# The Body of a Cow

*by* Sara Levine

**Eyes**

When I was a child, and we drove to the local dairy farm to buy our fresh milk, the farmer would place the thick glass bottle in a paper bag, even though it was just one item. So it did not surprise me the day we took home a newborn calf from this farm that she also came in a bag.

How my parents, two Brooklyn kids who migrated to the Connecticut shoreline as young adults, came to acquire a cow was not so different from how they acquired other animals in our life: Pokey, a knock-kneed, pigeon-toed standard poodle given to my father by a patient who was mentally ill; Office, a cat who had walked into my father's waiting room in labor during a snow storm; Eggnog, a hen from my elementary school who was being picked on by the other chickens.

The calf that would become mine was about to be shipped to the slaughter house because there were too many female calves born that season, and the farmer had run out of room in his barn. Usually there was about an equal number of heifer and bull calves born; the heifers would be raised as dairy cows and the bull calves were sent off to become veal. This year there was an overabundance of females.

The farmer settled her on the seat next to me in the car, enclosed in a burlap feed sack, tied at the neck. Only her head stuck out, black with a thick stripe of white from forehead down to her damp, pale pink nose. Her eyes were dark and unblinking. She watched me as I tried to wrap the seat belt around her, but it didn't reach.

**Tongue**

We named her Medlyn, after the farm she came from, and drove directly to the local grain store to buy a bag of calf formula and a bottle with a long, spongy orange-red nipple that to me, at age fourteen, looked slightly embarrassing and pornographic.

“Why can’t we just feed her milk?” I asked.

“You think the milk that comes in a bottle is what comes out of a cow. Do you have any idea how much they did to that milk?” my mother said.

“They take the cream off, for one thing,” my father added. “That’s where all the fat is; babies need fat to grow.”

The powdered milk was fine, like chalk, like something you might want to roll your body in. So soft you almost couldn’t feel it on your fingertips. It smelled like toffee. I measured it into the bottle and filled the bottle with warm water up to the line. To mix it, I had to rock my whole body like I was trying out a new dance; it was that big. It was best done when no one was looking.

In the stall, I braced the bottom of the bottle against my sternum. Legs locked and splayed, I was ready when her mouth reached for the nipple, when she head butted into it with surprising force.

Soon, her tongue reached for anything that came her way—a goat, a rubber boot, my long hair as I passed her stall with a bucket of water for the horse. She sucked the horse’s tail down to a scraggly stump. It was like seeing a cat wet and realizing how little is really there.

**Backbone**

People say cows are too dumb to train to ride like horses, but I knew Medlyn was smart and set out to prove it. Her backbone was sharp, but I solved this problem by wearing a sanitary napkin and by shifting side to side, never sitting quite in the middle as you would on a horse. She seemed content enough to have me up there, bucking only occasionally and half-heartedly. She wandered around the lawn, grazing, and I slid off when I got bored. The idea of a bit in her mouth seemed too cruel. Who was I to say in what direction she should travel?

Medlyn grew and news of the rodeo spread and kids I’d never seen before showed up in our yard to test their skill. She bucked each off on her first or second try. I was the only one who could stay on. Until the day she did buck me off, and I landed on my ankle. I

spent the remainder of the summer on crutches and planned, in my head, the book I would write on why people don't ride cows. *Cows are too smart*, was the thematic summary.

**Ear**

My parents told me it was illegal to prohibit the state veterinarian from visiting, and so he did. I understood the reason for the tuberculosis test; the part I objected to was the ear tag and the tattoo. My mother now tells me it has been discovered that cows have unique nose prints, as identifying as the finger prints of a person. These prints can be used for identification purposes. A triumph of individuality over bureaucracy—one that comes almost a quarter of a century too late for Medlyn, but it still pleases me.

That summer, the state vet told me she was the cleanest cow he ever saw. The tag looked painful, but I tried to think of it as an earring. The tattoo reminded me of the Holocaust, as tattoos do; I could not watch him do it. When I looked, what most surprised me was how the fur inside her ear had been shaved; the pinna looked hollowed out and too thin. Afterward, she circled like a dog and she lowered herself down, front legs folding first, onto the fresh woodchip bedding, and I lay down with her, my head resting against that hollow where her back leg met her side, and we slept.

**Rumen**

If you press your ear up to the side of the cow, it is like holding a seashell to your ear. Every once in a while you will hear the sound of a wave gathering height and crashing onto the shoreline.

