objects. Many of these frisky interactions resemble aspects of hunting behavior. When

her kittens are around a month old, the mother will start the process of weaning. Multiple changes will occur for kittens during this time:

- Mom introduces her kittens to the concept of meat by eating prey in front of them.
- Next, she will present her kittens with dead prey.
- Kittens begin the dietary transition from mother's milk to meat.
- Mom spends less time with her kittens, hastening their independence and development.

Mom will up the game over the next few weeks by bringing home weakened prey for her kittens, to let them practice killing. Although kittens instinctively pursue and chase prey, their hunting understandably lacks finesse at first. Mom may have to offer the occasional assist while kittens learn the fine art of mouse dismemberment.

Folklore says that kittens learn to hunt from Mom, and if they don't, they will not succeed as predators. The evidence suggests this is not true. Watching Mom hunt gives kittens a leg up, but it is not sufficient or even necessary for a kitten to grow into a successful killer. Even kittens who are prematurely separated from their mothers can still hunt successfully through instinct and with practice. Though time under Mom's tutelage is a benefit, hunting is so important to feline survival that practice will even-

tually make perfect (or at least halfway decent) even without a good instructor in charge!

With adequate practice on live prey, an adept hunter can deliver one sharp bite to the nape of their prey's neck, leading to a swift, orderly kill. When a cat meets their mark, their canine teeth slide between the vertebrae of the neck like a lock and key, severing the spinal cord of their victim. It is not just about saving time; failure to kill quickly allows a mouse or rat to escape or even fight back, increasing the chance that a cat might get injured or go hungry.

Kittens can't predict the future, and they don't know that they may spend their days as a house cat with humans to care for them. So, for the sake of survival, kittens must practice, and practice, the fine art of delivering that killing bite.

Some predators will chase their prey for extensive periods, in what is known as *pursuit or persistence predation*. Persistence predators—such as cheetahs or wolves—run long distances, waiting for their prey to tire. They take advantage of that fatigue to make their final attack. Cats go for a much more laid-back approach and are what we call stalk-and-ambush hunters. I would never suggest that cats are lazy. Rather, they are efficient: this style of hunting is common among the feline species (the exception being cheetahs) and conserves a great deal of energy. Cats

are not really in it for the marathon—which can be a boon when we are trying to play with them but have limited time to do so.

Stalk-and-ambush hunting often relies on an element of surprise. Predators sit and wait, and wait, and wait. In some cases, cats will travel to destinations that have proven successful for hunting in the past. This might be somewhere where there is abundant prey, such as an area of mouse burrows, bird feeders, and the like. With your own cat, you may notice them loitering by the toy closet when they feel like playing.

Innately attracted by sounds that suggest prey, such as rustling, scratching, or squeaking, cats will move toward the source of the sound to inspect further. They are highly motivated to chase any small object moving rapidly away from them or along a horizontal plane, telltale signs of a helpless, possibly tasty, and definitely frightened animal. Once the perfect location is found or signs of prey are detected, a cat may hunker down, often crouching in some grass or behind something that offers them a little bit of cover. Some cats seem to prefer ambushing out in the open, while other cats wait for rabbits or mice to pop out of burrows or warrens. Regardless of their preference before pouncing, the key is patience.

This isn't a *Fatal Attraction* type of stalking; this is all about survival. When movement is observed or prey is heard (unlike

dogs, cats use their sense of smell less often than sight and sound when seeking out prey), cats immediately stop what they are doing and flatten themselves to the ground. In what may best be described as an army crawl, cats will gradually approach their prey, staying low to avoid detection. Anyone with a cat has likely seen this behavior. They may alternate a crouched run with stillness, aside from the tip of the tail, which will often twitch in excitement. The head and neck are stretched out, the pupils are dilated, and the ears and whiskers are rotated forward, increasing the information available to all the cat's senses. At this point, cats will follow the tiniest movement of prey and make their way closer as they prepare for the final pounce. What works to a cat's advantage right now is their patience. They can wait. A long time.

