

CHAPTER ONE

The Unusual Case of TC5

He was born in a tank, no different than any other member of the Cavanagh School, University and Research Facility. The current model of Timothy Cottard filled his lungs for the first time, already a full year matured, on a cold winter's day in Cavanagh, Mississippi. The town, which uncoincidentally bears the name of the school and facility, as is common knowledge, is one of the last small towns in the continental United States. It is strategically located far away from prying, liberal eyes that might judge, without being fully aware of all the factors involved, the somewhat unorthodox treatment of the individuals that reside therein.

It would be unfair to say that the students, who are all systematically inducted into the research facility located on the same grounds, are given anything other than superb treatment. Each student gets three meals of their choice a day and any other food supplies they request, as long as they maintain a healthy weight. The school uniform for male students is a simple pair of black slacks and a button up shirt. Not only are the students not forced to wear a tie, but day-by-day, they can choose the color of their shirt! Once they reach the University, as is the popular rumor, they are even allowed to have their own possessions, which is more than can be said of any other facility of its kind in the country. The real issue with the Cavanagh system, is that it is somewhat controversially "too lenient", at least according to the New York Times circa 2243. Surprisingly, however, despite the comparatively wonderful treatment, this particular Timothy Cottard was never quite happy there.

Of course, "never", as it applies to emotion, is almost always a slight exaggeration, and even in the unusual case of TC5, the fundamental laws of behavior remain much the same. All emotions, even the ones that seemingly come from nowhere, have a beginning. This particular feeling of unhappiness first arose in his fifth year, when he and other students began learning of the personal history of their originals. More specifically, it arose during an argument with KS2, one of only two artificials who shared the same sleeping quarters as he did.

"You shouldn't be helping him anymore," Kurt said to Timothy in the common room after the second day of Adam's personal history.

As it was, TC5 had helped Adam, code AP3, with his work for years, even though he knew very well that artificials were supposed to succeed or fail alone. The current fifth level students had long suspected that Adam was the least intelligent of all of them, therefore the most likely to fall behind, but the consequences of breaking rules at Cavanagh made it such that none of the others dared to help him. No other artificial could hope to escape punishment if caught, but Timothy was too important to be punished for most things. Due to his position, tutoring Adam fell to him as a sort of manifest destiny.

"I know the rules, and I already know your opinion. Adam still needs my help and I'm not going to let him fail."

"This time is different."

"Why? Because of Adam's history? It doesn't change anything."

“Of course it does. You know I was hoping just as much as you that he was based off somebody worthwhile, but he’s not. He might not even be faulty – maybe that’s just what his original was like.”

Kurt talked calmly. He always did. He was a model student, he did as he was told, and every day he wore a gray button-up shirt by choice. Maybe it was genetics that caused him to act that way, or maybe it was because he was a two, and twos had a lot more to prove.

“Talk about something else or stop talking,” Timothy said.

Adam had become an extremely sore subject as of late.

“Don’t you want to show the humans what you’re capable of? I bet if you wanted to, you could be the best artificial in the whole school, but instead you go on testing the rules with Adam. Why? Just to see how much you can get away with?”

“Say another word and you’ll find out exactly how much I can get away with.”

Kurt had been defeated. He knew it was an empty threat, but it was the first threat he’d ever received from a student. It was a well thought out display tinted with irony – no other artificial could have said it. Without another word, KS2 went back to studying, and TC5 resumed a game of Shogi, which he promptly lost to the level 8 computer. His thoughts couldn’t be farther from the game. Personal History class was upsetting a delicate balance that had been in place since Adam, Kurt and Timothy had shared their first room in the model manufacturing building. Relationships all throughout the lower student house were becoming strained.

It wasn’t always like that. The previous level, like all the others before them, learned its personal history from one-on-one sessions with the instructors. It was a system that had been in place since the founding of the school over 130 years ago. Recently however, it became apparent to certain, otherwise-still-oblivious instructors, that the students were spending a great deal of time sharing their “private” histories with one another, and since there had always been a great shortage of hired help in the fifth year, the current caretaker had decided to alter the curriculum and teach it as a group. It was a simple maneuver on paper, but it changed everything. Kurt was far from the only student pressuring Timothy one way or the other in regards to Adam, but he didn’t listen to them. He had always and would always protect him.

The next day, young Timothy and a few others were in room 4 waiting for class to start. Room 4, the only classroom on the basement level, was widely known as the worst room in the lower student building. It really wasn’t too bad if the weather was decent, but on a cold day like this one, with that cheap motel heater turned to its highest setting, the air was thick and stuffy.

Timothy, being the most repeated model in the entire history of Cavanagh had naturally learned his history before any of the other students. The first, apparently, was a failure. Since the Cavanagh school hadn’t been founded yet, and the concept of artificials in that time was still relatively new, Mrs. Weinstein attributed his failure to the lack of a good education. In actuality, he was a perfectly decent student by all accounts, but he was a terrible scientist. The second model failed as well, though it wasn’t until years later that Timothy finally heard the truth about how it had killed itself. TC3, on the other hand, was a great success – it managed not only to continue, but to complete the research of the original. TC4, which was almost not even made, was the greatest success of them all; it had single-handedly revolutionized the fields of nanotechnology and robotics. Timothy, of course, was the fifth.

Given the strong genetic link between models, it is only natural that the students developed a kind of competition with their previous copies. It helped give them something to focus on and

helped fuel their ambition, which is particularly important when the pressures and expectations are so high. If a model doesn't accomplish its research, and if it's not modeled after an uncommonly illustrious scientist, it might get traded to a lesser facility. Packingham in particular treats their artificials like cattle in a 20th century slaughter house. This competition, in Timothy's case, was only further fueled by the older instructors, Mrs. Weinstein included, who were still teaching in the time of the fourth. When he was bad, he might hear, "Why can't you be more like the fourth?" When he was good: "You would even make the fourth proud."

