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## The Right Path

By Marianne Dyson

In the low lunar gravity, the knife spun slowly in the air and struck the gym floor with a clatter. Even before the knife came to rest, Sarah had laid down her staff and started doing pushups.

“*Hah Nah, Dul, Set, Net,*” Sarah and the other students counted out loud in Korean. In the Korean Martial Art of Kuk Sool, whenever a higher rank dropped a weapon, all lower ranks stopped and did pushups with them. Losing control of a weapon showed that the student required more practice and discipline--and if a higher-ranked student required it, then obviously the lower ranks did, too.

As Sarah finished, the new black belt from Earth who had lost the knife passed in front of her, wiping the weapon on his sweat-soaked uniform. “Stupid lunar knife!” He looked at Sarah and said, “I hope you like pushups because this knife is about as slippery as a fish!” He stumbled awkwardly back to his practice area.

“Yes sir, I need more practice, sir!” Sarah responded as respect demanded. Sarah actually liked doing pushups. They kept her bones and muscles strong so she could compete in Kuk Sool tournaments while she lived on Earth with her mother each summer. During the school year, she lived with her father here in Aristarchus City.

Sarah resumed practicing the staff routine she planned for tomorrow. The Kuk Sool grand master himself would see it! He would oversee black belt testing and watch public demonstrations the students had prepared.

Sarah was a Dahn Boh Nim, a brown-black belt. She’d earn her fifth black stripe tomorrow. She needed at least three more to qualify for black belt, which she hoped to do before her fifteenth birthday next fall. Maybe then her father would realize Kuk Sool was more than just “an excuse to go exercise with boys.”

Sarah liked being on the girls’ volleyball team in middle school, but it hadn’t challenged her like Kuk Sool. In Kuk Sool, she competed only with herself. No one accused her of showing off when she did her best. Instead they encouraged her to try even more difficult techniques. There was always more to learn.

Her father didn’t understand. He said if she wanted to learn that “useless” self-defense stuff, she could pay for it herself. Fortunately, God provided an opportunity for her. Her pastor introduced her to some uranium miners who gladly paid her to do their laundry. She’d saved the money for months, and finally had enough to buy her own staff in time for the big event.

She expertly twirled the five-foot ceramic staff. On Earth, staffs were made of wood. But wood had to be imported to the Moon, so was more expensive than gold on Earth. Lunar staffs came in different colors. Sarah chose blue for the skies of Earth. She lay on her back and spun the staff above her, watching the light move up and down the shaft. Around and around and--*Thwack!*

“Yow!”

Sarah immediately realized what had happened. The black belt had thrown the knife, and not being used to the lunar gravity, had missed the target completely. It had hit her staff and ricocheted back at him. The knife had chipped the staff and cracked it! She felt sick. She didn't have money for a new one. She'd have to brace it with duct tape. It would be ugly, but serviceable. She left it and lopped over to the black belt.

"Sir, are you okay?" Sarah asked the young man. She guessed he was a recent high school grad come to the Moon on foreign exchange before college.

He glared at her in anger while rubbing his thigh. "You idiot! Your staff got in the way of my knife and threw it back at me!"

Sarah bit her lip. He had called her an idiot, and blamed the accident on her. Yet he was a higher rank, and it wouldn't be right for her to challenge him. Before she could think of something to say, he said, "You should not have been practicing so close!"

"Sir, that may be true, but do you realize you need six times more room for throwing on the Moon than on Earth?"

He scowled at her. "Of course I know that."

Sarah had a feeling he knew it in his head, but not in practice. Still, no good would come of criticizing a higher rank. She knelt and bowed. "I am sorry, Jo Kyo Nim," she said, calling him by his title. "I was not paying attention."

"Well, don't let that happen again!" he growled over the counting of the other students doing pushups.

"Yes, sir," Sarah said, and meant it. She would pay close attention to this clumsy black belt so that his ignorance would not bring harm to himself or others.

