

Now Will the Real Monsieur *Please* Stand Up?

In this story there are two main characters and they are mice. The first mouse is known as M¹ and the second as M². M¹ is female and M² is male. They live in the same unit in a research lab in Kentucky. Their unit is just one among many. There are other mice in their unit but they do not play specific enough roles in the story to have names. “M” stands for mouse. It is much easier to use “M” than their real names. Their real names are much longer. They are both named after the genetic strain they are bred from which is called strain C57BL/6. That means they are related. Sometimes the strain is abbreviated to B6. It is a very common strain. But even B6¹ and B6² can be complicated. Maybe you cannot imagine a B6¹ or a B6², but when “M” stands for mouse it should be easy. What makes them even easier to imagine is that they are both nearly identical. M¹ is white and M² is white. Neither mouse has stripes. They are relatively of the same length and height. The only way you can easily tell them apart is by scanning the microchip-enhanced tags in their ears. If you do not have a computer that has the software to read the information on the tags then you can just remember that the female has a pink tag and the male a blue one. That is really the easiest way, unless you want to flip them over to check out what they are packing underneath.

Dinosaurs first evolved about 120 million years ago (mya) but it was only 60 mya that the forms that ended up becoming mouse and human split from a common ancestor. This is known through the analysis of mitochondrial DNA. This relatively recent divergence is one of the reasons mice are used so often in the laboratory. M¹ and M² are in a laboratory right now: M¹ is sniffing one of the unnamed mice in her unit’s left eye and trying very very hard not to read the letters on the shredded newspaper all around her which is used as a lining to soak up all the urine and feces produced in the unit. M¹ figures that if she concentrates on the unnamed mouse’s left eye that she will not see the huge letters curling away above her. M¹ thinks that if she just tries hard enough that she will not have to read. In fact, she concentrates so hard that she accidentally pokes her nose straight into the unnamed mouse’s right eye and the unnamed mouse jumps to the left and M¹ jumps to the right and M¹’s right foot steps on a shredded curl of newspaper and pulls the curl down to her eye level and, even though she shuts her eyes very quickly, she unintentionally reads the letters *h* and *o*. M¹ and M² are part of a genome-enhancing experiment that will eventually force humans to confront not only their fear of a post-human generation of individuals but also to consider how they are hanging on to the last threads of a false dignity that assumes that they are

more than just flesh and blood, that they are somehow something greater than just the sum of the information of their bodies. This experiment will help show that Hegel was right all along, that in fact “spirit is a bone.”

M¹ did not like reading because she did not know what reading was or what she was reading but yet she was reading. She preferred talking and listening because at least those things were somewhat familiar, but reading was just too far out there. It was nothing like sniffing or seeing or tasting. M¹ did not like it. Even though she preferred talking and listening, it did not mean that she partook in these activities when the lab technicians were around. She had seen what had happened to the first mouse that talked. He talked in front of one of the technicians and was scooped up, never to be seen again. He did not even talk that much. He just said “krerk.” One useless word. That was pretty much as much sense as most of the other “talking” mice ever made, even M². Just “krerk.” But that did not stop them. After the first mouse started talking the rest joined in. Not even in whispers, to avoid detection; they all just started blabbing. Once they were all doing it no one was taken away. But M¹ could say much more than just “krerk.” She did not know exactly how much more she could say until she started telling M² stories. Then she found she could articulate whole clauses and phrases and sentences. She remembered the words the technicians had said during the day and she pieced them together at night for M². She would do this buried deep in the newspaper because she never forgot what happened to the first mouse that had spoken. She did not want to be scooped away, mainly because of M². M² was the male that M¹ liked.

M¹ made her stories like this: when she had gathered enough fragments from the passing and attending technicians for a story she would go find M², who was usually either in the eating or drinking area, or sleeping. When he was eating or drinking M¹ knew there was no point in disturbing him, but if he was sleeping she would—even if he was with some others—dig into the newspaper, her eyes shut tight against reading, and sniff him out. It felt good. It felt natural. She often took longer than what was strictly necessary to find him—double and triple checking others to make sure they were not him—just for the pleasure of being a mouse. When she found him she would slowly run one of her paws over his nose and he would twitch and she would lie beside him, not on top or in any position that would wake him up too much, and she would start stringing together stories out of the jumble she had gathered during the day. M¹ would turn these glottorals and alveolars into stories centering on a male brown mouse who had a unit all to himself which was so big that once he got lost trying to find the water bottle. One day a technician put another mouse in the unit and this mouse was brown too, but female. They started having pups together