So the day after Timothy's argument with Kurt, as the class was about to begin its third lesson on the personal history of Adam Patterson, also the third, it shouldn't be particularly surprising that Timothy, having only recently heard of the immense success of the Cottard line, might be feeling a bit superior to the others in his class. That, combined with how hard he'd worked for the boy's sake, he was more than a little annoyed to see AP3 himself as he buried his head in his hands, elbows propped up on his spotty, discolored desk nearest that dreadful heater in the back of the class. Still, Timothy and Adam were best friends, which was hardly extraordinary given that there were only three boys in fifth year, so despite any annoyance, he felt it was his duty to try and cheer him up. More importantly, Timothy was concerned that Adam's attitude might be noticed by the instructors.

Casually moving to the back of class, taking note not to disturb Cassie and Fanny who were in the midst of a superficial conversation about their originals, Timothy took the seat nearest Adam. He quickly began to sweat, both from his proximity to the heater and the situation he had gotten himself into.

"How can you stand it back here?" he asked.

"Heat is good for the lungs," Adam grunted in reply, moving nothing but his lips.

After taking a moment to make sure that no student was bothered by his relocation, he lightly shook his friend.

"Hey," Timothy whispered, checking to make sure the instructor hadn't yet arrived, "you need to cut that out before they catch you moping around."

Cassie's laughter two seats in front of him felt wildly inappropriate.

"What's the point?" Frustrated as he was, he still had tact enough to whisper.

Up to that moment, Timothy had assumed Adam was just having a bad day. His reply however, apart from the whispering, was a response Timothy didn't expect. He would never have involved himself had he known the issue couldn't be solved with a quick nudge and a reminder of the code of artificials.

"The point is, you don't want to get transferred... or discontinued."

Adam pulled his head out of his hands and turned to his assailant. There was an unspoken rule in the Cavanagh student house, at least among the students, to never talk about the possibility of discontinuation. It was the subject only of horror stories told by the fireplace in the communal room on more than a few winter nights. Through his hurried declaration, Timothy had hoped to scare sense into his friend. It didn't work.

"I'm not like you Timmy," Adam said. He was the only one who ever called him 'Timmy'. "You're the fifth copy of one of the most famous scientists in the 23rd century. I'm the third of a set of failed copies of a scientist who didn't even matter."

"That's not true!" Timothy desperately hoped Adam would shut up. "We just heard yesterday how he removed the need for silver in membrane switches and circuit boards."

"Yeah, him and two other scientists, and he hardly got any credit... "

"But with the silver shortage, that's still really important."

“I just don’t see the point anymore. You’re always having to help me in physics. Anything past $F=MA$ and I have no idea what I’m doing.”

Timothy didn’t have the slightest clue how to console him. He’d gone too far down this path of self-pity. What’s more, after all the work he’d done to help his friend keep his marks high, seeing him act so pathetic bothered him. The truth was, for all his words of denial, Adam was right. He had no concept of anything remotely science-oriented, and Timmy, under the constant judging eye of Kurt Svedburg, was always forced to make sure he never lagged behind.

Adam took a deep breath, and for the first time, Timothy noticed something dead inside the boy. All the piled pressures and ambitions finally collapsed under the realization that he wasn’t modeled after the world’s greatest scientist, but just another pitiful good one. For some reason, unknown to himself even years later, each time when he looked back on the events with self-disgusted shivers, Timothy felt truly afraid... but at the same time, he felt an inexplicable anger.

For one to fully understand the situation, it must be said that the vast majority of researchers created and raised on those grounds were trained from inception to exchange their feelings for science. Their opinions meant nothing. Their ideas of self worth or self identity, outside of scientific achievement, meant less than nothing. In a way, when Adam Patterson whispered those words to him, he was essentially saying, “I’m without worth. I’m a dud, and I will never accomplish what I was created for.”

In that moment, though it was hardly true of him overall, Timmy believed exactly what he had been told by their caretaker at the time, a one Mr. Phillip P. Morris: *If a student is incapable of scientific discovery, then it isn’t worth the cost it took to create it.* How was anyone else supposed to respect Adam, when he didn’t even respect himself?

“Fine,” Timothy said, “then you’re not worth boiling back here anyway!”

So moved by this sudden rush of anger, he left his friend, stunned, in the back of the classroom and went to take his original seat beside Fanny, who had apparently just finished telling a joke of some kind, as he gathered from Cassie’s adorable, but currently rather annoying, laugh. He plopped his things on his desk as if the wood itself had wronged him. He no longer cared who saw him move. He had barely seated himself in the chair when Mrs. Weinstein strode into the classroom. Throughout the entirety of the hour and half long lecture, he made a point not to look back at Adam. In his mind, Adam had wronged him, and he deserved nothing less.

In the two weeks that followed, Timothy not only refused to engage in anything other than menial conversation with his friend, but he also talked with Kurt and they agreed that, for Adam’s own good, he would stop tutoring him in math and science, at least for now, so he could “find his own footing.” Timothy had planned it all out. Eventually, Adam would beg to be tutored again and, after showing a bit of initial reluctance, Timothy would remind him that he did, in fact, still care about the code of artificials. Having set him back on the right track once again, Timothy would agree to help him, and everything would go back to normal... but Adam didn’t seem to care about anything anymore.