It is a little hard to take our fuzzy house panthers seriously when right before attacking their prey they wiggle their butts, but nonetheless, this is what cats do. To be fair to them, this treading of the back paws is typically more exaggerated when cats are playing. If you have ever seen the butt wiggle, you know it is not the most dignified cat behavior—but it is definitely one of the cutest. The function of the butt wiggle is unclear; it could help propel the cat for the final pounce, or it may just be a way to relieve the muscle tension from holding still for so long.

Cats will decide at some point to dart forward, either low to the ground or in a jump, but generally with the back feet planted. Keeping the back feet touching the ground provides stability and

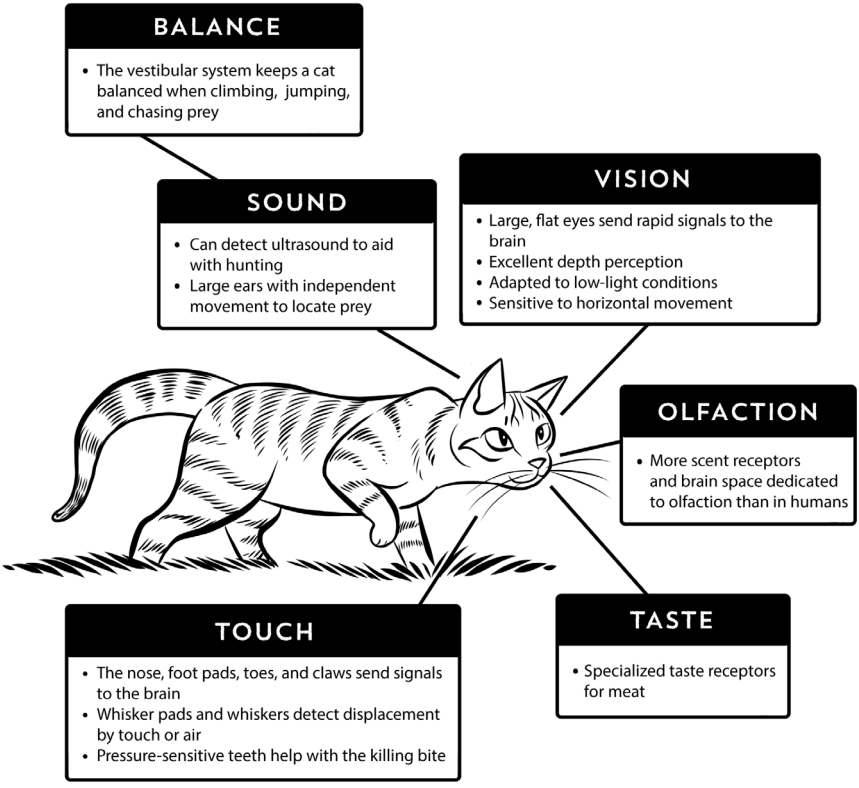
the ability to make quick last-minute adjustments, including opting to run away if the prey is more formidable than originally thought.

Mice can be taken out with a one-paw smackdown. Grabbing prey that can fly (bugs, birds) typically requires both paws. Paws may also be used as a bludgeon when cats don't hit the mark on the first attempt. And if the front paws are not sufficient, cats will flop over and begin kicking prey with their back paws, further weakening their victim until they deliver the killing bite swiftly and effectively.

SENSES AT WORK

Like us, cats have five senses: vision, smell, taste, hearing, and touch. Some even consider cats' sense of balance to be a sixth sense. Let's look at how each of these senses chips in to help a cat function as a powerful hunting machine.

HOW EACH OF THE SENSES CONTRIBUTES TO HUNTING



A VIEW TO A KILL

One of the many reasons we find cats so appealing (i.e., cute) is their large eyes, which invoke a sense of caregiving and affection in humans (this is a phenomenon known as *Kindchenschema*, or

baby schema, where we respond to things we find cute with an urge to care for them). On the other hand, a mouse might contemplate those big eyes with trepidation, knowing that, much like the big bad wolf, a cat's response would be "all the better to see you with."

