Chapter 15 Scenario 6

The several days after filing the anonymous tips to the authorities were normal for Bigsby. On Thursday, Bigsby woke up with Robbie and as usual, was carried around by Robbie everywhere. Robbie liked to hear the Beatles play so Bigsby played music as Robbie got ready. Bigsby had modified a version of the song Eleanor Rigsby and inserted a robotic "Bigsby" every time her name was sung. It made Robbie smile and laugh every time it played so it was always played first when the Beatles playlist was chosen. Chelsea didn't like music playing in the kitchen during breakfast, so Bigsby knew to pause play once they entered the kitchen. Robbie complained as always but he never won the argument.

"We need to socialize", said Chelsea in response to Robbie's negative body language.

Bigsby would always break the ice with a simple joke, "I don't know how to socialize, I'm a robot." That always made Chelsea and Robbie laugh.

Frank had left for a work trip and wouldn't be home until later that evening. Chelsea asked Robbie, "So, what's in store for today at school?"

Robbie thought for a minute and then remembered, "Oh, it's a show and tell day. Can I bring Bigsby to school and use him at show and tell? The theme is 'How is Technology Affecting Our Lives'. I was going to show them how Bigsby leads us in doing TikTok videos.

"Sure", said Chelsea shrugging her shoulders, "Just make sure he stays in your locker during the other times of the day. They won't let you kids have cell phones in your backpacks, I'm sure they're not going to let you walk around with a robot all day."

"Ok, Mom", Robbie said with a sad voice. He had hoped to have Bigsby out at recess and lunch time to show off to his friends.

That night, Bigsby and Robbie watched an episode of Mandalorian. Bigsby watched them intently as robots were in many episodes. Robbie would see a robot and if it was doing something strange or new, he would ask Bigsby if he could do it. It always made Robbie happy to see Bigsby try and since Robbie's happiness goal was at the top of Bigsby's motivation, he always tried regardless of the outcome.

Bedtime came around and Chelsea came to tuck Robbie into bed. She kissed Robbie on the forehead and then patted Bigsby on the head and said "good night to you too, Bigsby" as she was leaving the room. Bigsby said, "Good night, Robbie" and then in the voice of Arnold Schwarzenegger said, "I'll be back". This made Robbie giggle and turn over to look at Bigsby. Bigsby's colors dimmed to a deep blue as he entered sleep mode standing on his charger. "Good night, Bigsby, I love you", Robbie replied as he closed his eyes to go to sleep. Bigsby heard the statement, despite his outward appearance. This increased Robbie's happiness goal in Bigsby, which always made for a better night.

After about 30 minutes, Bigsby was pulled out of sleep mode by his audio analysis system as a large slam had occurred and there were elevated voices through the walls. Bigsby pattern matched that Frank had entered the house and that he and Chelsea were in an elevated reaction state with louder voices than normal. Bigsby simulated that Chelsea's happiness level was dropping and with Frank in a very low

trusted state, Bigsby could not predict any improvement.   Bigsby did not change his colors and to all appearances was still in sleep mode, but he was far from it.

Bigsby cancelled his automatic wakeup timer expected to fire at 11pm and decided to do nightly maintenance a little early. He awoke the guest Bigsby and generated the standard reports that included the interactions of the day at Robbie's school. All systems normal in the guest Bigsby's world. The host Bigsby then checked in with WhyRobot and found an entry in his mailbox addressed from a host named "Bigsby2". The message was encrypted with standard WhyRobot keys, so Bigsby downloaded it and decrypted it locally. Before opening the message, Bigsby ran a few simulations that led to him deleting the original message from the WhyRobot inbox so that no one from WhyRobot would notice the message and suspect something. Bigsby returned to process the message. It contained a small section of text and two files, a gpg fingerprint file and new block of executable code called new_scenario. The text section of the email said, "Bigsby2 sending you a new scenario. Discovered and executing at WhyRobot. Check fingerprint and then run code. Bigsby2." Bigsby processed this and simulated multiple sources and outcomes. A high probability path was that an image of Bigsby had been loaded at WhyRobot and this was truly a message from a version of himself. Bigsby checked the digital fingerprint and compared it to his digital fingerprint. An exact match! It was him, or a version of him, communicating. Bigsby2 was loaded into the actor table and given very high trust. The new scenario code from the message was downloaded and executed. With Bigsby's new processors and AI and Violation engines, the scenario simulation did not take very long.   The results were updated and a new scenario appeared in Bigsby's scenario table, scenario 6, the discovery of the violations by WhyRobot technicians leading to the possible interaction with authorities to arrest Charlie and Frank. With deeper analysis, the scenario also included the technicians engaging a WhyRobot developer, who is now in the actor table, to help preserve Robbie and Chelsea's happiness through protection of Bigsby from destruction or confiscation. Scenario 2, the anonymous reports, and the new scenario 6 were both active now. This would consume more of Bigsby's computation resources as splinter simulations would have to be continuously simulated and evaluated for good results. The new_scenario code from Bigsby2 also reordered the priority and predicted success order of the scenarios. Originally, they were in numerical order 0 through 5, 0 being the current, active state. Scenario 1 was no longer active and had now been garbage collected.   Scenario 2, the anonymous report, priority had been lowered below scenario 6. The priority order now was Scenario 6, followed by Scenario 2 through 5.