After those two weeks, Timothy made up his mind. It was just a few minutes before lockup, and he found himself staring out the window of the fifth level Communal Boys Room. The moon that night looked as if it were lying on a pillow of fog from the restored Mississippi River Delta. There was little quiet to be found in the bugs and birds outside as he placed the four fingers of his right hand through individual holes in the hexagonal plating that barred the window. The metal and the wind cooled his skin. Kurt had already gone to bed, but Timothy was determined to wait for Adam to get back from his meeting with Mr. Morris. He could already see their encounter in his mind. He would start it out with an apology. Adam would insist that it had all

really been his own fault, and Timothy, knowing that it had, would insist that it wasn't. After that, they would make up, and he wouldn't have to feel so bad anymore... He was still by the window when he heard it—

A loud *thump* outside the door. TC5 waited a few seconds as he came up with the proper pretext to check it out. Acting as if he believed someone had knocked at the door, he opened it for his imaginary visitor. At a safe distance, he saw Morris leading Adam toward the front door – toward that loud darkness and that full moon he had been gazing at moments before. No student born at Cavanagh had ever been outside past 7:00 o'clock in the evening.

Timothy had always believed that anyone who chose to do so could do exactly as he did in class and with his projects, with no more effort than he had needed. That night however, as Adam was led by a hand on his neck, crying, down the fifth and sixth dormitory stairs, he realized that, maybe, not everything the instructors told him was the truth. He feared for Adam. He already missed his friend, and he felt responsible for his fate.

At the same time, almost as strong as his other feelings, a spirit of adventure had been awakened within him. Maybe, he thought, there's more outside those walls than we've been led to believe.

CHAPTER TWO

The Replacement

1. An artificial may never harm a natural under any circumstances. The punishment for such an action is discontinuation.

2. An artificial must obey any commands given to it by a natural, but must always place the commands of its owner above any others. If two commands conflict, and neither is issued from its owner, an artificial is to do nothing; choosing one command above another is a sign of rebellion, the punishment for which is discontinuation.

3. The value of artificial property is assessed solely by its ability to expand our knowledge in the fields of science and technology.

4. Discoveries made by artificials belong solely to the owner or institute that possesses the corresponding patents of authenticity.

5. Regardless of situation, the manufacturer is not responsible for faulty models.

This is the code of artificials, though only one through four reside in the plaques around the Cavanagh School. In the midst of shuffling synthetic children, a student found himself looking at one of those plaques, the one on the wall in the lower house chefs room, a few weeks after Adam was transferred... If you really, truly believe that Adam was transferred, however, maybe you should ask yourself the question that Timothy asked himself that afternoon, as he stared with tired eyes at the gold-encrusted panel on the wall: *Would they really tell us if Adam was discontinued?*

This particular day was not a normal day by any means of the word. This was the day that the fifth level would receive its supposed trade for Adam. Timothy, who until recent times, felt as if he knew his place in the world, was unsure whether to welcome the boy warmly or fight his appearance as some kind of warped revenge for his friend. Though he knew the newcomer had no part in the recent tragedy, he still couldn't quite make up his mind.

The fourth, fifth and sixth level students were all affected by his coming, as all were housed in the same student building, and a transfer, especially at this point in the year, was extremely rare. Even a few of the seventh and eighth years had come from their sister house to see whether or not the transfer was modeled after a scientist they would recognize. By consequence, several artificials from all three levels were experiencing various degrees of malfunction. The occupants of the chefs room were in an uproar, at least if seen in contrast to their usual benign behavior, and with so few releases available to them, they had all gathered there after class, either to eat away their stress or to talk to classmates as they did so. Timothy was left outside the group holding a tray of steak (of the grass-fed beef variety), two baked potatoes, and various other foods that were hard to eat standing up, for with the vast amount of copies packed into the hall, and his current standing with the students in the house, he had also been left without a chair.

Despite the evidence to the contrary, it would be wrong to assume that the other students had shunned him for his involvement in the transfer. Actually, it was Timothy himself who had pushed the other students away. Kurt Svedburg in particular had tried to assure him that he had done absolutely nothing wrong, but in his own insistence that he had, he quickly lost what little respect his actions had earned him... And so, TC5 was to be an outcast until such a time as he himself decided he didn't deserve to be anymore.

Stealing a chair from a restless sixth year, he managed to find a spot at a table comprised of four sixth level students and Cassie Cunningham. Cassie was undoubtedly odd. She had the unusual and dangerous habit of smiling openly, a habit he had only seen in her and in Adam. Timothy rather liked her in those rare moments when she wasn't trying to suck up to the higher-ups or trading pieces of herself to appease lesser minds. Of all the students in any year, Timothy also considered her to be the prettiest. She smiled at him when he sat down, and her teeth were as white as her stunning hair was black. It is a sign of untold admiration that, as weary as he was, he at least attempted to smile back.

They were all engaged in some conversation about economics.

"I disagree," a sixth year said as Cassie turned back admiringly to him, "there can never be a system that takes into account every financial factor. From as far back as 1637 when the 'Tulip Mania' fiasco happened, we should have realized it. In that case at least, there were signs of collapse... if a single tulip bulb is worth five to ten years salary, you should guess a collapse is imminent."

The table laughed in the way artificials often did: reserved, controlled, as if their laugh were simply a social choice – and for many of them, it was. As the student finished his thought, he had turned to Cassie for approval before continuing. Timothy suddenly hated him.

"But even if every country were based on the gold standard again, what if Brazil for instance, while mining a comet, found 1000 tonnes of gold... that could throw off the entire global economy. That's why there's no perfect system. Capitalism is great until people start winning that little game of monopoly. Communism is great until people realize they can sail by without working as hard. Fascism is wonderful as long as everyone is in on it – but there's no single system that *can* work perfectly, so it's pointless to try and figure it out."

