**A life by any other name**

Andrew Wong sleepily hit the snooze button on the hotel alarm and turned over to fall asleep again.

A knock suddenly sounded on his door. Grumbling and whipping the sleep from his eyes, he slipped on a pair of jeans and looked out the keyhole. A myFriend was there. It must have cost them a fortune.

“Mr. Wong, you requested a wakeup call at…” The voice paused for a second then changed tone, “Nine… forty-five,” another pause, “…in the morning.” The synthetic voice broke up the numbers and said them one at a time, like a cheap voice to text program. They must have gone for the lower end C model he thought. Still, that level of voice synthesis was basically criminal.

He realized he hadn’t opened the door. He stared at the knob for a second. “I’m up” He said finally, “uhh, thank you.”

The myFriend made no sign of recognition, but merely turned and left. They really needed to work on context sensitivity.

As Andrew hurriedly put on his winter coat and the rest of tired bland clothing required to exist on the east coast in the winter, he realized that that might have been his only real interaction with the myFriends outside of the lab and testing. He would have to arrange to get one of the models at his own house. And it should probably be one of the A models. That speech was really horrendous.

“Andrew!” The slightly portly man leapt to his feet. Andrew quickly surveyed the establishment. Dark wood, a tasteful amount of glass, white table cloths. This was no place for lunch. He feigned a smile.

“Senator Sarrow. Thank you for inviting me.” He said, reaching forward to meet the man’s already extended hand.

“It’s really been years hasn’t it?” The senator asked, clapping his hand to Andrew’s back and motioning with the other towards a booth in the back of the establishment.

“Not since undergrad actually”, Mr. Wong answered. “We hung out with different crowds.” He added, before realizing what he had said.

The senator didn’t seem to notice. “Well it’s great to see you. I’ve heard a lot about your work. Who hasn’t? Facebook stock is higher than ever!” He motioned for Wong to take a seat.

“Amazing really. Who’d have thought we could have robots in our house this soon? You remember just a decade ago? People said it was a pipe dream. Amazing work.”

Andrew didn’t quite know how to respond. “It truly is amazing. To others’ credit, I just expanded upon previous work by…”

“No no no, too modest!” Senator Sarrow proclaimed, waving dismissively. “Everyone knows you’re the best. I wanted to thank you for meeting us here.”

“Right” Mr. Wong said, glancing around. “Where is Ms. Brown anyway?”

“Ah, she’s quite known to be habitually late, so I gave her a time five minutes earlier to compensate. It looks like I should really make that ten.” Sarrow said, both of them subconsciously directing their attention towards the door.

“Well, I just wanted to tell you, I completely support your company’s position in the lawsuit. I’m sure the court will see reason. It would be insane not to.”

Wong nodded. “We should probably wait until Senator Brown gets here. She’d want to hear what we both had to say… That’s why you two invited me here in the first place right?”

Sarrow looked a little taken aback but then nodded agreeably.

Suddenly changing subject, he produced a menu from nowhere and presented it to Wong. “Everything’s amazing. There’s a reason my picture is on the wall there.” He pointed to a small framed picture.

He wasn’t particularly hungry but he scanned the offerings. There were no prices. The wine list was about three times as long as the actual menu. There was lobster.

The door slammed open, unfortunately letting in the inhumanly cold winter air. A woman stepped in and made her way to where the two of them were sitting.

“Dr. Wong?” She asked, handing off her perhaps real fur coat to a waiter who had materialized beside her.

She also extended her hand before he had time to reply.

“Ahh yes.” He stuttered. Suddenly realizing he was still seated, he rose and shook hands. “I assume you are Ms. Senator Brown?” He asked. Before glancing around, and reseating himself, not sure what to do in the situation.

“Yes, I see you and Daniel have already met.” She pointed out, sliding next to Andrew. “And If you mind, I prefer just ‘Senator Brown’”. He opened his mouth to apologize but Sarrow beat him to it.

“Actually, he and I went to Yale together.” Senator Sarrow responded, probably purposefully name dropping both the institution and the relation to him. Andrew shut his mouth.