and the male mouse would show all the little pups the way to the water bottle and he would explain the feed tray while the female mouse would watch or come along or sleep. Once, when the male mouse was on the way to the water bottle with the pups and the female mouse had decided to stay behind because she was pregnant again, the female mouse heard a cry coming from down in the newspaper below. Without thinking of her future unborn, she dug down into the newspaper until she found a young pup that had been left behind. It had probably gotten trampled by the others who were overly excited about going to the water bottle because they were so thirsty. The female mouse took the young pup in her mouth and brought him to the surface. Then she set him down and groomed him with her front paws. When she was done she nudged him forward with her nose until he met up with the others at the water bottle. They were still there, crowding around the bottle, many of them still thirsty. In all the commotion, the female mouse could not find the male mouse. Then she saw him coming over from the food tray. He was bringing over some food for the pups, since they were still too small to go that far. The female mouse made room at the water bottle for the young pup and nudged him up to the dispensing ball. Then she looked at the male mouse and their family, or “deme,” and felt proud. At this point in telling the story M¹ nudged her face in closer to M²’s and, even though she lacked complex labial muscles, gave him a soft kiss on his left ear, the one without the blue tag. M¹ wanted to have a deme with M², but she knew it was impossible for the moment because of the vaginal plug she was wearing. She told M² that it was sure to be removed soon, but she was not sure he could understand.

When M¹ first started telling stories they did not make a lot of sense. In fact, M¹’s stories did not make any sense at all until she started to dream. The dreams came suddenly, like they had been switched on. There was no intermediate stage of fleeting out-of-focus shapes or anything similar. There were just nights of nothing and then nights of dreams. M¹ did not like her dreams at first, in fact she hated them. She would try not having them but that never worked. Sometimes she would remember them and sometimes she would not. She tried forgetting them. She found she dreamed of things that she did not think about during the day, like of a mouse that had tried to mate with her or of a technician that had stopped coming or of the generations of mice before her that had maybe even lived in the same unit. Then she tried, each night before falling asleep, to remember everything that had happened during the day so that she would not dream about anything at all. This worked for a while at first but then she started dreaming about stranger and stranger things, things she could never come up with during the day, like dreams about other animals that were much smaller than her or of water bottles made of bones. Then she started having dreams of

eating all the other mice in her unit, each time finishing her meal by devouring M². Sinking her teeth into M²'s hairy flank would wake her up every time. Eventually she started worrying all day about the dreams she would have at night. She even started wondering whether instead of being a well-behaved mouse dreaming of eating her co-inhabitants, maybe she was really a killer cannibal mouse by day who only dreamed of living in a well-functioning lab deme. M¹ found herself nervously pacing under the water bottle, thinking these possibilities through; she felt she was going mad. Finally she decided that there was nothing she could do about her new nightly companions and she just gave up. That was when she first started taking words she heard the lab technicians saying and stringing them together, making sense.

One of the reasons mice are used in experimentation is their genetic comparability to humans, another is that they are very economical. They have a short generation period, 10 weeks from being born to raising the first litter. Mice in the lab have around 8 pups per litter and exhibit estrus immediately postpartum. Another advantage is they can be packed tightly together, providing an attractive animal-per-square meter ratio. For lab mice it has been reported that this can be as high as 3,000 pups/m², including the space for the units and inter-unit space as well. The use of a vaginal plug allows technicians to control breeding times and frees them from actually having to be on-hand for copulation. It was this vaginal plug M¹ was anxious about removing because of her ever growing commensal feelings towards M².

A few of the unsuccessful attempts M¹ made at removing the plug went like this: trying to pull the plug out with her teeth, nose and/or paws; uselessly trying to give directions to the other mice regarding how they could pull it out; running over the newspaper lining as fast as she could and taking flying leaps against the walls of her unit trying to pop the plug out; hoping.