There was a certain student at that table who was not impressed by JM2's argument, or rather his ability to recite the chief idea in John Harold's *Only Flat Road*. This student vivaciously attacked his steak, hoping to finish before he was somehow pulled into a conversation that couldn't be further from his mind... but Timothy was far from the only student in that room thinking outside of what their current communications would normally allow. There was a new face at the only entrance to the dining area, and as much as the current speaker wished to continue his tirade, he was stopped by the sudden silence that invaded the room like a strong wind bursting through the door along with their caretaker and the dark haired boy that accompanied him. So strong was this rushing silence that JM2, without even realizing the boy was there, stopped in mid-sentence during a particularly extravagant mental flourish.

It was an awkward moment. Several students had acted as if there was no sudden lull in their speech, but it was painfully obvious that the black-haired boy was on the mind of every single artificial in that room.

"I see you've all noticed our new addition to fifth year," said Morris coldly to the present student body, his voice as oily as his hair. He might have seemed normal to the students if it weren't for his strong Italian jaw, his all-knowing presence, and that oily, oily voice. "This is

Isaac Sanderson Four, chiefly an Astronomer by education. You are to treat him as you would any other student.”

A student raised a shaky hand.

“I’m not here to answer questions,” he said, and then, turning to the boy himself, “you can continue your tour, or I can leave you here. What do you want?”

IS4 blushed at being asked to decide something so important.

“I suppose I’ll stay here if you don’t mind.”

“As you wish. I don’t have the time anyway.”

Morris stalked off. Maybe he was angry. Maybe he was relieved at no longer having to speak to an artificial. There was not a student there who was sure. In fact, there was not a single student in any level who could tell anything about Philip P. Morris other than the fact that he didn’t particularly like them.

The girl who had raised her hand, raised it once again, with much more confidence now that Morris was gone. Isaac turned even redder, a side-effect of being put in the position of a teacher.

“You don’t have to raise your hand. Just ask and I’ll answer whatever you want.”

“What school are you coming from?”

He ran his hands through his hair, an enviable habit he had picked up from an instructor he once had.

“The McDonald’s Research Facility in San Bernadino, California.”

“Was your original an Astronomist as well?” another student asked.

“No, actually, but my last two were.”

“So you’re a four?”

“Yes... Are there any other fours here?”

There was silence for a moment, then the girl who had asked the first question replied.

“There are two, but none in the lower student building... but we do have a five.”

Timothy shrank down in his seat. It was obviously the same at other schools. Your number was a sign of your worth. If you managed to get copied enough, it showed a unusually high value. The first copies weren’t considered worthless by any means, but they had to work much harder to earn respect. Timothy, however, unlike many of the upperclassmen like Scott K. who now resided in the 7-12 building to the right of their own, never took any solace from his high number. He felt even more strongly than the other students that, if he failed to achieve something, it was clearly through a fault of his own and not from a lack of good genetics.

“Really?” Isaac asked. “I’ve never known a five. Can I ask... Is it okay, if I ask who it is?”

A few tactless fingers pointed toward Timothy. At that very moment, as Timothy readied himself for anything that was to come, their vision met for the first time – a boy who longed to know more about the world outside those walls, and a boy who had seen just that. The two seemed almost destined to be the best of friends. It shouldn’t be surprising then, that after the questioning had died down, Isaac shuffled over to Timothy’s table and took the recently vacated seat on his left.

“I heard you’re in my year. And a fifth too! I’ve never met a fifth before.”

“Timothy,” he said, holding out his hand, longing for a change in subject.

The action in the hall had died down, and the boys quickly had the table to themselves. The fear that Timothy felt, that every student continued to feel for at least a few more weeks, at the prospect of a complete stranger joining their ranks, was quickly abated. Though they were raised in extremely similar situations, they were equally fascinated by the hundreds of minute differences they found between the two schools. To each of them, the rules of their parent school

seemed more sacred than the teachings of religion to the naturals. Isaac laughed happily when he heard that he was to receive a two hour lunch break after only two classes, as did Timothy at the prospect of having breakfast at 8:00am instead of 7:00am. Isaac spoke with the passion of countless desires and fears, as openly as if he were thousands of miles away, talking to a friend on a distant beach, walking near the water, squishing sand between his toes. Timothy shifted his speech to match him, but Isaac's presence was overpowering, and he eventually fell to reflecting Isaac's fears and desires instead of discussing his own. Despite everything, it was Isaac who would be the more impressed of the two; he found something in Timothy that he had not expected to find in any artificial apart from himself: a broader perspective.

They talked their way through nearly a full hour when the single sharp *DING* of the one o'clock bell, a symbol equally revered at both schools, reminded them of their duties. Timothy turned his words mid-sentence to ask the new student where he was supposed to be.

"I don't know!" Isaac said, "Your headmaster never told me!"

"Come with us then. You're in fifth level after all. I'll ask the instructor if it's okay."

Isaac nodded, looking rather doubtful, as if on the first day, the instructors had nothing better to do than ship him off to Packingham.

CHAPTER THREE

Westhart

“This is IS4, the new transfer student,” Timothy said, presenting Isaac to Mr. Westhart. He was dead serious as he entered the room, but he couldn’t help but enjoy the sudden hushed and extremely obvious murmurs that accompanied his announcement. In that moment he felt extremely important; everyone was thinking about the new student, but it was Timothy who seemed to know him, and that gave him a sort of power. The glorious moment lasted all of two seconds--

“I’m unaware of any new student in fifth year. You’re not on my list... I’m sure I would have been alerted when AP3’s transfer came in,” Westhart said, eyeing Isaac suspiciously from behind his Mohogany desk. “I’ll have you know that if this is a prank of some sort you’re libel for some serious punishment... You’re not an upperclassman are you?”