A cat's eyes are large in relation to their head, but also relatively flat compared to some other animals', providing for quicker signals from the pupil to the retina (the cells at the back of the eye) and hence, the brain, allowing for lightning-fast reflexes to pursue detected prey. Cats' eyes are especially sensitive to small movements, and their pupils are very flexible—opening almost to complete saucers at nighttime and closing to slits in the daytime to adjust to changes in light.

Their forward-facing eyes give them a wide range of vision, approximately two hundred degrees, which is a bit larger than what humans have and perfect for spotting a bird out of the corner of one's eye. One hundred degrees of their visual range is binocular vision (meaning overlapping vision between both eyes), which provides cats with excellent depth perception and the ability to detect prey moving across the horizon. But not *too* far across the horizon, as indoor cats are particularly shortsighted, with optimal focus when objects are two to six meters away (outdoor cats can see farther by comparison). Any object at a distance greater than that is going to be a bit fuzzy compared to what we can see. Ironically, cats also can't focus on anything that is too close either, so objects that are closer than around nine inches will be difficult for cats to see clearly.

YOUR TURN!

Start a play session with your cat by bringing the toy into their ideal range of vision (six to eighteen feet away), gradually moving it closer to them once you've captured their attention. Cats are most responsive to horizontal movements, but experiment as you wiggle the toy, varying distance and direction to see what your cat responds to best.

Despite apparently needing bifocals, cats' eyes are structured to give them an advantage when hunting—to see their prey when it is active. Rodents are out and about at dawn and dusk, meaning that to hunt them successfully, cats need to see well in low-light conditions. Cats' eyes are packed with a type of cell called *rods*, which magnify the effects of available light, allowing for the detection of movement when there isn't much light available.

Although we might stumble around in the dark, cats' eyes can take advantage of even small amounts of light to see shapes and movements with ease. To further amplify the effects of any available light, the backs of cats' eyes are lined with something called the *tapetum lucidum*, a collection of cells beneath the retina that light bounces off. These cells increase the amount of light detected by the rods and create the eyeshine you may have

observed when taking photographs of your cat with a flash (but you can relax; your cat's glowing eyes are not a sign of demonic possession).

SMELLING DOUBLE

Cats live in an olfactory world we cannot imagine. They have a much stronger sense of smell than we do, with more receptor cells in the nose and more space in the brain dedicated to scent. Their excellent sense of smell is augmented by a secondary olfactory organ called the *vomeronasal organ* (VNO), which detects species-specific chemical signals called *pheromones*. Cats produce pheromones in scent glands that they have all over their bodies, including their cheeks, forehead, paws, flanks, and anal glands.

The VNO is in the roof of a cat's mouth. You may observe your cat carefully investigating areas that another cat has rubbed on or otherwise marked, opening their mouth slightly to take in more of the pheromone signal (this expression, which resembles a grimace, is known as *flehmen*). In this way, cats can send and receive messages from afar, using something akin to invisible ink as far as humans are concerned (also frequently described as "pee-mail"). Scent is a safe and secure way to send a message, and scent is social (but in a socially distanced kind of way).

When it comes to hunting, cats use their regular olfactory abilities (at least in a broad sense) to locate prey. Rodents also use urine marking to communicate with each other, and cats can

eavesdrop on these signals to figure out where the mice are congregating. However, unlike dogs, cats likely do not use smell to track their prey for long distances. Most rodent urine marks are old news by the time the cat detects them, and so cats are more reliant on vision and hearing to detect a potential kill.

