





Clones in Seattle

by Ziyanda Khumalo

One morning in Seattle's Grey Hospital, a ten-year-old girl, ARMA(p,q) was brought in for a blood transfusion after accidentally cutting herself with a butter knife. The young lady had been living on the street for as long as she could remember. She did not recall her parents or anyone from her family. The people in the street had become her family. Her doctor, Dr Model, married to a brilliant scientist, Mr Forecast, did blood tests, determined her blood type, and did a blood transfusion.

105

A few minutes later, ARMA(p,q), ARMA for short, had a terrible fever. The doctor discovered it was a reaction from receiving the wrong blood type. This was strange, and so they did another blood test. Her blood type was different from the first test.

Dr Model decided to run more tests on ARMA to determine what was happening with her body. They discovered that ARMA had a rare genetic makeup that allowed her to produce cells from both the male AR(p) and female MA(q) chromosomes. It was a rare occurrence in medical history.

The next morning, ARMA was on the first page of every tabloid in Seattle. Since she was a homeless kid, many opportunists offered to adopt her to make money off of her. Dr Model officially adopted ARMA to protect her from these vultures. ARMA was so happy that she had found a home where she would get everything.

Mr Forecast had his own lab in the house, so he was always home. That meant he spent much time with ARMA when his wife was working. ARMA was an inquisitive child, so she would go into the lab and ask Mr Forecast many questions.

One day, Mr Forecast had an idea. He wanted to create clones out of ARMA using her sequencing genome. He tried for days to forget this idea because he loved ARMA like she was his own child, but one day, he decided to act upon this idea. He would run tests on ARMA without his wife's knowledge. He used an incubator to create clone babies. Every day there would be a new clone created from the cells: AR(1), AR(2), MA(1), MA(2), and so on. As the babies grew up, he realised that his wife would find out about this when they had to be removed from the incubator, so he found a hospital three hours away from his home. In this hospital, they would give the babies to people who couldn't have kids.

106

Fifteen years later, Seattle had become very unsafe; there was a serial killer tormenting the city. The world had seen that there were clones in Seattle, and it had become a norm to see two people who looked the same.

The serial killer was also a clone but was different from the rest. He had been sick for quite some time, so he decided to expand his science knowledge. He had a life-threatening disease: non-stationarity. He would find the clones and study their genomes to find out if they were also sick like him and if he could use any of their DNA for his healing. He found a way to differentiate the clones using a DNA sequencing procedure called Proc Arima. The AR clones had chromosomes called autocorrelations that had an exponential decay, and the Y chromosomes of the MA clones would become zero after specific cells were run, which was what the numbers next to each name represented. It was known that the serial killer would act drunk

while walking up to his target; hence people called him Random Walk. Random Walk was different because his chromosomes were all equal, indicative of this non-stationary disease. He felt that since he would die, none of the other clones deserved to live. He would find the clones and kill them himself.

Meanwhile, ARMA had grown up to be a police officer. She was investigating the serial killer case and was determined to find out who killed her brothers and sisters. Five years previously, when she realised what her dad had done with the clones, she was mad and decided to tell Dr Model. Mr Forecast decided it was best to leave because he regretted hurting his family. No one knew where he went. ARMA thought he might be the serial killer trying to fix his mess to reconcile with his family. She finally succeeded in her investigation and found Random Walk. However, she needed a good strategy to approach him and not be killed in the process. As such, she decided to look for Mr Forecast to figure out how to help Random Walk.

After many unsuccessful attempts, she found him in a very secluded place, hiding, isolated from everyone. Mr Forecast's solution was to carry out a procedure called differencing on Random Walk's genome to heal him from the non-stationary disease.

ARMA found Random Walk's contact details and told him she was the original from which the clones were created. She tried to convince him of her solution with the condition that he would stop killing. Random Walk agreed, and the procedure was successfully executed. Random Walk was now healthy and stationary, and Seattle was safe again. He changed his identity to White Noise and fled the country because he knew he would be arrested for all the murders he had committed.