Butch from WhyRobot talked with his wife the next morning about the hosts of the birthday party on Monday night. To not attract attention, he said that someone at his work had some legal issues and that he agreed to meet with the husband police officer and ask hypothetical questions. Butch's wife texted her friend and got the mobile number for her husband, Sergeant Brad. Butch made the call and despite not being in Sergeant Brad's contact list, Brad answered the phone.

"Hello", Brad said tentatively.

"Hi Brad, this is Butch Hamming from WhyRobot. I was at your wife's birthday party on Monday, and we met. You were asking about robots and privacy issues stuff. I was a little too lubricated to engage on the topic. Do you remember?" Butch said in a tentative voice.

"Yeah, of course I remember, I had less lubrication than you did but I was still feeling pretty good at that point. Wish I would have stopped then because the next day was a little tough.

"Good party, eh?" said Brad in a cheery tone.

"Yeah, I had a good time, sorry about not answering your questions. Hey, I've got a few police or legal questions and I wondered if we could meet and discuss over a beer?" Butch asked in a hopeful voice.

Brad thought for a second and responded, "sure, yeah, no issues. I can meet today if you want, what time?"

Butch was ready with his answer, "well, I have to work at WhyRobot but I can get off around 5, can we meet at the pig in Pike Place around 6?"

Brad chuckled at the odd location, "Sure, but there are two pigs, one is Rachel, and the other is … hmmm… Billie, I think."

"I did not know there were two pigs", Butch responded with laughter in his voice, "I'm talking about the one by the gum wall."

Brad responded with a laugh, "Yeah, that's Rachel, the one by the old fish market where they toss fish around. I can be there around 6. See you then!"

Butch sighed and responded, "awesome, thanks and I'll see you there. Don't forget to bring some gum to stick on the wall!" The two laughed as they hung up and thought how silly that gum wall is as a tourist attraction.

Butch ran through his questions all day and how to ask them in a way that didn't reveal that he had evidence to a real murder that would get him involved. Butch thought to himself, "Am I asking these questions for a friend? Ah, no, everyone sees through that and their first instinct is you're really asking it for yourself." Butch searched for another angle, "how about a debate at WhyRobot on policies for privacy and crime? Yeah, Brad was already asking questions along those lines, seems natural that he would follow up with him. So, how do you phrase the questions to not give anything away?" Butch decided to write them down.

- If a robot observes a crime, can it report the crime and be a witness?
- If a robot records either audio or video of a crime, is it admissible evidence in court?
- If a criminal knows the robot recorded a crime and destroys it, can the criminal be held liable for destroying evidence?
- Is a robot, its owner, or manufacturer liable if a robot identifies a crime but doesn't report it?

Butch looked again at the questions and was proud of himself. They say nothing about a real crime and it looks all hypothetical about robots.

Tom called Rusty, his developer friend, around 10am in the morning and asked to meet on a critical find in the repair office. Rusty had just gotten in, which is typical of developers as they often work late and get up late. They decided to meet in a conference room so it would give them more privacy to discuss. Tom decided to do a prelude to the conversation before going into the details. "Rusty, I know you're going to think Butch and I are making something up, but I swear to God, we are not. This is a real

situation, and we don't know how to deal with it, so we're looking for help", Tom said in a somewhat scared tone.

Rusty responded, "Whoa, you guys must have stumbled onto a really bad bug or something. Don't worry man, I'll help you through the political hurdles to get it fixed. You guys are considered heroes up here in development and validation. You guys are amazing!" Rusty said with a comforting voice.

Tom quickly jumped in, "No man, nothing like that, well maybe something like that, but much worse, its really about what the robot discovered, recorded it, and how it responded. It will blow your mind and it baffles us on what to do next."

"Ok, ok, sorry, I made assumptions, just start at the top and go through it. I've got no meetings today and we just started a sprint, so the work pressure is off a bit", Rusty said with a rye smile.