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Sarah scanned the growing crowd in the bleachers for her father. Testing was over, and as usual, everyone had passed. The true test was not how you performed in front of the judges, but how you performed in class every day. *Sort of like being a Christian*, Sarah thought. *After all, God wasn't just watching on Sundays.*

"I bet that guy wouldn't last 30 seconds in a sparring match with Master Harmon!" a familiar voice said.

Sarah turned to face and bow to her friend Julie. Julie was new to Kuk Sool. She was a fast learner though, and already a blue belt, just two ranks below brown. "What guy?" Sarah asked.

"That new black belt from Earth," Julie said. She tipped her head towards a guy wearing a silver-trimmed dress black belt uniform. Sarah sighed. One of those outfits would cost her six months of laundry earnings.

"Oh, that guy!" Sarah said, suddenly recognizing him. "He missed the target last night at practice and cracked my staff."

"Your new staff! How awful!" Julie said.

Sarah shrugged. "Thank goodness for duct tape, huh?"

"I guess," Julie said. "Did you know he refused to do the adaptation exercises my mom recommended? He insisted he didn't need them!" Julie giggled. "Can you imagine someone telling my mother that he knows better what's good for him than she does?"

Sarah had to laugh. Julie's mother was the solar system's expert on adaptation to new environments. If she told the President of the United States to crawl across the

floor and moo to speed his adaptation, he would do it without hesitation. "That explains why he was so clumsy last night. He hasn't retrained his muscles to provide the right amount of force." Sarah sighed. *I should have tried to help him instead of selfishly focusing on my demo last night.* "I hope he doesn't hurt himself during the demonstration."

"Well," Julie said, "maybe a sprained ankle will teach him to listen to my mother!" They shared a laugh. "Speaking of my mother," Julie said, "she's saving us a seat. When your demo is over, come join us. The way the crowd's growing, I think the only people not here are stuck on Earth!"

*Except my father,* Sarah thought as Julie bounced away to join her demo team. The place really was packed. She spotted Pastor Craig, and waved to him. *At least my heavenly Father is watching.*

\* \* \*

Sarah stood at attention in the arena with her staff tucked vertically behind her right shoulder, bare feet together. The audience quieted. She bowed to the grand master and said, "*Kuk Sool,*" loudly. "My name is Sarah Thomson, and I'll be performing *Ki-bon Bong* adapted for the Moon. With your permission, may I begin?"

The grand master nodded his approval. Master Harmon offered a smile of encouragement. Sarah was really lucky to have Master Harmon, the women's world champion in bong techniques, for her instructor.

"Thank you," Sarah said. She bowed again. Sarah moved smoothly through fifteen standing techniques and then began what was called the moving plum figure-eight spin. Taking advantage of the low gravity, instead of turning in a circle, she jumped into the air and did the entire technique without her feet touching the floor. The audience cheered. Sarah didn't spare any thought for them. She focused on her distance from the floor, pointing her toes, keeping the staff at the proper angle. She became a flower dancing with a whirlwind, beautiful and strong at the same time.

Sarah sailed through the techniques, seeing the sequence of movements as a path in the air that she must trace. Pastor Craig, who was also a pilot, said she was a natural navigator. She just saw how things should move, and her body followed her mind.

She completed the set. The audience went wild with clapping and hooting. Had she been that good, or were they just easily entertained? She hoped that she at least had set a good example for the newer students. Anything beyond that was merely proof of the teaching skill of Master Harmon.

Sarah bowed and backed out of the ring. She turned to find the new black belt waiting to go on next. She bowed while he did a quick jerk of his head. He seemed nervous, or maybe it was just the usual flushed look of newcomers. Sarah was surprised to see him holding a black ceramic staff. "Are you going to do a *bong* demonstration, Jo Kyo Nim?" Sarah asked.

"No, I just carry a staff around to feel important," he said sarcastically. "If you're done with your cheerleader routine, it must be time for the real thing. Excuse me." He pushed his way past her into the arena.