Isaac did look older than he was.

“Please, Sir. I just arrived today. I’m sure the headmaster would have told you himself had I continued my tour.”

“There is no headmaster here. If you mean the caretaker Mr. Morris, I will be contacting him about this matter shortly after class is over. For now, take your seat. Advanced Logic can be a tricky subject on its own, for your sake I do hope you’re willing to put in the work necessary to catch up.”

Timothy took a seat in the back, and Isaac, more than a little shaken, instinctively took the seat next to him. Timothy was pleased.

“If some men are doctors, and some doctors are tall, does it follow that some men are tall?” Westhart asked Isaac the moment he sat down. It was an easy question compared to what the rest of the class was covering at the time.

“Well... not necessarily, Sir.”

“Why do you say that?”

“We don’t know anything about the doctors themselves. What if only the female doctors were tall? If we are supposed to go on your information alone and not factor in our stereotypes of the medical environment, for all we know, the only doctors who are tall by your definition are some kind eight foot aliens.”

“Well said. There are many implications to a question such as this, but the logically minded must never assume we know anything for certain.” Westhart nodded approvingly toward Isaac. “If you are indeed supposed to be here, then I think you’ll catch up just fine.”

Westhart was an attractive man of about fifty with short graying black hair that tended to grow where it shouldn’t. He was a drinker in his free time, and was a man convoked and conserved by black and fowl coffee. He was the best teacher in Timothy’s opinion, but his constantly fluctuating facial hair wasn’t the only thing about him that signified nonchalance. He tended to let class go a few minutes earlier than was strictly allowed, simply walked out for leisurely ten-minute coffee breaks, and was easily distracted from the lesson topics if you had the proper combination of question and timing.

Isaac was fairly on top of things for a new student. He had already read the approved works of Machiavelli, and understood common fallacies well enough to answer a question on readings that he had never even been given. Between his academic abilities and his position as a four, the entire class, Timothy and Westhart included, were dutifully impressed. The highlight of the day came when Mr. Morris slipped into the classroom to apologize to Mr. Westhart for not informing him of the new transfer. Isaac was so relieved that the unpleasant business had been concluded that he didn't much mind when Morris went on to address him in front of the class: "Of course, had you stayed with me as I had originally planned, you would have received a note explaining your arrival. Maybe you should value the opinions of us humans over those of your peers."

Such a great day this was, with the making of a new and intelligent friend, that Timothy soon began to forget his troubles. He finally felt a calm he hadn't known in weeks. He might even have been restored to his usual social self had Mr. Westhart not stepped out for his usual 2:00pm coffee break. A few minutes after he had gone, angry at being left out of every conversation that had sprung up in his absence, Fanny interrupted the happy musings of the two boys as they were fast becoming good friends--

"Are you planning to get this one transferred too, Timothy?" she said loudly, quickly hushing Kurt at the front who had been explaining a particularly complicated fallacy to Cassie. Timothy's face turned a painful crimson.

"What does she mean?" Isaac asked.

But sometimes simple words are enough to remind us of feelings that might otherwise be forgotten. Timothy knew he could easily explain the events to Isaac in such a way that the newcomer might understand and maybe even offer him a taste of the forgiveness that he longed for so desperately, but he couldn't bring himself to respond. In part, he wanted to punish himself, but mainly, he had simply lost the desire to defend himself. He felt a fleeting glimpse of what Adam must have felt before he was taken away, and this realization reinforced the seal on his lips and kept him unresponsive despite the many questions.

Class started again and ended without the boys sharing so much as a glance. Isaac hoped that when the lesson was over, Timothy might be more responsive. When the moment came however, he quickly gathered his things and walked out of the room. Despite IS4's stifled shout of "But I don't know where to go!", he walked all the way down the hall, signed out with the doorkeep and took to wandering the grounds.

Isaac stopped at the door. He wanted to follow, but the idea of being allowed to walk the grounds outside was a new one. It still felt like a sin. The doorkeep, looking him over with her questioning eyes, tricked him into turning back to the hall from where he came, and that's where Cassie took pity on him.

"Timothy is like that sometimes," she said knowingly, catching up to him near the door of classroom 6, the Physics room. "He's special. He really is one of the smartest ones here though."

"What was she talking about? What happened?"

"That was my fault. I shouldn't have said anything to Fanny about Adam. Kurt told me what Timmy told him and... well, I didn't think she'd take it that way."

"But what happened?"

"There's Projects next." She ignored the question. "It's optional whether or not you want to go – everybody completes projects at different rates – but the projects themselves aren't optional. You do one per class per trimester. If you want, I can show you the way?"

Isaac nodded, and off they went. The 4-6 building was much smaller than the place Isaac had stayed at in McDonald's, but he walked close to Cassie's arm for fear that he might lose his way.

CHAPTER FOUR

Now We Can Stop Lying

This wasn't the first time Timothy had set off to wander the grounds, and if things continued the way they had, it wouldn't be the last. When times were at their worst, he would often use the long lunch break after the two morning classes to step out onto the wet grass outside and run a hand along the rough granite of the ashlar wall – sometimes almost all the way around the facility. Oftentimes, like today, he found himself completely alone. On occasion, when he was sure no one was watching, he would peer through the best crack in the east wall, and try to spy the folks from the nearby town – doctors and scientists, people with some affiliation to the facility – who were sometimes reported to make their way in hiking groups and camp not far from Cavanagh. He did glimpse a deer once, which is pretty rare anywhere these days, but he never did find anyone who had strayed quite so far from the town.