A TASTE FOR FLESH

All cats lack the amino acid sequence that codes for a gene called *TAS1R2*, which is one of the genes responsible for the ability to detect sweetness. As a result, it is thought that cats do not have the ability to taste sweetness in the way that we do. What can they taste instead? Meat. To further support cats' role as a super-predator and carnivore, their tongues are equipped with receptors that detect ATP (adenosine triphosphate), a chemical compound that provides energy to cells and that is considered a physical signal for meat. If you're wondering what your cat is craving when they're hungry, you can likely narrow down the choices to . . . meat.

HEARING THINGS

We hear sounds when air vibrations travel through the ear canal and make contact with the eardrum, sending a signal to the brain that allows us to further distinguish features such as frequency (how high or low the pitch is) and volume (the intensity of the sound waves). Cats have one of the broadest ranges of hearing among mammals. They detect sounds that are higher

(ultrasound) than what our human ears can detect, while also detecting sounds as low as humans can hear. Sensitivity to ultrasound likely allows cats to eavesdrop on rodent activity.

The structure of cats' ears further amplifies sound. The pinnae (the external part of the ear) are relatively large, with thirty-two muscles in each ear that allow for a wide range of movement and even the independent movement of each ear. You have likely watched your cat move and swivel their ears in response to a surprising noise. By moving their ears, cats can quickly and very accurately narrow down the direction and height of a sound source, guiding future steps toward capturing prey.

YOUR TURN!

Rustling sounds are *very* attractive to cats—try moving a toy underneath some tissue paper or a paper bag to get your cat's attention.

GETTING ON THEIR NERVES: MECHANORECEPTION GUIDES THE HUNT

We humans can understand the experience of touch. We have receptors in our skin that send information to the brain about pain, pressure, and temperature. Signals travel through the

spinal cord of the central nervous system to specific areas of the brain, where the information may trigger action (such as pulling your hand away after touching a hot stove).

Like humans, cats are equipped with receptors sensitive to pain, pressure, and temperature. Many of these receptors are connected to hair follicles, and others are more sensitive to pressure on the skin (such as the sensation on your feet when you walk across a pebbly beach). When it comes to sensitivity, not all of the cat's body is created equally. Their nose, foot pads, toes, and even claws contain nerves that send signals to the brain. Their face and paws are incredibly sensitive to touch, and the signal is boosted by a hefty supply of whiskers.

Look at your cat's face. Take a really close look. Sometimes it's easy to overlook the seriousness of a cat's whiskers. But with careful inspection you'll see these stiff, thicker hairs on either side of your cat's mouth, their cheeks, and even their eyebrows and in front of their ears. On either side of the cat's mouth, between their lips and their nose, are what are called the *mystacial* (think "mustache") *whisker pads*. The whisker pads and the bases of all whiskers are where information really flows. Whiskers can help cats navigate through confined or dark spaces. Perhaps even more importantly, whiskers can make up for the fact that cats cannot see that well directly in front of their faces.

When a cat is pawing at or slapping prey, or preparing for the killing bite, they rely much more on their sense of touch than

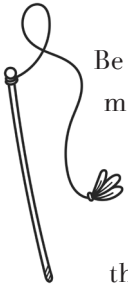
sight. (This can help explain why your cat may have difficulty locating a toy or treat that is *right. in. front. of. their. face.*)

Whiskers are sensitive enough to allow a cat to detect the degree, direction, and speed of whisker deflection, whether from direct touch or displacement by air. When whiskers are touched or displaced, cats have a reflex that turns their head in the direction of the touch. A touch of the lip can stimulate a cat to snap their jaws. These automatic responses increase the chance that a cat's hunting attempts will be successful.

Cats can also move their whiskers like a satellite dish focusing a signal. You may notice your cat pull their whiskers back when they feel threatened, or move their whiskers forward when they are excited. They can actually move their whiskers so far forward to almost wrap around a mouse!

Cats' paws are also equipped with several whiskers and hairs, and in the words of the esteemed cat behaviorist Dr. John Bradshaw, paws can be considered a "sixth sense organ." The exquisite sensitivity of the nerve endings in all those paw whiskers and hairs allows cats to fish for prey from a hole or crevice, and also lets them scoop that prey right into their mouths. A touch to the paw can lead to a strong reflexive movement, much like touching their face or lips.