It was during one of the flying-leap attempts that M¹ first noticed the level of ambient noise in the unit had started to increase. It was the other mice. They were talking more. Not saying different words necessarily, it was still mainly a lot of "krerk," but the utterance-frequency had significantly risen. M² was doing it too. M¹ sniffed around different groups of mice but she could not sense anything unusual. They were all just really chatty. That night M¹ told M² quite a different story than any she had come up with before. The main difference was that this story was about humans, and it took place outside the unit. In this story the two main characters were lab technicians. She called them T¹ and T². T¹ was female and T² male. T² lived under a mushroom

in a forest. The mushroom provided T² with shelter and at times nourishment, although T² was careful not to eat too much of his home, for obvious reasons. This meant that T² had to go out at times to gather food. On one of these expeditions T² met T¹, who was also out gathering. They found they had many things in common, like that they both lived under mushrooms, for instance. T² asked T¹ what kind of mushroom she lived under and she said a Sulfur Tuft. Then T¹ asked T² what kind of mushroom he lived under and he said a King Bolete. T¹ said she thought that this type of mushroom was poisonous and T² said that he had been taking little bites out of it for as long as he could remember and, just look, he seemed to be doing fine. T¹ said she would really like to take a look at this mushroom so T² took T¹'s hand and led her back to his home. Before M¹ could continue with the rest of her story, a latex-covered human hand came down from above and pinned her down to the soiled bottom of the unit. In order to do this properly, the hand had one finger across her neck and the other across her back. This meant that M¹ could not even squirm. She became very nervous. She thought the technician had heard her telling the story to M² and was now going to do who knows what to her. She started breathing very heavily. She started breathing heavily for two reasons: 1) she thought it might cover up any strange story-telling noises the technician might think he had heard; 2) she just got excited thinking, hope beyond hope, that the technician was there to remove her vaginal plug, and this would mean she could start a deme with M² immediately, since he had been right next to her a moment ago. But neither of these two things happened. Instead, M¹ was given an injection at the base of her neck. This had happened before. M¹ did not know if other mice were receiving similar injections at the moment because all she could see was the grime that had sunk down to the bottom of the unit and which she was being pushed into. Even though the injection really hurt there was a part of M¹ that had to admit she did not mind. She could not remember how many times it had happened before, but after each injection she did enjoy running around in circles, trying to wear off the burn of the needle. As she lay there, pinned under latex-fingers, she could not help feeling slightly anxious to have it over with, looking forward to scurrying around a bit in the open air before getting back to M² to finish the story about humans and mushrooms.

Not all mice live in labs, though. Even though many mice are now bred specifically for scientific purposes, at places like the Jackson Laboratory in Maine, outside of the lab, the migrational history of mice actually follows that of humans quite closely. Because of what has been called their “stowaway tendency,” mice have followed human populations colonizing all

of the Americas and Australia. In fact, a small group of *castaneus* has been recently found in California. This type of mouse is native to Japan, and points to the influx of Asian migration to the western US in the 20th century. Mouse populations are closely tied to human ones in more ways than just by their similarly highly conserved ribosomal genes which are beneficial to large-scale mutagenesis studies such as the one in which M¹ and M² were taking part.

It was not until a couple of days after the injections that the plugs were finally removed. M¹ was by the food tray at the time of the removal, and after the procedure was done, she immediately set out to find M². He was not by the water bottle nor was he with either of the two groups in a corner of the unit. She decided to check a complex of tunnels some members of the unit had been constructing, kitty-corner from the water bottle. Quite a few tunnels had been built, some of them with a number of side-rooms. M¹ had found M² down there before, sleeping in the dark. This time she went down one tunnel she thought was familiar but it turned out to be a dead end. When she turned around to go back she saw her way was blocked by another mouse. It was not M² but she smelled it was a male. She knew he knew her plug had been removed. She made a move to get past him but he blocked her way by shoving his head in each direction she tried to pass in, hissing “krerk, krerk” each time she moved. M¹ tried to dig her way out sideways but the newspaper was packed too tightly from the burrowing during the tunnel’s construction. So M¹ decided to face the male. She screeched louder than she had ever dared and then dashed towards him. She scratched at the male’s eyes and squeezed past him down the tunnel. She raced her way up to the surface but she could still hear the male behind her. She popped out of the tunnel and ran to the opposite side of the unit, near the water bottle. While running across the unit, even though she was scared, she could not stop thinking of the humans and the mushrooms. As the gap widened between her and the injured male, her mind raced on to subjects she had never thought of before. She thought about books and cars and fires, about supermarkets and planes and high-end restaurants. She thought about the difference between good service and bad, and she decided when to leave a big tip and when to leave none at all. Panting from both physical and mental exhaustion, she made it to the side of the unit with the water bottle, and then she had nowhere else to go. Circling the unit over and over would be useless; the injured male could always catch up. Her only hope resided in M², but as she turned around, backed against the wall of the unit, he was nowhere to be found. All she could see was the injured mouse galloping towards her and a few indistinct, although extremely sexually active, groups of mice at the other end. As the injured male closed in on her, M¹ thought