Today, however, as he came across the best and widest crack in the wall, he walked right on past it. *Am I broken?* he thought, caught in the cadence of his steps, staring at the dress shoes he'd been given for fifth level. An artificial was genetically enhanced to feel less than their human counterparts, but he had always suspected that he had a reportable amount of excessive feeling. He had even told Morris as much at a more trusting, younger age, but Timothy had always been too valuable for the strictest application of the rules. The original Cottard was one of the first scientists deemed too important to die, all the way back when facilities like Cavanagh didn't even exist. The latest reproduction that walked those grounds was a continuation of a legacy too important for progress to allow for a faulty model. It can easily be presumed that if Timothy weren't both a Cottard and a five, he would never have been able to avoid discontinuation as long as he had. As it was, without these walks to dissipate his more powerful emotions, nothing could save him.

The grounds he walked were divided into several sections: the main field, the gate with its thick double wall, the groundskeeper's shed, the fruit and vegetable garden, the model manufacturing building, the 0-3 building, the 4-6 building, the 7-12 building (also known as the research preparation building or the University), and the final stop in the cycle of a Victor Cavanagh artificial, the enormous research mansion that cast a shadow over everything else at some point in the day. Everything about the facility was designed by the best minds that could be bought. Nothing was left to chance. Take the house visitation policies for instance: A student is allowed to visit the lower houses, apart from the model manufacturing building of course, at any time they aren't in class, at a health appointment, or otherwise in a mandatory meeting of some kind; a student is not allowed, however, to visit the building of the levels above it. An artificial in the lowest student building, the 0-3 building, would not be allowed to look in on any of the other three buildings. Conversely, an artificial that had reached the mansion and had obtained the title of "Doctor," could, at least theoretically, visit any building it liked. At first glance this policy may appear arbitrary, but nothing about Cavanagh was ever arbitrary. Things were set up the way they were to keep the unhappy students always looking forward. If they always believe that things are going to be better, or at least different, then they are willing to keep their minds open,

and if someone – or *something* as is the popular belief – is told the same thing long enough, he/she/it will eventually start to believe it... and Timothy had always believed everything.

Throughout Timothy's life, despite his tendency to break the rules, he had always wanted to be exactly how an artificial was supposed to be. In that particular moment of perpetual walking, he wanted to be just like Kurt. Kurt was logical and had just the right level of permissible emotion; he was also clever, but not clever enough to cause problems. For the first time since his creation, however, Timothy was actually enraged at himself for being different than the other students. If Timothy were like Kurt, then Adam might still be there, secretly picking his nose in lectures and, when they were alone in the common room, grinning wildly at strangely worded passages in *Electronics, A History*. Adam might still be living in the fifth year boys room, whispering words to Timothy after lights out...

The older Timothy became, the more he started to feel the pull from the hidden forces of the school. Now, with every pull he wanted to yank back with a stronger force of his own, but he was, in his entirety, simply a puppet dangling from strings buried deep within in his back: the thick strings of Cavanagh.

And so he walked unsteadily, as if against a wind that wasn't there, almost hoping someone would stop him. With every step he imagined that Morris might burst out of the ground, see his face and finally realize he didn't belong there.

Timothy signed back in around 6:00pm, just an hour before the house closing time, picked up his dinner from behind the cooking counter and took a seat at the furthest round table from the door, in the corner of the room, as he had begun to do. He wanted to finish his dinner quickly so he would get a chance to shower, hopefully alone, before lights out at 9:00pm, but he wasn't particularly surprised when Isaac appeared opposite him. The new transfer sat down like the seating arrangement had been planned for years. He fanned his arms out, taking possession of the table. Timothy made moves to control whatever conversation might arise.

"Did you wind up at Projects?" he asked before Isaac had a chance to speak.

"Yeah. Your Projects teacher was really weird – maybe *teacher* isn't the right word. He doesn't really teach anything, does he?"

"I suppose not."

Timothy noticed that Isaac hadn't brought over a dinner tray.

"Is he normally that quiet?"

"He never says anything to any artificial. He won't even respond to important questions, even though he's definitely, absolutely not deaf. Kurt and I proved that once."

"Why doesn't he speak?"

"I don't think he finds us worth his time..."

Timothy took advantage of a lull in the conversation to down a handful of baby tomatoes. Just as they were starting to bond again, Isaac scooted around the table near Timothy. "About earlier, what was that girl talking about?" Isaac asked.

Timothy stared at him, marveling at his audacity. Just who did this kid think he was?

"You can't just come here and expect to know all our darkest secrets on the first day! Things like this take time."

"I won't judge you... and I know I don't have a right to ask, but we are going to share a room, right?" Isaac said. "I'm going to hear about it eventually or it's going to be a very awkward next ten years or so."

Timothy smiled weakly in spite of himself, but it felt wrong, and so he stopped.

"I'm sorry I left you without anybody to show you around."

“Don’t change the subject. I don’t care about that.”

“Well, maybe you should!” Timothy didn’t have any idea what he meant. He just wanted to talk about something else, and it didn’t matter what it was.

“I swear—” Isaac scooted closer “—whatever you tell me, I won’t tell another soul. Not the caretaker; not anyone.”

Timothy was visibly shaken. Who was this boy who thought he could just come into his life like that? Timothy hated him. He hated him. HE HATED HIM! How could he trust anyone with information like that? Morris could have easily put Isaac in fifth level to spy on him. Timothy was shaking, but he had to tell someone. He couldn’t go on like this anymore, and if the boy would tell on him, then at least the betrayal would be the final bit of pain that he would feel.

“He was in my year. We were manufactured just a few weeks apart. Sometimes he was a huge pain, but he was also my best friend,” Timothy began, picking a place on the spotted white table to focus his eyes. “I didn’t report him if that’s what you think. I might as well have though.” His words carried with them a dangerous amount of emotion. “I knew Adam was faulty. We all knew – but somehow I... convinced myself that I actually cared. If I had just – just ignored the stupid rules, he’d still be alive.”