Not to be outdone by whiskers, the claws and teeth provide further information. Movement of the claws gives cats signals about how much a prey animal is struggling under their grasp. Teeth are pressure sensitive and help cats determine the perfect location for the killing bite.



YOUR TURN!

Be sure to let your cat have contact with a toy—they may want to chew it, grasp it, or rub it on their face, but in general, they want the satisfaction of catching it! Make sure they are a successful hunter during your play session (even if you have to help them out a little bit).

AND TO BALANCE OUT THE SENSES . . . BALANCE

Cats are well-known for their exceptional grace, and like us, they have a vestibular system that helps keep them upright. This system detects the position of the head and its movement (including direction and speed) and then gives our brains feedback that allows us to do neat things like, for example, focus on this text while you shake your head left to right. The vestibular system, which is located in the middle and inner ear, controls our sense of balance.

The vestibular system and vision collaborate, allowing cats to focus on prey while moving in to attack. Add to that a dash of lickety-split reflexes, one extremely flexible spine, incredibly powerful back legs, and a long tail that can serve as a counterbalance when needed—now you've got yourself a stealth predator who can leap six times their height and who can pirouette, flip, and pounce with laser-sharp accuracy; they'll land on their feet

every single time, eviscerate a mouse along the way, and move on to the next kill like it was nothing.

DO CATS PLAY WITH THEIR PREY?

Cats are often mischaracterized as cruel torturers because they appear to play with their prey. They may extend the hunt by batting at or tossing a mouse or releasing them from their grasp before pouncing on them again. While I have no doubt that cats do experience many good feelings during the hunting process (more on this later), many of the behaviors that appear playful to us are merely the cat being tentative about how successfully they can complete the job at hand.

Much like the bob and weave can protect boxers from an incoming punch, head bobbing in cats (which looks very silly to us) is a great way to avoid a bite or swipe to the face when taking on a large rodent. Batting at prey gently can give them feedback on how ready the prey is to respond aggressively to an attack. These tentative movements allow cats to test the strength and ability of their victim, making sure that the effort is worthwhile.

Cats may also experience some post-hunting joy, continuing to toss, bat, and mouth the dead animal; they may even leap and "dance." Dr. Paul Leyhausen has described this behavior as "play of relief," suggesting it allows for a release of built-up tension from a stressful hunt.

HUNTING MAKES CATS FEEL GOOD

There are reasons that, to many of us, behaviors such as sex and eating feel good. It is no coincidence that the things that help our species endure also give us pleasure—it ensures that we are motivated to do our best to both survive and create offspring! Our cats are no different. Although we can't ask them why they hunt, we can infer that their brains and bodies think it's a good idea. They are still motivated to hunt, even when not hungry. Hunting could even be described as a behavioral *need*. We can provide for that need by allowing cats to hunt toys!

There are chemicals in the mammalian brain (such as dopamine and serotonin) that are related to pleasure and mood, and it's believed that aspects of hunting and play can activate these chemicals. Without getting too deep into the neuroscience weeds, what we can say is that evidence suggests hunting is likely a feel-good activity for cats, from the stalking to the full tummy and everything in between.

POSTMORTEM MEAL

Once prey has been killed, it is time to eat. Cats may carry their prey (usually by the nape of the neck) to a location that offers cover and where they feel safer. House cats bring about a quarter of what they kill all the way back to their home turf (as many owners of indoor-outdoor cats who find "presents" on their doorstep will attest). You may even see similar behavior when

you play with your cat, finding yourself in a tug-of-war as they try to carry a wand toy back to their favorite bed.

Inside the house, we also see prey-relocation behavior when cats remove some of their food from their bowl and carry it a short distance away before eating it off the floor. Moving the food dish to a space away from other pets, or to where the cat has more of a vantage point, can nip this messy habit in the bud.