Sarah wondered if his rudeness was because he found her attractive? This was one of Julie's favorite theories. She said guys feared being rejected by pretty girls, so set themselves up to get it over with quickly by being obnoxious. If this was his plan, Sarah thought it was working pretty well.

A junior red belt about ten years old ran up and bowed to Sarah. She held out a copy of the program and a pen. "Dahn Boh Nim, would you sign my program?"

"Me?" Sarah asked. "I'm not even a black belt."

"But you will be soon," the girl insisted. "That demo was awesome!"

"Thank you," Sarah said shyly. She signed the program, and then knelt down with the girl to watch the demonstration.

Sarah heard him announce that his name was Ian and that he was going to do *Bong Hyung*, staff forms. Forms demonstrated the student's ability to memorize a chain of complex movements, execute them precisely, and do them so smoothly that each motion naturally flowed from the last.

His initial movements were similar to Sarah's demonstration--spinning the staff and striking imaginary targets. He obviously knew the sequence well. Sarah enjoyed the way the flaps of his dress uniform made a ring like Saturn's as he spun. But he leaned to one side whenever he stopped. He was using more power than needed and losing his balance, a common mistake of newcomers to the Moon. A few weeks with Master Harmon would break him of that.

The *hyung* was long though, and it didn't look like Ian was up to it. Most likely, his heart was in overdrive, still acting to overcome Earth's gravity and sending too much blood to his head. His brain would automatically raise his temperature to cause him to sweat away the "excess" fluid. Thus, his face was puffy red, and sweat stains darkened his uniform.

*Whack!* Ian's sweaty grip slipped and the staff slammed against the hard floor. If this were a tournament, he would stop after such a bad mistake, and all the lower ranks would do pushups. But this was a demonstration, so he continued.

Sarah saw that the slam had cracked the black staff. She thought of her staff, its beauty marred with duct tape. It seemed appropriate that his would now have to be taped as well. Maybe he wouldn't be as smug after this.

However, it seemed that the mistake had made Ian angry. His knuckles were white against the black staff, and his face was nearly purple. Proper *hyung* required a clear mind. If he didn't calm down, his concentration would slip as well as his grip. Sarah knew this *hyung* included a difficult jump spin combination near the end. He was still using too much power in his mock strikes. If he lost his balance...

"No!" Sarah said as the staff hurled from Ian's hands toward the crowded viewing stands. Could she stop this potentially deadly spear? She suddenly saw a path in her head. She could do it!

"Catch my staff," she ordered the girl beside her. Then, in a flash of movement, Sarah used her staff to pole vault sixty feet into the air.

Her aim was true, and she nabbed the staff. She began falling toward the viewing stands. She needed to do another pole vault in the stands to get clear of the crowd. But the people were packed in so tightly, where could she come down? *God, please clear me a spot! Don't let me hurt anyone!*

The fall took six times longer on the Moon than it would have taken on Earth. As Sarah dove, she recognized the faces of the uranium miners whose laundry she'd cleaned. And there, in the midst of them, was Pastor Craig! "Clear me a spot!" she yelled.

He slid off his seat and crouched down, covering his head. She aimed the black staff at his empty seat. Now she could pole vault right over the bleachers and come down on the other side. *Thank you, God!*

The staff made a loud twang as it hit the aluminum bleachers. Sarah flipped to the side, and glided over the crowd. Soon she was over the top of the bleachers and diving to the floor behind them. It was a 30-foot drop. Luckily, that was equal to about a 5-foot drop on Earth. Still, it was a hard floor. She needed to use the staff to absorb some of her energy.

Sarah held the staff tightly against her right side. The staff hit the floor first and slid a little, slowing her down. But the impact split the staff and it shattered! Sarah didn't have time to let go before the sharp edges slit her hand and forearm. She fell among the pieces, rolling as she'd been trained, her head never touching the floor. Her forearms slapped the surface, and she let out her breath in a loud yell, surprising people in line at the drink stand.

Sarah sat up slowly as a crowd gathered. A voice of authority told them to make way, and Master Harmon knelt beside her. "How are you, Dahn Bo Nim?" she asked.