Tears filled Timothy’s eyes. If Isaac was smart at all, he would get away from that table as fast as he could and never look back. He was focused on the spot. Things were silent for a while. He imagined he heard Isaac leave, and then he felt Isaac’s hand grab his own. Timothy squeezed the hand as hard as he possibly could, keeping himself from crying openly in front of the artificials. If the transfer student was in pain, he didn’t show it. The boys knew that, if anyone saw them like that, they would get reported, and both of them would be discontinued... but somehow that painful crunching of bones was worth the risk of death.

When they finally let go, the boys looked around in horror, searching for signs that they had been discovered, but not a single student had turned their gaze from their own plates to look their direction. Somehow, a simple touching of hands didn’t warrant the attention of anyone.

They talked for a while longer: about Adam; about their lives; about nothing in particular. The conversation didn’t matter quite as much anymore. When they finally left the Chefs room at 7:30pm, they broke apart – Timothy toward the showers, and Isaac into the fifth year boys room to investigate his new school supplies and the schedule that Morris had promised to send up during his rather short tour.

When the fifth level boys met back at their room thirty minutes before lockup, Kurt was quite surprised. It looked to him as if Timothy and Isaac had been friends for years.

CHAPTER FIVE

Two Black Holes

Timothy, along with all the other students, woke up the next Friday to the 6:30am bell. He went to the bathroom to brush his teeth with a powerful electric toothbrush, the closest thing an artificial had to a possession, and was quickly joined by Kurt, and shortly thereafter Isaac. His new roommate, finally getting acclimated to his new surroundings, managed to sleep well for the first night since he'd arrived.

Breakfast was nothing special. After giving Cassie a red-faced hello, Timothy joined Isaac in the usual spot, at the furthest table from the door in the corner of the room. Neither boy was remotely surprised when Kurt joined them as well.

"Didn't get a chance to order yet?" Kurt asked, eyeing Isaac's tray of standard rations.

"Actually, I did. I wasn't much sure what to order honestly. Our meals were chosen for us at MD."

"You'll get used to things quickly here," Timothy said, "Stephen, SM2 in Sixth, was a transfer a few years ago. He was so worried he would do something wrong that he wound up getting full marks in everything."

Isaac chuckled. Timothy picked out the cantaloupes from his morning fruit.

"So..." Kurt said. He had abandoned his food and had gotten real quiet. Timothy found himself leaning forward to catch the words. "Before you left, did you meet the student you were traded for? Adam Patterson. Code AP3."

Timothy had stopped himself from asking that very question many times before. He ultimately decided that he didn't want to know. Nonetheless, he listened intently.

"No..." Isaac said, and turning to Timothy: "but that doesn't mean anything. MD is a much bigger school than Cavanagh. They sometimes separate out students as a kind of orientation, and even if they didn't, he might have been put in the previous year, which is on a completely separate campus."

Timothy was relieved to see the mail trolley making its way along the wall to their table. It meant that he didn't have to respond. The cart was being pushed by the usual plump Eastern-European girl. Late twenties, cropped black hair.

"TC5," she said, pulling a small green envelope with an embossed Cavanagh crest off the cart. She placed it near Timothy's fruit bowl. "KS2." She again took out a small green envelope, which this time she placed directly in front of Kurt before turning to stare inquisitively at Isaac.

"IS4," Isaac said.

"Ohhh, another four! Well, I'm glad to see we're trading up! There are far too many twos here if you ask me. Anyway, here's your mail."

She handed Isaac another green envelope. This one, as it contained an introduction packet, was slightly larger than the other two. All the "mail", as Timothy found out before Isaac had even received his own, contained a tiny hand-written note from Mrs. Weinstein that said, "Personal History will be changing its scheduling due to the addition of a new student." As the cart continued its journey toward the last few remaining tables, Isaac studied Kurt carefully, trying to read his expressionless face.

“Are you offended Kurt?” Isaac asked finally with an air half-way between a question and a consoling remark. Despite a long moment of study, Isaac had confused a perfectly normal sniff for a sign of offense.

“What do you mean? Why should I be offended?”

“Oh, I was just asking. Nevermind.”

“No, I’m curious why I should have been offended.”

“I just meant... because you’re a two.”

Kurt held his hand up to silence him from saying any more as he labored to swallow an overzealous bite. Isaac turned unsurely to Timmy.

“She did say ‘KS2’, right?”

“Yeah, that’s it,” Timmy said.

“Yes, I’m a two,” Kurt said. He cleaned his fork with his mouth and placed it neatly on the napkin by his plate. “But I’m also not human. The way I see it, what’s the point in having an opinion about something you can’t change? I am what I am, and I am *where* I am, and neither of those things will ever change... Do they take offense to things like that at your school?”

Isaac blushed.

“No I suppose not.”

Apart from some minor discussion about classes, the rest of the meal was consumed in silence.

Personal History at 8:00am was exceedingly boring. Technically, Isaac, who was a four, should have been taught his history next, but it was apparent from Mrs. Weinstein’s unfounded annoyance with IS4 that she had yet to learn the history herself. Instead, much to Timothy’s dismay, the class learned about the life of Fanny’s original – a phylogeneticist by trade. Poor Mrs. Weinstein, who was a historian and not a scientist, would have had a hard enough time explaining what exactly the original Fanny did without the myriad of questions the latest one asked whenever she paused to take a breath.

“But what did she discover that made her so important?” Fanny asked at the very moment their teacher took a gulp of water.

