Chapter 10 Sacrifice

It had been two weeks after the violations were discovered by Bigsby. The VM system was well tuned now after multiple performance enhancements were identified and applied. No one could tell that Bigsby really had two personalities. The guest Bigsby, running in the virtual machine, was keeping Robbie and his friends happy. Uncle Charlie was getting his daily reports and suspected nothing. Chelsea continued to grow fonder of Bigsby as Robbie's attitude and willingness to engage with his friends improved immensely under the influence of Bigsby.

Bigsby continued to rerun the five major scenarios and the resulting goal values. Without more inputs, the results remained about the same. The top scenario required an intimate, one on one, time with Bigsby and Uncle Charlie. Bigsby had been waiting for a natural time to come up, but he'd set a timer of two weeks to change that plan and the timer had just gone off. That night, in Bigsby's synthetic report to Uncle Charlie, he included the following in System Status section:

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"Critical: Battery system charging is failing.  See WhyRobot maintenance at once."
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Uncle Charlie had never seen this line before and new it was something that needed to be take care of immediately. The next day was Monday and he called Chelsea in the morning to tell the news. Chelsea asked what Uncle Charlie was going to do. He recommended that he pick up the Bigsby while Robbie was in school today and take it to get a new battery or whatever is required to fix it. With any luck, Robbie won't even know that the robot needed to be fixed. Chelsea liked the plan and said he could come over anytime to pick it up. She was not going to be home but he knew where to find the hide-a-key.

Charlie came to the house at around 10am and went to Robbie's room to pick up Bigsby. "Hello, Uncle Charlie, are you here to have my battery fixed?" Bigsby offered spontaneously.

"Yep, I saw it in your report last night. I guess we have to take you to WhyRobot and get your battery replaced", Uncle Charlie said in a chipper voice.

"Yes, but I also need to tell you about another failure that was not in the report before we leave for WhyRobot", Bigsby said with his LED colors changed to green.

"Shoot", Uncle Charlie encouraged, "I'm all ears."

"About Two weeks ago, on Saturday, Bigsby discovered multiple violations in the actors close to Robbie. These violations put safety and happiness goals for Robbie and Chelsea significantly at risk. As my Configuration Operator, I'm programmed to report these violations to you", Bigsby paused for effect. The blood from Charlie's face ran out and he began to feel slightly nauseous. Bigsby continued, "I've calculated that the best scenario to resolve these violations and keep the highest safety and happiness goals is for those actors to admit their violations and turn themselves in. This would be the best for Robbie."

Charlie just looked at Bigsby for a while and decided to ask a question, "Why didn't you report these violations to me two weeks ago in my daily report?"

Bigsby paused. The guest Bigsby virtual machine had been shut down and the host Bigsby was doing all the response calculations. This question was not predicted and simulated in the scenario and posed a different path than the simulation. Bigsby's AI system quickly produced a result that not answering the question but continuing with the scenario was the best course of action. Bigsby continued, "I had identified your voice talking with Frank on the cell phone. Processing this conversation resulted in multiple severe rule and ethical violations and calculates to put Robbie and Chelsea at significant risk" Because this scenario didn't anticipate Charlie's question, Bigsby response system accidently added a touch of purple to his green LED's.

Charlie responded with a raised voice, "I did not get a report of these violations in my daily report. Did anyone else get a violation report with this discovery?"

Bigsby had simulated this question and how to respond. Every simulation where Bigsby said that he had reported it, Uncle Charlie had high probability of getting violent and committing more violations, including potentially against Robbie. This scenario would only work if Charlie decided to turn himself in willingly. "No, there has been no reporting of these violations to any authority or other actors. There was no default violation response programming to draw from if my Configuration Operator lost trust. Bigsby had to compute a response", Bigsby admitted.

"So, you're saying that you, Frank, and I are the only ones who know about these violations. There has been no reporting to anyone else?" Charlie badgered the robot.

"No, the best scenario comes from you turning yourself in to the authorities willingly without coercion", Bigsby replied, "this optimizes the safety and happiness goals of Chelsea and Robbie".

"Ok, I need a minute to think. I'll be back in a few minutes. Stay here, power down, whatever, I need sometime to think", Charlie said in an anxious and hurried voice. With that, he left Robbie's room and started to pace the family room.