Sensing nothing broken, Sarah answered, "I'm fine, ma' am." An emergency medic pulled back Sarah's torn sleeves. The skin of both forearms was scraped raw and bleeding, and her right hand was cut pretty badly.

"Good *Nak Bub*," Master Harmon said with a smile.

"Yes, ma'am," Sarah said. *Nak bub* was Korean for falling technique. She was supposed to take the brunt of the fall on her forearms and hands, and she had.

The medic treated Sarah's forearms with spray "skin" made from Moon-grown aloe vera. He wrapped her right palm with white bandages, and Master Harmon helped her to her feet.

Her father rushed over to her. "Sarah! Are you hurt? I was on my way here when I got an emergency page from Pastor Craig."

Sarah stared down at her bandaged hand, and then into the worried eyes of her father. "I'm all right," she assured him. "I know how to fall. I only scraped my forearms and cut my hand a little."

Master Harmon nodded. "Your daughter is an excellent student. You must be very proud of her. Her quick action may have saved someone's life today. If you will allow me to take her back to the arena for a few moments, I'm sure the grand master would like to personally thank her."

"Can I go, Father? Please?" Maybe it was the expression on her face, or maybe it was just that her father saw that arguing with her was useless, but he nodded. Sarah hugged him quickly and thanked him for coming. He said something about getting the time wrong, but Sarah could only be glad that he had come at all.

As Master Harmon escorted Sarah back toward the arena, her father following, Julie dashed over. "You were amazing!" Julie said. "I didn't know you were a pole vaulter!"

Sarah laughed. "I'm not. It was just the quickest way to get high enough to catch the staff."

"I keep telling her to go out for track," her father said. "I don't understand why she wants to learn self defense. It's not like we have any muggers on the Moon!"

"It is pretty safe here," Master Harmon agreed. "But *Kuk Sool* is not just about fighting. It is about body conditioning and mental development as well."

"That's for sure!" Julie added. "My mom says it's the best exercise program on the Moon, and that's high praise coming from her. She also likes the idea that I will be able to protect myself from pushy guys when I go back to Earth!"

Sarah knew Julie was talking about Ian, and smiled.

"That's a good point," Sarah's father said, thoughtfully. Sarah guessed he was thinking about her next trip to Earth.

The conversation ended as they reached the participant's area. Father went to sit with Julie and her mom, while Master Harmon took Sarah into the arena. The crowd erupted in applause. Sarah walked in a sort of daze to the grand master. Ian stood beside him, studying his feet.

They stopped in front of the grand master and bowed. It was quiet now except for the hum of cameras. "Dahn Boh Nim, recite student creed number three," he asked.

"Yes, sir," Sarah stammered at this unexpected request. "I will use what I learn in class constructively and defensively to help myself and others and never be abusive or offensive, sir."

"That's right," he said. "When you went after that staff, you acted defensively to help others. Earlier, in your testing and in your demonstration you showed great strength of body and mind. Therefore," the grand master declared, "on behalf of the World Kuk Sool Association, I hereby certify that you, Sarah Thomson, have met all the requirements for promotion to the rank of first-degree black belt."

Sarah gasped. She had never heard of anyone being promoted to black belt with so few stripes. Yet there stood the grand master himself holding a new black belt just for her. He cleared his throat. "Please raise your arms."

"Yes sir," Sarah squeaked. Master Harmon untied her brown belt and folded it. Then the grand master tied the black belt tightly around her waist.

He reached for Sarah's hands, and gently held them, careful not to press on her injuries. "Congratulations, Jo Kyo Nim," he said, bowing to her.

She bowed and managed to choke out, "Thank you, sir," around the lump in her throat.

"Now, Jo Kyo Nim Ian has something to say," the grand master said.

Ian knelt in front of Sarah. "I take full responsibility for the damage caused to your staff during practice last night," he said. "Please allow me to replace it with a new one."

