

The Application of Science (and Pseudo-Science) to “Magic” in the Calebra Fantasy Series

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*The Warlord’s Blade • The Wizard’s Quest • The Sorcerer’s Gambit
Revenge of the Wolf • The Pirates’ Nemesis*

(www.dcrhind.ca)

When I set out to write the Calebra Fantasy Series, about thirty years ago, I was coming from a serious science background (majoring in Biology and minoring in Mathematics) and was uncomfortable with the thought of portraying wizards as engaging in aspects of *hocus pocus*. I needed people to believe in my characters, and the only way I could feel comfortable describing their talents was to have it seem based on science.

Thus, before George Lucas mentioned symbiotic medichlorians as the basis for *the Force*, I came up with the idea of a crystalline element called *landia*, which might enable a someone to manipulate matter and energy. The presence of a recessive gene would enable these people to accumulate landia in their body tissues until, somewhere near puberty, they would show signs of being able to transmit energy, move objects, and transform matter. Training would be required; a Wizards’ Council, called The Order of the Earthpowered, would be needed to train apprentice wizards in the use of their powers. The training would be in physics and Chemistry, with Biology for the healers.

As explained in the first novel, *The Warlord’s Blade*:

The wizard must understand what he is attempting to do, in terms of physical laws. For example, you could not command a rock to explode unless the process of explosion, and the molecular structure of the rock were understood. It must be done step by step, just like a natural phenomenon.

When the wizard Taronlas seeks to escape captivity by turning into a sparrow, he comes up against the complexity of the rules:

For the next hour, he tried all sorts of ideas without much success. Finally, he sat down to rest and think once more. Trying to alter his body all at once didn’t work. He tried several combinations of trying to shrink and change into a bird at the same time, but it was too much of an unnatural strain on his powers.

Exactly how did he go about altering inanimate objects? He had rarely done it, though he used to play with the skill as a novice, almost a hundred years ago. He tried visualizing how he had once changed a stone into a chair. It had been so long ago; he cursed himself for not having kept up so trivial a skill.

Rooting through his pouch he drew out a large copper coin. Setting it before him, he studied it carefully. Once he had a full grasp of the physical nature of the metal, he then pictured a chair. As before, he visualized every aspect of what made the chair a chair – the nature of wood, how wood molecules differed from copper, as well as wood’s dead cell structure. Then, concentrating very hard,

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he made the coin become a small chair. It worked perfectly. Focusing, he drew more matter from air molecules, making the chair larger.

“Ah-hah!” he muttered, giving his leg a congratulatory slap. “So that’s what I’ve been doing wrong.” He had been trying to perform the wizardry directly on himself. This time he thought more about it, concentrating on the precise steps. With a deep breath, he decided he was ready.

Smiling to himself, he sat on the chair and concentrated very hard. He visualized the sparrow before him. Studying the shimmering image, he correcting minor details until he was sure that it was accurate. The next step could almost be skipped. There was no living thing in all Calebra that the wizard knew better than himself. Gathering his nerve, he pulled together each and every essence of who and what he was, and made the changes, system by system. The excess bulk would have to become energy particles in the air about him.

For a moment he felt really strange. What had gone wrong this time? He then realized that everything about the room seemed larger. He felt very nervous and confined, his heart pounding in his chest. Slowly he calmed himself, preparing to see how much progress he’d made. First, though, he had to give in to an itch near his shoulder. Turning his head to the right, he used his beak to settle a ruffled feather. It took a second for what he’d just done to register in his mind. He was a sparrow!

I soon found myself applying the concepts to the elite warriors of the books, the vad-Taelens. In the beginning, I simply made them martial arts experts, surrounded by the lore and mystery associated with both the ninja clans of Japan and the Shaolin priests of Hunan, China. Before long, however, I found the best of these seemed to fast for normal humans. At first I brushed this off with their lightning reflexes stemming from getting brief glimpses of the future, seconds before something happened. This evolved into the notion that they were actually reading some of their opponents’ thoughts, predicting their actions.

Partway through the second novel, *The Wizard’s Quest*, however, the epiphany occurred: My vad-Taelen warriors were near-wizards. I’d been describing certain people as ‘sensitive’ — able to sense Earthpower and its use, but not actually having Earthpower. It suddenly occurred to me that my vad-Taelens must have landia in their tissues — enough to make them sensitive to Earthpower, able to read minds, able to see glimpses of the future, but not enough to make them wizards.

Before long, I realized that, if this were the case, the most elite of these must be awfully close to being wizards. Thus, certain vad-Taelens can reach out and have the nearby sword seem to fly into their hands. In *Revenge of the Wolf*, book 4 of the series, Narell, one of the heroes of *The Wizard’s Quest*, now late middle-aged, finds he can move objects at will, when he never could before. He has finally accumulated enough landia in his body.

Even my love of medical Biology was not left out. When a wizard was injured, there was no waving of a wand and chanting of “reparo.” He had to know his anatomy, as in the case of Darion in *The Sorcerer’s Gambit*:

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Taking a seat under a tree, he relaxed and probed the injured area with his wizard's sight. He found a broken collar bone and some splintering around the shoulder joint. In addition, the shoulder blade had a large fracture. He began a Taelen breathing pattern and focussed, then stimulated his body energy, exciting the mitochondria in his cells to more rapid function. He worked at gathering all the spare calcium and protein in his system, channeling them to the area of damage. Protein built into collagen fibers, while the calcium filled the matrix, bonding things back together. All the while, the young wizard's eyes raged with silver fire as he funneled earthpower into his shoulder to accelerate the process and encourage more rapid production of new bone cells. Turning his attention to the muscles and ligaments, he found more stress than damage. He used his energy to soothe and regenerate the tissues.

The rules of physics can never be ignored. In *The Pirates' Nemesis*, book 5 of the series, the hero tries manipulating weather to create more favourable winds for him when he has to catch up to a pirate ship and rescue his love-interest. His efforts are successful, but he comes close to causing a hurricane and a snow storm in other, more remote locations. You cannot alter pressure gradients without affecting those in other places.

Throughout the series, it has made the writing and description of magic more interesting for me, but it set a challenge of maintaining consistency. For me, however, the challenge is what makes it worth doing.