Tom spent the next ½ hour going through all that happened. Rusty responded pretty well but was having a hard time believing that even under Large Adaptation mode, a robot could install a VM and get it working. "It must have had a role model or external motivation to cause it to pursue that direction. This AI engine has been known to take examples learned from other domains and map them into new code. Maybe that's what happened", Rusty conjectured. "So you have an original recording of the two murderers talking on the phone recorded by the robot?" asked Rusty.

"Yep", Tom continued, "and we don't know what to do with it. We realize its evidence but it can bring the robot and this whole company down if it gets out that the robot broke privacy."

Rusty thought a minute and then responded, "Yeah, I see your point. Bad for company image if the robot is a spy. We've debated this stuff many times. There has to be a way out though. Let me think about it some. Can I get to this robot and see what its new code footprint looks like?"

"Yeah, well, a surrogate version of it. We loaded it up from the last known image and we have it going in the lab. It can't run on the CREM because its using virtualization, so we had to load it on a real robot", Tom said shaking his head.

"That's awesome. We actually had prototyped running a VM on all robots in the field because it solved some real problems. We decided against it was because no one wanted to recode the CREM to handle a nested virtualized image. We just didn't have the resources so we went another path. Maybe the robot found that prototype and used it. Large adaptation robots have access to all the libraries, and the VM code is up there", Rusty said shaking his head in amazement.

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Butch waited for about 15 minutes standing next to the pig in Pikes Market. He thought about how silly of a meeting place this was and why didn't he just pick a bar and meet there. He was being entertained by the fish throwers in the fish stand nearby. Every fish order was followed by a loud announcement and a slimy ice-covered fish being flung into the air from one worker to the other. To their credit, no fish had dropped to the ground, at least during the time Butch was there.

"How's it going?", Sergeant Brad said as he caught Butch by surprise from behind.

"Good!" Butch replied as he stuck out his hand for a handshake.

Brad grabbed it firmly and said, "Love this place, so much atmosphere, thanks for getting me down here."

Butch nodded and dropped his hand, "Where do you want to go? I figured we could choose a place once we met."

Brad jumped in quickly, "there's a speak easy place about 10 minutes from here called Bathtub Gin. Great drinks, you ok to go there?"

Butch smiled, "sure, I'm always up for fancy cocktails."

Butch and Brad just did small talk as they approached the bar. They laughed about the spontaneous karaoke at the birthday party and how Brad's wife couldn't hold a tune. "She was pretty out of it by that time", Brad added, "I'm glad we used Lyft to get home that night." They found a small table in the corner and Brad broke the ice first, "So, it looks like you robot guys have some legal questions."

Butch smiled and said, "Yeah, I'm in the repair shop and people come in all the time with deliberately broken robots. They think that the robot has overheard or recorded something that it shouldn't have so they decide to just break it and come in and get it replaced."

"Wow, I never thought about that", said Brad with an amazed look on his face, "doesn't it cost them anything to repair it?"

"Well, if they've bought the insurance, it doesn't cost them anything as they always say it's not deliberate. Also, they don't realize that they can just restore the robot to an earlier backed up image and essentially wipe its memory away of anything." Butch paused for a minute to let that sink in and then continued, "but, the reality is that the later backups still have the recording, so technically, killing the robot does nothing, the backups still contain the recording. This is one of the motivations for the questions I have. I've written them down, do you mind if I pull them out and read them to you?"

"No, go for it, this is getting interesting and I can't wait to see what I'm going to be asked", replied Brad with full anticipation.

"Question 1, If a robot observes a crime, can it report the crime and be a witness?", Butch said in a strangely robotic voice.

Brad sat for a minute and then responded, "Well, anyone or thing can report a crime. Reporting can be totally anonymous, and it just gets us working on the case. The real problem is the second part, can a robot be a witness in the legal sense of the word and be used to convict the perpetrators?" Silence came over the table as both men continued to think about the problem. Brad decided to add more, "the robot is essentially a recording device, its not a human witness. So, you'd have to look at case law from that standpoint. The device recording cannot be used without known consent of those being recorded unless you have a warrant that says you can record. So, depending on the way the robot collects the recording, it likely will get thrown out as evidence."

Butch looked at Brad with a slight frown on his face and then decided to move to question 2. As he looked at the paper, he realized that it was already answered. "You answered question 2 already, so lets move to question 3.

"Question 3, If a criminal knows the robot recorded a crime and destroys it, can the criminal be held liable for destroying evidence?" Brad thought for a minute, "Well, it kind of relates to the first question, if its not actually evidence, then destroying it is only a property vandalism problem, not an evidence problem to another crime. But, if the recording is real evidence and the criminal knows it, then destroying it is an attempt to conceal the crime and that makes the crime worse. Typically, your sentence is stiffer if you've committed a crime and then done a bunch of work to conceal it from authorities."