Sarah glanced over at the junior red belt holding her blue staff in the participant's area. The duct tape had held just fine. She didn't really need a new staff. However, she understood that this was Ian's way of repaying her for causing her injury. "Thank you, sir," Sarah said quietly. She expected him to rise, but he continued kneeling.

"I also offer my apology to you for my actions today," he said. Sarah noticed the grand master nodding his approval. How many times had they recited the first rule in strong mind training: martial arts etiquette! The vid of today's event would doubtlessly be seen by every *Kuk Sool* student for months to come. Instead of just being an

example of how not to do a demonstration, it would now also be a lesson in accepting responsibility and showing respect. She nodded her acceptance. But he was not done. "Please allow me to pay for the black belt uniform that you earned today, to thank you for preventing my mistake from hurting others."

Sarah gulped. He was offering to pay for a new staff and a black belt uniform? Students only got room and board. He'd need a job to pay for these extra expenses. *Hmm*. He could do the miners' laundry while her hand healed! "You're very generous," Sarah said.

Ian stood up and backed away, flashing a weak smile at her.

Sarah bowed and also left the arena. Surprisingly, Ian was waiting for her. He bowed and offered his congratulations on her promotion. Sarah returned the bow, wondering if being nice meant he didn't like her after all? She'd have to ask Julie later. The junior red belt offered her congratulations, too, and asked what to do with her staff.

Sarah glanced at Ian. His staff lay in pieces, and people would be making fun of him for weeks. He had called her an idiot. But he had also apologized and seemed genuinely sorry. How many times had Sarah failed God and yet been given a chance to start over? "Jo Kyo Nim, you will need a staff to train with us here," she said. "I would be honored if you would accept the use of this one while you are on the Moon."

Ian grinned, a true smile this time. Sarah thought he looked rather handsome. "Thank you, Jo Kyo Nim," he said, carefully using her new title. "You are very generous. I will gladly take the staff to the school for you and make sure the staff is properly cleaned. As soon as your hand is healed, I would be honored if you would teach me how to adjust my *bong hyung* for the Moon. Obviously I need more practice!" Everyone laughed. Maybe Ian would fit in after all.

Sarah said her good-byes and followed her father toward the door. "Wait," he said. "Did you want to stay and watch the rest of the demonstrations?"

Sarah stopped. She really wanted to, but she felt a need to be with her father, also. "Only if you want to," she said.

He smiled. "I suppose my report on the pyroclastic intrusions in lunar anorthosite can wait while I learn what it means to have a black belt for a daughter."

Sarah nearly glowed as she led her father back into the gym.

## Background Facts

Lunar gravity is 1/6<sup>th</sup> that of Earth. This means that objects and people weigh six times less and fall with six times less force. When people go from Earth's gravity to lower gravity, blood (which is mostly water) shifts to the upper body. This is because the heart is used to pumping "up hill" against Earth's gravity, and the blood vessels are designed to prevent that blood from "falling" back down too quickly. The person feels as if they are standing on their head. Their faces get puffy and red, and their noses feel stuffy even though they don't have a cold. The brain senses the changes and "orders" the body to get rid of the excess fluid. One way this is done is through sweating. Most of the changes happen in the first few weeks in space. The heart actually shrinks in size because it doesn't have to push as much blood as hard as when on Earth.

Another change is in the inner ears. Fluid pressing against tiny hairs informs the brain what direction the body is moving. After spinning around on Earth, the fluid quickly settles, but not so in space or on the Moon. When gravity is reduced, the fluid doesn't press as hard, confusing the person's sense of balance. After a week or so in space, the person has "reprogrammed" their brain to interpret movements in their new environment. Doctors have devised exercises for astronauts to use their eyes instead of their ears to determine their orientation, and thus speed their adjustment to the new environment.

Kuk Sool is a real Korean martial art, though how its practice will be adjusted on the Moon is fictionalized. More information is available at [www.kuksoolwon.com](http://www.kuksoolwon.com). The author is a student of Kuk Sool, and received her first degree black belt in February, 2005.