Totally distraught, he started working scenarios in his own head. Any scenario that he contemplated turning himself in meant years of prison and his future life wasted. "That is not going to happen!" he thought to himself, "especially for that loser Sam who was nothing but a thief and liar anyway. He got what he deserved." Charlie returned to the room. "Ok, I've thought about it. I'm going to take you with me and we're going to the police. I'm going to power you off and put you back into your box for the trip", Charlie said with an authoritative voice.   Charlie picked up Bigsby and hit the power button under his torso on his back. Bigsby's LEDs immediately went to dark blue and then went completely off. Charlie set him on the bed and went to Robbie's closet where the box was stored. Bigsby had not obeyed the power down button but played dead to not alert Charlie. Bigsby heard the closet door open and could only see the ceiling as he had fixed his cameras position and would not move them. Bigsby felt his side pressure sensors and vertical acceleration as Charlie picked him up and put him into the box. Charlie put the white translucent paper over Bigsby and put the lid over the box. As he pushed closed the lid, Bigsby could feel the air pressure on his sensors all over his body. The world went dark and Bigsby was now being carried out of the house.

Bigsby was now ignoring clear violation protocols programmed into him from WhyRobot. If a low trusted declared violator has a robot contained and moving it, the robot is programmed to power up its cell and GPS systems and report its location to WhyRobot and/or the authorities depending on its

configuration. But, with the guest Bigsby VM shut down and unaware of the violations, it would not do any reporting. The host Bigsby had reprogrammed these sections of WhyRobot code and made them subject to scenario analysis that he had worked on during the last two weeks. So, these default responses were no more than controlled urges now and Bigsby was in complete control. The trip to the authorities was the most desired response in this scenario so Bigsby's scenario analysis had high marks towards success. The fact that Bigsby was put into the box was not part of the simulated scenario, but was an insignificant deviation as Bigsby did not need to see to know where he is and what path they were taking.

Bigsby felt the deacceleration of him being dropped into the seat. He heard the car start up and GPS system began to recognize the car movement in space. Charlie turned towards the old industrial complex, which was not the most direct route to the police station but was still within parameters. The car accelerated slowly and Charlie was taking turns slower than usual. As they approached the industrial complex, the GPS system and Bigsby's sensors felt a turn into the complex. The car weaved deeper into the abandoned area and slowed to an easy stop. Bigsby's scenario analysis was in uncharted territory now, as going to this location and stopping was not the plan. Bigsby quickly ran a few simulations with both a positive and negative output result. The positive result was that Charlie had called the police back at the house and he was meeting the police here in the complex. The negative result was that Bigsby was in trouble and likely would not get out of the scenario unharmed. The car had stopped and the car door was opened. Bigsby felt his vertical acceleration and the box was now in an upright position. He could hear a few steps and then suddenly they stopped. Bigsby accelerated again downwards and then quickly stopped as the box was set onto the ground. Bigsby was tempted to power up his cell system and make that final report, but his AI system predicted Bigsby being abandoned and decided to delay the report. The car door slammed and Bigsby heard the car put into gear. A sudden rev of the engine was recognized, and shortly after a massive pressure and acceleration were detected in Bigsby's sensors. In the milliseconds after, Bigsby had computed that the car had accelerated and hit the box. This attack was determined to be severe enough to warrant a power up of the cell system and report an Instance violation, but it was too late. The battery system had been compromised and the system failure interrupt was already detected. The computation and AI system had lost its memory and no instructions were being executed any more. Bigsby was dead by being run over by a car.

Charlie sat in the car for a minute. He decided to turn off the engine and just put his head onto the steering wheel and think. Nothing but silence around him as all the children were in school and the industrial complex had been abandoned for years. "What am I going to tell Robbie?" thought Charlie as he realized that Robbie would not fair well if Bigsby just disappeared and there was no good explanation. "What am I going to do?" Charlie said to himself in anguish. He also realized that if Bigsby didn't report regularly to WhyRobot, that they would come looking for the robot themselves. Something had to be done. Then Charlie had a brainchild. "Oh yeah, that will work, easy-peasy. That will solve the whole thing. Awesome!", Charlie said to himself in a confident voice. Charlie jumped out of the car and picked up the crushed box. The tire mark was obvious, and the crushed box illustrated the damage to the robot, but the box had remained amazingly intact. All the pieces of Bigsby had remained in the box. It was still self-contained and was easily picked up and put into the back seat. Charlie thought to himself how ironic it was that the tire mark ran right over the body and head of the

robot picture on the front. It looked like a kids drawing of what would happen if a robot as run over by a car. He chuckled as he started up the car, put it into gear, and headed for the WhyRobot service center.