Ruminal contractions, I later learned in veterinary school. There should be three per minute in a healthy individual. I would hold the bell of my stethoscope up to the left side of the cow, eyes on the second hand of my watch, and wait, no less amazed by the sudden burst of sound advancing towards me.

The rumen is one of four stomachs in a cow. Each has a unique purpose and internal landscape: it's worth taking a brief tactile tour.

My first glimpse of the digestive tract of the cow occurred in large animal anatomy lab at veterinary school. Imagine a room full of pony corpses hanging by chains and hooks from the ceiling in various stages of dissection. The scene is overwhelming at first—the stench of decay, the harsh chemical odor of the preserving fluid, the omnipresence of large, dead bodies.

A deceased cow was brought into the room several weeks into the semester, but I hadn't noticed until the director of the anatomy lab called us over to where he was working.

"Come look at this," he said. He had the digestive track of the cow out on a long, low table. When he sliced open the rumen, I was surprised to see that the inner surface was covered with papillae, reminiscent of shag carpeting. As he continued his dissection, I found myself leaving the anatomy lab behind. The second stomach, the reticulum, was more formal. It reminded me of an afghan made by a great aunt; polygonal cells formed a honeycomb pattern. The lining of each shape was pilled like a favorite nightgown that has been washed too many times. The third stomach is called the omasum, which means book, and though I could see how someone looking might see pages, for me, the deep longitudinal folds of this stomach were drapes made of terrycloth. The fourth stomach, the abomasum, is most similar to the human stomach. It looked smooth and plain. A pillowcase perhaps.

The rumen is the stomach that has always intrigued me most, even more for its inhabitants than for its internal landscape. In this chamber, an entire ecosystem of microscopic organisms sets up house. These bacteria—the uncelebrated links between sunlight and flesh—break down the grass into nutrients that a mammal can use. They are really what is responsible for converting plants into meat. The cow and other ruminants merely have the correct internal environment to support these hosts. In fact, under certain circumstances (such as misinformed antibiotic use or disease), this population may die out and the veterinarian will have to reintroduce it into the body of the cow. Without them, a cow eating grass would be shitting grass and starving as we would.

**Esophageal Groove**

There is a secret passageway inside the cow. It forms only when a cow is young. Suckling causes a reflex closure of muscular folds which create a tube from the esophagus all the way to the fourth stomach. There is no need for milk to go into the other stomachs, which evolved to digest grass. The milk arrives at the fourth stomach as intact and untouched as a child spit out the end of a water slide.

**Udder**

It's Halloween in veterinary school. The large-animal vet who is lecturing today on introductory nomenclature in bovine medicine is dressed in full Holstein uniform. His entire body is cloaked in white cloth, with black patches sewed on and a three-dimensional, pink udder facing forward over his crotch.

Veterinary school, like medical school, is largely about mastering a new vocabulary and while I consider myself good at language, I often found myself lost.

This man looks like someone who might live near the mountains of Vermont, a full beard and mustache and smart eyes; someone who's wife might home school the kids. Or else an engineer living in Cambridge, full of good ideas, if not completely able to articulate them. I knew for a fact that he became a vegetarian because he could not stand to eat his patients.

*The cow's udder is referred to as the bag*, he explains, without the slightest hint of irony or apology. *A non pregnant cow is referred to as open.*

I look around to make eye contact with other women in the lecture hall, but everyone is diligently taking notes. No one even rolls her eyes. *This never would have happened in a humanities class*, I think to myself.

I give up and stare in wonderment at the spot where his dick must be.

**Rectum**

I am standing with a small group of my classmates ankle deep in manure wearing a forest green coverall that has the name *Herb*

embroidered over the chest pocket. We are each wearing black rubber boots and one translucent glove made of something related to saran wrap that extends all the way up to our shoulders. Each glove is fastened up there with a clothing pin. *I'm wearing an arm condom*, I think to myself. I am regretting that I do not yet have any children in my life; I imagine a few pairs of these gloves would make a welcome addition to someone's dress up box.

The professor is armpit deep in the rectum of the cow. He is palpating the ovaries through the rectal wall to determine where the cow is in her cycle. One can estimate the size of the follicle maturing in the ovary and use this information to predict when the cow should be inseminated.