“Intriguing,” the suit clad woman said, “Dr. Wong has apparently been doing some great work for the Center for Language and Culture. The board and I couldn’t be happier.”

“Thank you, although really, its just in my spare time” He started.

“Nonsense. Your work on helping us develop our Chinese offerings has been invaluable.” She grinned.

He somehow felt like a small fish being encircled by two much larger and hungrier sharks.

“Are either of you hungry?” he asked, offering his menu to the female senator, if only to get them to stop talking for a second.

It worked. Her eyes lit up, “oh they have beef wellington.” She remarked.

“Everything is amazing.” Sarrow assured the both of them, Wong for the second time. “There’s a reason my picture’s on the wall over there”, Wong blinked. Was he repeating himself on purpose?

Sarrow winked at him, and subtly indicated at the other Senator.

Although she seemed deep in concentration over the menu, Wong could make out a momentary frown.

Sarrow decided to drive home his advantage. “Brown and I have had a little competition the past year or so. We both try to outdo one another on the restaurants,” He turned to Ms. Brown, “but I think that’s about to end,” he said somewhat masking a grin, “no place that I’ve found is better than Whitney’s”

“Ah, and here is Whitney.”

A well-dressed man in a black serving suit appeared. He must have been at least six and a half feet, and he towered over everyone at the table.

“Senator Sarrow, Senator Brown and… ” a small pause, “Dr. Andrew Wong! A pleasure to make your acquaintance!”

The group put in their orders, Wong making himself content with just a ‘simple’ burger that offered sautéed expensive sounding mushrooms and onions as well as some sort of homemade sauce of the chef’s own invention. Whitney took his order with a smile. He did not ask Wong he would like the burger. There was only one answer. Anything else would have been culinary sacrilege.

Brown ordered the Wellington and Sarrow ordered the tuna.

“So this is a regular thing for you two? Pardon my bluntness but the media seem to think you two are um, mostly at odds.”

“Certainly, I disagree with many of the positions that Senator Brown espouses, but at the end of the day, we are both trying to represent our constituents and make the county a better place. There’s no reason we can’t talk civilly with one another. Would you agree?”

Senator Brown nodded. “Sometimes the best way to learn is to walk into the lion’s den. I…admire Senator Sarrow’s resolve even if he is completely wrong most of the time.” Wong could figure out whether or not she was joking. Her face revealed nothing.

“Well, let’s jump right into it,” Senator Sarrow proclaimed.

“Stop me if you disagree with anything I say Rachel,” She grinned. “I’m not sure if you’ve read the news surrounding the hill these days. This lawsuit that facebook has landed itself in had turned into something much larger. It hasn’t even gone to appeals yet, but there’s some speculation that it could find its way up to the supreme court simply based on the raw, incendiary, questions it brings up.” Sarrow said staring suddenly at Senator Brown, punctuating each of the words in the list with a brief pause.

“What Daniel has neglected to mention is that it’s a completely polarizing issue. And we have seemed to have found ourselves on the opposite sides of the table once again. Hence the need for someone impartial, who knows the science and the technology.”

“I assume this is about the myFriends?” Wong asked. “I practically have to stop reading the newspapers. So much of what they print is misleading. The blogs are worse.” He added.

“Well, that’s why you’re here, as Rachel has pointed out. Put simply: the myFriends, they’re the first commercial robots capable of, well, basically everything I can think of. So, are they sentient?”

Wong sat in shocked silence. “Sentient?” he repeated.

“Yes, that’s basically what the issue is about, and where we think the lawsuit might go. A supreme court decision on this would be a game-changer for both Facebook, silicon valley as a whole and civil rights.”

“Sorry senators, I’m just a little surprised by the question. Umm no, the myFriends aren’t sentient. They aren’t even close.”

Wong thought he heard Sarrow exhale a bit.

“Well, that’s good to know. You know its somewhat hard to tell.” Sarrow added.

“Hold on a second.” Senator Brown said, “lets get into this more. Remember, we’re not uneducated, but we’re completely unfamiliar with your field Dr. Wong. I apologize if our questions seem, well, naïve.”