of a high-end restaurant subdued in candlelight. She knew it was someone's birthday because there were many humans seated at a single table. M¹ started to imagine that M² was a human, and it was his birthday party. In front of M¹ the injured mouse stopped to catch his breath, and then slowly proceeded forward. M¹ backed away as much as she could, compressing herself up against and the wall of the unit, raising herself onto her hind legs. Then she closed her eyes, backed against the wall, raised her head up, and put her left paw over both her eyes. Then she saw a waiter coming up to the birthday table balancing a huge cake packed full of candles and she said, out loud, in fact as loud as her limited vocal apparatus would allow, as if she were the waiter calling out to birthday-boy M², "now, will the monsieur *please* stand up?" Outside the unit there was a crash of a metal tray loaded with glass tubes. Then, as un-latex protected hand hurriedly brushed the injured male off M¹ and lifted her out of the unit, M¹ saw M², too late, making a dash for the corner out of which she had just been scooped.

As M¹ rose out of the unit she saw her confused M² frantically sniffing in circles and digging in the newspaper. M¹ raised her head in despair, about to raise another cry, when she was stunned into silence. She could see the whole lab now. All about the room, there were rows and rows of units, stacked 5-high, and every single one was empty, except for hers. Used and discarded units were stacked along the sides of the lab. There were countless wires coming from all over her unit, connected to a wide variety of microphones plastered along the sides. Most of the wires led away to computers. There were rows of cameras suspended from a boom hanging down from the ceiling. Then she heard applause. M¹ struggled, and she was quickly put down in a different unit, this one empty, white, and clean. Her nails could not get a grip on the smooth surface and she sprawled on her stomach and stayed there. The applause continued. A champagne cork popped. M¹ was too scared to try and get back on her feet again. She thought of M². She would never see M² again. He was surely confused, or else with another mouse even now, starting his own deme as M¹ lay alone, unable even to stand on her feet. She stopped breathing. Now she would know what happened to that first mouse that had spoken. She wanted it all to stop but she could not hold her breath for long and she let it out. A technician put a food tray in front of her with many types of food she had never seen before, but they smelled good. One item was the corner of a piece of cake. Her nose was going crazy and she could do nothing to stop it, but she did not make a move towards the food. A now latex-covered hand pushed the tray closer so she could eat it without having to get up, and a drop of icing stuck to the tip of her nose. Then she felt two other latex-covered fingers around her neck. These were different, because they had long nails. The fingers

wrapped a thin strip of pink ribbon around M¹'s neck and tied it loosely in a bow. The applause grew louder. There were repetitive bright flashes of light. M¹ moved herself back a bit from the food, which was becoming more tempting. She tried to think only of M². But M² would never try to escape from his unit and look for M¹. He was surely with another mouse already because now all the plugs had been removed and within 10 weeks he would have a litter of his own. M¹ was sure he would not even be strong enough to remember the stories she had told him and pass them on to his pups. She looked at the tray of food before her and thought maybe she would just try some. The cake was chocolate. She lifted herself onto her feet, which were sturdier now that she knew what kind of friction she could expect. She looked down at the shiny plastic surface and saw her reflection: a single-knotted bow had slid round, under her neck. M¹ thought it was becoming. She had a bite of cake. While chewing she promised herself that the next time she was taken out of the unit, which was bound to be soon because the technicians were sure to show her off, she would bite her way free of whomever's hand was carrying her. Then, when she fell to the floor, she would dart over to the mess of cables running from her old unit to the computer banks, gnaw her way through to create a short circuit, which would spark a fire, burning the lab, and everything and everyone in it, right down to the ground.