“I told you!” Mrs. Weinstein squealed, turning to read from a Cue card, “various improvements to resampling measures of group support!”

Physics at 9:30am wasn’t much better as far as Timothy was concerned, but Isaac finally found his footing – the Physics program at MD had easily been the strongest thing about the school. Shortly after Isaac had thoroughly amazed Mr. Barrerra with his knowledge of basic quantum mechanics, Timothy and Isaac went outside for the early part of their two-hour lunch break.

“Wow, this is amazing!” Isaac said, when they got a good look at the large playing field, “I hardly got to see any of this when I came in yesterday. I can’t believe how huge this place is!”

Timothy felt a certain rush of pride in his surroundings and in his friend. It was a delightfully dull charcoal day outside. The clouds were carved as if from rock and all of nature had conspired to hide in the breathless silence typical of an early morning. It was beautiful in a hidden way, but Timothy had always seen past the accepted ideas of good weather.

“Isn’t MD bigger?” Timothy asked.

They began to walk diagonally across the field toward the research mansion.

“There are more students, but the campus is about the same size... when do students get to use the field?”

“It starts at seventh level I think. They seem to play a lot of American football in the prep house.”

“I hope so. I’ve always wondered how it’s played! How come nobody else from our house is out here?”

“They don’t care enough mostly...”

“That’s because they can have this anytime they want. I’ve almost never been outside before.”

Timothy played with a thought in his mind.

“If you like this,” he said. “I’ll show you the best place here – but only if you want to see it.”

After a few hundred sock-dampening steps, the pair had walked around to the side of the research mansion nearest the wall. The long gap between the building and the wall was easily accessible as it was fully three feet wide, but very few students were remotely aware of it. Timothy hurried through the dark gap, crunching the same leaves he always crunched, nearly tripping on a familiar curved branch, shimmying under a jutting heat-exhaust pipe. Finally, he made his way through to the back corner of the building. The other boy slowly followed his lead. He was much more careful of his steps as he made his way to the area where Timothy had stopped. When he got there, he was in a zone completely secluded and neglected by the small cameras that covered even the walls of the shower room.

The sky was entirely blocked out by the high wall and the overhanging roof of the building. It was cold and damp and dark. Hardly a ray from the smattering of light that escaped those opaque clouds found its way back here. Timothy was waiting for his new friend’s reaction. Isaac could tell from the way TC5 held himself that he cared deeply what he thought of this place, but Isaac wasn’t protecting his feelings when, after a few pained moments, he exclaimed, “This is the greatest place in the world!”

And so it was. The location of the place didn’t matter at all. Even the cramped feel and the bugs were no more to the boys than kelp in a net of fish to a boatman.

“There’s a feeling this place gives me. Have you ever felt it before?” Timothy asked, “Like you’re completely alone – completely by yourself.”

“Just once,” Isaac said, taking a seat on a log moist with rot in front of a sharp corner of the research building. Timothy joined him, and they sat facing the almost unknown fourth corner of the wall, seated in a lopsided triangle.

“I don’t come here very often. I don’t want them to know it exists. I feel almost human here, like I’m on the other side of the wall looking in.”

“Don’t say that.”

“Why not?”

“It’s like what Kurt said at lunch. The human part. There’s this idea like we’re so far away from humans... It’s not true. Think about it – is genetically modified corn still corn?”

Timothy did as he asked and thought about it for a moment.

“Technically it stopped being considered corn in the mid-two-thousands.”

“That’s not the point. People lived on it for years. It smells like corn. It tastes like corn...”

“But it will never be corn. Not really.”

The boys shifted to the ground, propping their backs up on the log. Because they were on the corner of the building, their backs wouldn't have reached their own separate wall. On the ground, Isaac alone felt the strange heat from the exhaust pipe that mixed uncomfortably with the fog, sending a strange shiver down the left half of his body.

"There's a theory that IS3 came up with – it's probably the reason why I was considered important enough to be made. Do you know about black holes?"

"Yeah."

"Tell me what you know."

"Well, black holes are huge. I mean, they're normally pretty big. They have the highest mass per area of anything in the known universe. There's one at the center of every spiral galaxy, and that's what keeps the planets revolving around it."

"Right. A black hole the size of a bowling ball would have more mass than all the planets in our solar system combined. Anyway, the Third was thinking about the Andromeda galaxy, and how it's supposed to collide with our galaxy, the Milky Way. Well, he got to thinking, what happens when two black holes collide? Now, if one were significantly smaller than another, the bigger one would probably suck in the smaller one and expand in size – but what happens when two black holes of almost equal size collide? Given no significant factors, the mass of each has to exert about the same force on the other at any distance."

"Right."

"Well, the popular theory was that they would just combine like when two stars collide – but the Third had a different idea. What if both black holes try to suck in the other black hole, and the closer they get, the stronger the force from each black hole to the other one. It's conceivable that, when they are just about touching, that the force could be so strong that each black hole could be inverted – nullifying the gravity that holds the mass inside and shooting matter across the universe! Think of how much matter could be in two supermassive black holes!"

Timothy imagined the explosion shooting out whole dazzling constellations and big gaseous planets ten times the size of Jupiter.

"But that's not the best part of the theory." Isaac continued. "What if what we knew as the big bang was just two supermassive black holes colliding all that time ago? If that explosion resulted in all the known universe, think of how big the universe really is! And in that enormous giant of a universe, we're really not that far away from the humans, are we? We live in the same time, on the same planet, share most of the same DNA. So whether we think what they want us to or not, we still think, don't we? ... And that's got to put us pretty close."

Timothy didn't know what to think. He couldn't stop imagining the giant explosion Isaac talked about as if it were just a tiny pin prick of light on Mr. Westhart's blackboard.

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