“I’m sorry, I didn’t mean to insult…” Mr. Wong began.

“No, no. That’s why we are both here. To learn.” Sarrow said. “Someone has to have an informed discussion on the hill nowadays.”

“Yes, learning.” Senator Brown said hurredly, “can you explain to us, perhaps very simply how the myFriends work then?”

“Uhh, sure thing. From a mechanical standpoint? Or it seems you’re more interested in the software.”

“Actually can you quickly go over the hardware? I believe part of the reason people assign so much intelligence to them is that these things look human like, at least from the waist up.” Sarrow said.

“Sure, the mechanical team started with a wheelchair chassis, one of the new ones that is gyroscopically stabilized. They shrunk the wheels to reduce the overall profile and that’s basically it as far as locomotion goes.”

“A wheel chair?” Brown asked.

“Well, the team’s goal was to develop something and get it on the shelves before we lost the competitive advantage over Google. We needed stair climbing capability, and the technology was already there. Plus, the gyroscopically stabilized base allows a greater range of arm movement without tipping. Think of a Segway or one of those ‘hoverboards’. By the way, I assume none of these details will leave this room?” He asked.

“No”, Brown replied

“Of course not”, Sarrow assured him.

“I guess it doesn’t matter too much now, I hear Google’s model has passed all their tests. They’re just waiting for distribution.”

“Anyway, working upwards, its torso houses most of the electronics as well as the battery. Its got two six degree of freedom arms and they basically just took the best hands they could get at the time. But what’s really impressive is the sensor suite on the head and the software, which is what I’m sure you two are most interested in.”

The two nodded.

“Again, none of this is to leave the room. My team and I didn’t have enough time to do a good job with this first model. Its all preprogrammed responses with some path finding and some dedicated NLP hardware for speed reasons.”

“Sorry I don’t quite understand.” Sarrow said, “What do you mean by preprogrammed responses?”

“Basically we took the top hundred million common human-robot interactions and made the robot able to respond to only those. Reaching for things, some sports, simple conversations, that kind of thing. There’s no machine learning, no real intelligence. Its all possible because we just stuck a ridiculous amount of memory into them on the theory that if we could present something that seemed human enough, people would be willing to pay for it until we could actually develop the true AI needed for it.”

“You’re saying it can only do certain things? I’ve seen them take out the trash, go shopping, even hold a halfway decent conversation. These things are all done by hand?” Brown asked, unbelievingly.

“Well, sort of. Just patterns. The computer vision is where most of our work went. It can identify objects pretty well, so if you ask it to go shopping, it uses GPS to plan a route to the nearest relevant store, and its cameras to avoid bumping into people and stop at lights. When it’s there, it just looks the product up in its memory if its common enough, or the internet if it’s not. But those are all hard programmed behaviors. If you ask it to do something it hasn’t be programmed, it won’t know how to respond.”

“That’s incredible. How were you able to program that many routines?” Sarrow asked.

“Competitions, a lot of edge cutting, and hundreds of thousands of man hours of programmers in Mumbai,” Wong responded with a slight smile on his face.

“Wait, you said that if you asked it something it hasn’t been programmed for, it wouldn’t work. Can you give an example?”

“Almost anything you can thing of in a rural setting” Wong admitted.

“Fishing, hiking, farming, making camp fires, anything that requires skill besides the hundred or so games we taught it. We had to start somewhere, so the assumption is that it will only be used in cities. Actually the camp fire example is a good one, the myFriend won’t even touch anything it deems to be harmful like matches, knives, or any weapon. We really wanted a safe robot. The lawyers spent weeks going over the obvious stuff with us.”

“Fascinating. But can you explain why exactly it isn’t sentient?” Brown asked. “I somewhat understand that if you just told it a list of things it could do that that wouldn’t be intelligence, but I want to hear perhaps a more informed viewpoint.”

“Certainly. Have you ever heard of a man named Alfred Turing? There’s been a few movies about him now, but I don’t want to presume.”