"Open," he says to the farmer standing by with his clip board taking notes. "CL two centimeters."

When he withdraws his arm, he draws some manure out with it and smears it onto the glove of the next student in line, as lubricant. That student will wipe manure on the arm next in line and so on. A palpation relay race. Or a gang rape. Both images emerge for me each time we practice this procedure.

**Heart**

Lost in the body of a cow, unable to locate the ovaries through the rectal wall, I sometimes rotate my hand so that my fingertips are in contact with the roof of the tunnel. Here, I can feel the pulse of the cow's aortic artery, the blood vessel fed by the heart. The slow and steady beat grounds me, like a compass or someone taking my hand in the dark.

**Vocal Cords**

When you are working on an animal whose body is larger than yours, you become much more conscious of your own physicality, the size of your limbs. The fact is, my arms are too short to reach the ovaries of an average-sized Holstein through her rectum. The professor tries to find me small cows to practice on. Maybe I will have more success at a Jersey cow farm; they are a smaller breed. He uses a sterile glove to enter the cow's vagina to throw the ovaries up over the curve where I will be better able to reach them.

We enter the cow's rectum together, arms pressed side to side. It is oddly intimate.

"I have one in my hand," he says into my shoulder. "I'm going to hand it to you right now."

I can't concentrate. Since we have arrived at this farm, there has been an incessant noise, a bellowing from a calf and a mother cow who have been separated this morning. Cows on a dairy farm are allowed to nurse their offspring for a day so that the calf can drink in the colostrum, the first milk that contains essential immunoglobulin to prevent against disease. Then the two are separated, the cow to join the other cows, to be milked twice a day for profit, and the calf to a small pen attached to a hutch. The calves cannot be housed together because their desire to suck is so strong they will give each others sores on their genitals, their tails, anything that sticks out.

It is impossible for me to focus. The sound elicits a panic in me that I cannot suppress. The panic of a mother separated from a child, a child separated from a mother. I withdraw my arm from cow and peal off the glove inside out and drop it into the trash. There it expands a little as though it is alive and is then still.

**Mouth**

When we walk back to the van from the barn, I lag behind to visit the calves in their hutches. I offer four fingers, palm up. They draw them into their damp mouths and suck.

**Clitoris**

Inseminating a cow is serious business; if it does not go well, money will be lost. Sperm from the bull must be purchased, and a veterinarian must be hired to determine the correct day of fertility. Students, therefore, do not get to practice this technique; they watch to learn. The first time I saw this done, I noticed something that surprised me. After sperm had been inserted, after the speculum had been withdrawn, I noticed that the veterinarian gave the cow a rub in the ventral area of her vulva. Not a big rub, but a circular motion, maybe one and a half or two times around before he

removed his glove and walked away. The gesture seemed intentional. I watched for this procedure the next time, and he repeated it. Again, with no comments. Cow vets, like cow farmers, tend to be men of few words, and this doctor was no exception. It took me days before I got up the nerve to ask about it. It did occur to me that it might be a private thank you, that he might just be attempting to give the cow a little pleasure for her efforts.

"Um, I noticed you give the cow a rub after you inseminate. I was wondering about that," I said.

"Yep," he said.

"So, is there some reason for the procedure?"

"Helps," he said.

Did he mean that it helped make the procedure more successful? That uterine contractions caused by stimulating the cow's clitoris might help draw up the sperm and increase the likelihood that a sperm would reach an egg? Did he actually think his one and a half rubs might be giving the cow an orgasm? Should I feel bad for the cow? For this man's wife? I was full of questions. Do we know for a fact that cows even have orgasms? Is there scientific evidence that manually stimulating a cow following an artificial insemination increases success rate? I'm sorry to report I still have no answers.

**Uterus**

On my large animal rotation, I was lucky enough to be at a farm when a cow was having a difficult time giving birth. In the mornings before we left the office of the large animal ambulatory clinic, the veterinarians would read their lists of house calls scheduled, and students would negotiate and choose which doctor to accompany for the day. *I've got horse vaccines, new pigs, a respiratory goat and a lame horse*, one might read. *Breeding exams at Hotchin's Farm, breeding exams at Adams, TB tests, sheep vaccines and a down cow. Think that's it,* another would say.

On this particular morning, Doctor Saperstein pokes his head in early to announce, *cow distocia, leaving now*. I grab my coveralls

and follow him to his van, not waiting for the other students' response.