Some cats may take a break before eating (killing is hard work) or will play with the dead animal before diving in. But other cats will continue hunting—a bird in the paws is worth at least two in the tree. When you don't know when and where your next meal is coming from, you can't always afford to take a lunch break. But the motivation to kill goes beyond just hunger. To that point, a recent study observed that cats walked away from almost half of what they killed. The instinct to hunt is very strong, and although strengthened by hunger, a cat need not be hungry to be motivated to hunt.

Dining behavior depends on the prey being consumed. Birds will be at least partially plucked before they're eaten; feathers can be pulled out with the teeth, or cats may lift the prey and shake their heads to loosen feathers. You can sometimes observe head-shaking behavior in your cats when they eat or play, so this behavior seems to be retained regardless of a cat's current hunting status, and it is unknown if the head shake might serve other functions (such as stunning the prey or snapping its neck).

WHY DOES MY CAT BRING ME PRESENTS?

Cats often prefer to eat in a more comfortable location than where they killed their prey. It may just be a coincidence that the comfortable place happens to be where you live too. (Take it as a compliment!) But the compliments end there: your pet isn't generously giving you a gift, nor are they making sure you don't starve. More likely than not, your cat might not be hungry enough to eat what they hunted. (After all, you are a reliable restaurant for your cat.) Of course, mother cats do bring prey to their kittens—so isn't it possible your cat is displaying a caretaking behavior toward you? While I can't offer a definitive yes or no, this explanation wears a bit thin when we consider that male cats will bring dead animals home at the same rate as female cats, yet male cats don't provide any care for their kittens.

If you're sick of waking up to dead birds in your slippers, there are actions you can take to reduce your cat's hunting behavior. Don't bother with a bell on your cat's collar, as evidence suggests bells are useless for preventing predation. A better option is the anti-hunting bib, which is a neoprene shield that attaches to a safety collar and hangs down in front of your cat's chest. They come in many adorable, brightly colored patterns.

Does your cat look ridiculous? Yes.

Is your cat mad at you for making them wear it? Probably.

Does your cat get used to it quickly? Yes.

Does the bib stop cats from killing birds and other animals? Surprisingly, multiple studies say *yes*! A 2007 study found that the bib stopped 81 percent of known hunters (of the feline kind) from nabbing birds, without interfering with other natural behaviors (such as jumping and running).

And if you don't want your cat to face the indignity of a bib, a recent study suggested that cats who are well fed *and* who get regular interactive playtime may be less inclined to hunt.

HUNTING IS PROHIBITED! NOW WHAT?

To kill is a delicate dance between predator and prey, and nowadays we have removed much of this drama from our cats' lives by keeping them primarily indoors and feeding them.

Even though most owners do not appreciate viewing their cat in this light, cats are natural-born killers. Predation has shaped every aspect of cats' evolution—every muscle in their bodies, all their senses, their lifestyle, their instincts, all shaped by the one thing they were born to do: hunt. Being successful hunters has allowed cats to thrive on almost every continent of the world.

And although we coexist with cats and throw food in a bowl for them, domestication has done very little to change their instincts to hunt. Hunting gives them life and it gives them pleasure.

We took hunting away from our cats, but we can give it back—by playing with them!

CHAPTER 3

From Prey to Play

HUNTING IN THE SAFETY OF YOUR OWN HOME

For cats, many aspects of hunting are mirrored in how they behave toward toys. In fact, we can stimulate all those hunting instincts without any mice or birds having to die—by providing our cats with interactive play.

The key here is *interactive*. You move the toy as if it were a bird, bug, or rodent, and your cat responds as if it were a bird, bug, or rodent. This is a lot different from leaving a few fuzzy mice and Ping-Pong balls lying around your house (maybe gathering dust). Although we'll take a deeper dive into the benefits of play and how to tailor interactive play to your cat's individual needs later in the book, let's start with the building blocks of a feline play session.