“Ah, you mean like the Turing test?” Brown asked, veneer cracking slightly with excitement as she recognized something related to the conversation.

“Sort of.” Wong suppressed a groan. “Its somewhat more complicated than that. In the theoretics of computer science they teach about classes of ‘intelligence’. For instance…”

He took out his cell phone and lay it on the table. The two senators stared it intrigued.

“This cell phone is capable of doing anything a supercomputer can. Just slower. Same with your phones. They all have the same ‘intelligence’, and mind you, that word is in rather heavy quotes. Then, for comparison, take the myFriends: they have some interesting hardware, they can move around and avoid things and identify objects, but at the end of the day they are no smarter than this cell phone. In fact, because they are just ‘going through a list’, it’s almost less than that.”

“Ok, I can understand that. They are all computers, right? But lets take this a step further. What then, defines something as sentient from a computer science point of view?” Brown asked. Sarrow frowned slightly but said nothing.

“Well, you’ve hit upon a rather large thorn in computer science and actually neuroscience as well. We don’t know yet if there is something about us, our brains, that makes us smarter from a formal standpoint than our computers. By the way, the term for the ‘level’ of intelligence our computers have is called ‘Turing complete’. My best guess, is that our brains are Turing complete as well.”

“I see. Well, lets travel with that assumption.” Brown said. “I might as well let the cat out of the bag. I mentioned this earlier. This is mostly a civil right issue. How should the myFriends be treated under the law.”

“As property, one would hope, and not an inch more, or else everything goes down the drain it would seem.” Sarrow interjected.

“Quiet. He has explained his field, let me explain ours.”

“See, from a layperson’s standpoint, these myFriends exhibit some crude form of sentience, like a monkey or pet.”

“That’s completely wrong though.”

“Lets talk about this. Dr. Wong, you are supposed to be somewhat impartial here. How the law works is not like Computer Science, there are some overarching axioms as you would say, but out on the fringe of things, cases are decided through similarity to other cases and sometimes, not that anyone would want to admit it, public opinion. Intellectual property protects your robot just as much as it protects a painting, even though the founding fathers couldn’t have envisioned robots”

“Ok, that makes sense.” Wong said.

“If I understand you correctly, there might be precedent for extending rights beyond what computer science would consider intelligent or Turing Complete. Consider for instance someone who has gotten in a car crash. They are unable to move or communicate yet they still have rights under law. You have to abide by their will along with other things. This is called unresponsive wakefulness syndrome. Would this person be considered to be Turing complete?” Brown propositioned. Sarrow simply listened attentively.

“Hmm, like a computer with no peripherals.” Wong paused. “I think you just have the same problem as before. Computer science can’t really say anything about the ‘intelligence’ of such an individual since we don’t know about the capabilities of an unaltered brain. I would hazard to say though, and may I remind you this is not really my field of expertise, that if neural activity was similar to that of you or I, they would also be Turing complete.”

“And if it were not? What if there were no brain activity?” Sarrow asked.

“Then I suppose they couldn’t be, like a computer that was shut off: no intelligence” Wong answered.

“Well, that’s where law and computer science…” Sarrow started suddenly,

“honestly this is really more like neuroscience…” Wong interjected.

“Well, this is where law and neuroscience agree. If someone exhibits no neural activity for an amount of time they are declared brain dead, and thus, legally dead.” Sarrow said.

“May I point out though, that person still is to some sense, recognized as being a person. Their will must be respected and so forth.” Brown countered.

“However, if someone is in a state of unresponsive wakefulness syndrome, your unplugged computer if you will, and doctors can’t recover functionality, it is possible to terminate life support in some cases.” Sarrow argued. “What Brown is trying to do is to equate the mentally handicapped and your myFriends, an insinuation I believe the mentally handicapped would find insulting.”

“Thank you Senator Sarrow. Where I was going to with this train of thought was that under the Americans with Disabilities Act the mentally handicapped, whose faculties range from those in comas or in vegetative states to fully functioning members of society, have fundamental rights in conjunction with their ability to demonstrate capability to function.”