She's a Jersey—dark prominent eyes and a pale, chocolate-brown coat. She appears calm when we arrive, but cow emotions can be difficult to read. She's standing still, no longer pushing. She isn't chewing her cud. Dr. Saperstein puts on his long sterile gloves and enters her uterus. *Head back*, he says. After considerable effort, he is able to turn the calf's head to the proper orientation and hands me the chains. It feels wrong putting metal chains into the uterus of an animal, wrapping them around the legs of a baby not yet born. But I find two hooves and wrap the chains in two half-hitch loops as I've been instructed. *Okay, now, up and over*. *That's the way to do it. Up. And Out*. I pull, but the calf was not budging. I pull and Dr. Saperstein pulls and the farmer pulls as well. We are like one side of a tug-of-war game, and, this time, there is movement. *Don't forget to catch it*. There is sudden burst of wetness and my coveralls became superfluous as I am drenched in amniotic fluid head to foot and I catch him, or part of him, and we both fall over, my body cushioning his slippery one, and he is alive. *Congratulations*, Dr. Saberstein says. *You've birthed your first baby*. The mother cow moves to sniff the calf and begins to clean him with her tongue, and I use a towel to dry my hair.

**Hooves**

Medlyn lived with us for about three years. There was mumbling from the area farmers, especially from Mr. Medlyn and my mother's friend Vivian who, in her thirties, gave up her life as a socialite to become a cow farmer. These murmurs did not reach my ears directly, but the gist of the message was this: when was I going to give Medlyn away? There were many issues. The farmers were concerned that if she was not bred soon, she would be unable to ever get pregnant. My parents were concerned about who would take care of her when I went away for college. While I knew my two younger siblings would be happy to take on the goats and the horse, no one was eager to shovel cow manure each day. And there was a lot of it. I didn't see why we couldn't just breed her at home. It was

pointed out to me that we would have to send a male offspring off to slaughter; it was too dangerous to keep a bull as a pet. And we would have to milk Medlyn once she was bred. This part seemed crazy to me; wasn't it a matter of supply and demand? If the baby wasn't nursing, if the cow wasn't being milked, wouldn't the supply just stop? Milk cows, I was told, were bred to produce enormous amounts of milk. This information evoked for me an image of living machines out of control, no longer bound by the rules of nature that apply to other mammals. Bovine Frankensteins.

In the end, I decided to let her go so that she could experience motherhood, so that she could at last be in the company of cows. It seemed selfish to keep her to fulfill my own needs.

I gave her to Vivian because I trusted her most. This elegant and tough woman who could hold her own among the male farmers. When I think of Vivian, a story she told when her son was a newborn comes to mind. She was nursing him under her shirt while completing some transaction with a neighboring farmer. The man lifted up her shirt to "give the baby some air." His expression of embarrassment at seeing her bare breast is one I loved watching Vivian act out. The farmer, after all, made his living off mammary glands.

Medlyn did have trouble conceiving, but after some time, she did. But the calf was stillborn. I learned this when I was away at college, and I carried the news as a heaviness in my chest for weeks.

Later, she was moved to a neighboring farm (Vivian only worked in breeding and the raising of calves). Here, I was told, she kept apart from the other cows. When it was time to come in from the pasture, all of the other cows rushed in, but she waited across the bridge for a personal invitation.

"Medlyn! Medlyn!" the farmer would yell, and only then would she would come galloping across.

When it was time to choose the cows to ship to slaughter each year, Medlyn was spared time and time again. Most cows are only kept on for their prime milking years, but Medlyn was allowed to

live into middle age. *Not Dr. Levine's cow*, the farmer would say when they wrote up their lists. He meant my father, of course; I was not yet a doctor. I heard all this news from my father; he related it with amusement and pride, but I could barely stand to hear it. Eventually, I assume, she was shipped. No cow dies of old age in New England.

I never saw her again after the day we dropped her off at Vivian's farm. I suppose I could have, but it would have been too painful. What I remember most from that last day is how she broke free and ran as my father was backing her out of the trailer. People think cows can't move, but when they want to, they can. Someone must have caught her and brought her back to the farm, but I don't remember the details. What I do recall is how we both ran that day, each from the other. The image imprinted in my mind is the sight of Medlyn's back hooves kicking up dirt and grass as she did a tight U-turn and raced down the road towards home.