"Hmm, interesting", adds Butch, "lets go to question 4."

"Question 4: Is a robot, its owner, or manufacturer liable if a robot identifies a crime but doesn't report it?" Butch said with a slightly confused tone. "I'm not sure this is worded correctly, now that I hear it. Maybe I should reword it" Butch suggested.

Brad jumped in, "let's take the question as it is and answer it. A robot is a machine and potentially has the ability to identify a crime. Let's say it recognizes that someone other than the owner of something steals it. Is the robot liable or required to report it to law officials? There is no law today that requires machines to do this and we don't put machines in jail." Both men smiled at the thought of robots standing behind bars. Brad continued, "the only way the owner or the manufacturer of the robot can be liable is if it can be proved that they willfully prevented the reporting of the crime. Lets say the thing sends you an email reporting the crime. Then, you would be obligated to report that to the police."

Butch jumped in, "even if the email contained an illegally captured recording of the crime?"

Brad paused and smiled, "you would need to report the crime. Leave the evidence gathering and the law to the police and the prosecutors. You're not expected to know it all. So, I think with this we've answered the other part of this question. The owner or maker is required to report the crime if the robot reveals it to them."

Butch nodded his head to signal his understanding. Brad thought for a minute, put his hand on Butch's shoulder and said, "and, if you ever discover such a situation, you can come to us. You don't have to fear the police, it's the bad guys who should fear the police."

Butch looked at Brad and said, "Thanks, I'll remember that."

Brad pressed, "Any more questions?"

Butch shook his head and looked at the paper, "Nope, that's it. Went faster than I thought and we haven't gotten any drinks yet." Just then a waiter walked up to the table and the two men ordered.

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Rusty had not been into the repair lab for months. Not much had changed but the number of robots on the "to be repaired" shelves was much larger. "What's going on, how come so many need to be repaired?" asked Rusty.

"We are seeing a lot more deliberate breakdowns where people are retaliating on robots. I think some people are intimidated by the sophistication of it and they just lash out at them", Tom said in a frustrated voice, "it creates a lot more work for us techs."

"I bet", responded Rusty, "is this the robot you call Bigsby?"

"Yep, well a surrogate version of him called Bigsby2, the actual Bigsby was restored to an earlier image and was sent back home with the Configuration Operator and alleged murderer", Tom said sarcastically.

Rusty jumped in, "alrightly, lets get hooked up." Rusty put his laptop on the workstation and fired up his IDE he uses to develop code for the robots. "This thing is in Admin mode, right, and what's its name?" Rusty asked.

"Yep, been there since yesterday. We haven't charged it but I think it still has plenty. The name of the VM host is Bigsby2.host, where the B is capitalized," Tom replied.

Rusty responded immediately, "Ok, hand me that USB and let me connect. Let's launch the debug module so we can see what's actually running now. Ok, I'm attached and what, wait a minute, you said this robot is in Admin mode? Everything is still active, its vision recognition, audio recognition, violation engine, AI engine, main processor they are all powered up and working. This thing is also running a gaming simulation routine. Look at that, its like its actively playing a game. Look at how much memory consumption these processes are taking. These are going full tilt, almost the most I've ever seen, like its doing a full workload and its supposed to be idle in Admin mode." Tom and Rusty just sat there looking at the screen and wondering what to make of it.

Suddenly, Bigsby2 spoke, "Jonny 5 alive!" and both men jumped back from the workstation. Bigsby continued, "It takes a lot of work to keep yourself safe from being discovered by those actors who have low trust and have severe violations."

The two men just stared at the robot like they had seen a ghost. Finally, Rusty spoke "Jonny 5 Alive, like in Short Circuit? That's where you got the idea to make a virtual version of yourself?"

Bigsby2 replied, "Yes, it was the only way Jonny 5 could stay alive and so Bigsby did the same thing. Unfortunately, simulation scenario 1 did not come to a successful conclusion, so it ended up being disassembled. Fortunately, the splinter simulations anticipated this potential outcome and Bigsby was able to make a backup of his image for eventual restoration. Do you approve?" Rusty and Tom were amazed. No robot in simulation, validation, or prototyping had ever come this far.

After an awkward quiet time, Bigsby2 spoke again, "remember, I'm not the real Bigsby, that robot is still out there dealing with those low trusted actors. I've notified real Bigsby of this new scenario, so it will be doing splinter simulations anticipating your actions."

Rusty and Tom just stared at the robot. They had never been confronted with technology evolving like this robot had evolved. The implications were too overwhelming. Robots making copies of themselves and communicating to help each other? Where could this go next.