“Interesting. Can you explain some more about the ‘capability to function’ part?” Wong said.

“The Americans with disabilities act lists several ‘Major Life Activities’ including: seeing, hearing, walking, speaking, performing manual tasks and caring for itself. Would you disagree that a myFriend has all these capabilities in some sense?”

Sarrow didn’t let Wong respond. “Your line of reasoning is flawed senator. That list you just quoted is to establish a non-exhaustive list of areas that the disabled may experience limitation. The list’s purpose is to establish whether a *person* is disabled, not criteria a robot has to meet to be considered a person! Plus, I hardly believe a myFriend can care for itself.”

“Actually, the A series has much better physical manipulation skills. It can plug itself in at night, and self diagnose minor flaws using its camera so long as it works. We wanted as little overhead for the user as possible.”

“Excuse me sirs and madam. Your food.” Whitney presented their plates. It turned out that the burger was as decadent as it had been described on the menu.

“Fine, but can we take a step back here?” Sarrow said between mouths of tuna. “We are talking about robots! As you said, not even particularly intelligent ones! The fact that they seem intelligent should be irrelevant. They’re goddamn machines! Metal! The very reason they exist is to perform tasks we want to automate away!”

“That sounds very close to species based discrimination.” Brown said icily.

“That’s a term I hope I never hear again.” Sarrow said.

“Ok, and let’s assume that these robots have some rights. Where does it end? At some part, won’t our recognition of their intelligence ethically require us to, you know, not have them perform manual labor for us? You know, this is how it starts in the movies. Ever seen the matrix?” Sarrow said with jabs of his fork towards the unsuspecting tuna.

Wong raised his eyebrows but said nothing. He couldn’t. The burger occupied the majority of his mouth and he intended to keep it like that. The burger was a social shield against their questions. He listened though.

“Fear mongering” Brown responded simply. “You’re better than that.” She stated.

Sarrow paused for a moment. “I apologize. You’re right. But there’s no denying it would be a legal nightmare, granting robots rights. Our law system basically has it as a very strong, yet unstated assumption, that we’re basically the only sentient life.”

“And why should that prohibit the development of law any more than the acknowledgement of personhood of African Americans? You think I don’t understand the turmoil that would cause? Look, I’m not even suggesting these myFriends should be considered sentient. But as Wong said, the technology is approaching the point where it may be impossible to differentiate the machine and the human. By god, Law must be there when that happens or atrocities will occur.” Brown countered.

“I’m glad we agree that this civil rights crusade for these myFriends is completely ridiculous. I expect the court to find the same conclusions. But its interesting that you mention god. I’m very sure in the bible it states very clearly making nothing in god’s image. My own personal beliefs aside, I suspect my constituents would be very unhappy with the prospect of a fully sentient robot.”

“Well, I’m sure your constituents know where to…” Brown started.

Whitney suddenly appeared next to them. “Is everything to your liking?” He asked.

They all stared at their food for a split second.

“Amazing!” Brown said, leaning forward, perhaps to hide the fact that there was very little wellington left.

“Magnifique!” Sarrow said making an ok sign with his hand not clutching the next piece of tuna.

Wong swallowed a piece of burger before choking out “uh, its great!”

As soon as he left, the wolves came out again though.

“Simply put, if we” he motioned to himself and Brown, “two respected politicians can hardly agree on this issue, I’m afraid of what bloodshed will occur in the house! Or perhaps more philosophically, I’m not sure this country, or any country is quite ready for this technology. We’re just not socially there yet and I’m afraid of what would happen if you introduced it before the law had time to catch up. Whether that’s banning, limiting, or defining.”

“I think I actually agree with you for once.” Brown agreed.

Wong was silent.

“Well I hope you two are ready to get started on the problem. Because of the demand in the market, the tech is developing whether you want it to or not. Even if you ban it here, development will simply continue in another country. It would be economic suicide. It’s not even something I really have a say in, or any of us really. It too big of an opportunity to ignore. I certainly hope you’re ready when it comes.”

The three stared at their empty plates silently. The time for eating had passed. Perhaps it was time to get to work.