

Chapter 5

Knowledge is not Enough

I had a rough night last night. I was haunted most of the night by a peculiar stress dream.

I was at a community center and was one of the finalists for a grant. The group of competitors were gathered in a multi-purpose room waiting. When I got there the attendant told me where to wait and made it clear that I was one of the people who was going to receive an award. The judging committee was in the next room. The abstracts we had submitted were laid out. Mine was vague and I simply couldn't remember what I had proposed. I kicked myself for not being more prepared, "I should have dug out the proposal and reread it before I came."

Eventually we were pulled into the committee room. Three groups of us were to receive funding for our proposals. One after another we were to briefly explain our proposal to the others in the room. I got a hold of a copy of my application and started flipping through the pages, trying to appear interested in the group presenting, but desperate to know what I'd proposed.

There were hundreds of pages. Apparently I had proposed to do an experiment regarding the safety of comfrey using two animal models: goats and monkeys. Further, I detailed the plans for extensive characterization of the extract. I vaguely remembered that there was something humanistic at the end of the proposal that would seem more pertinent to this particular funding agency, but I couldn't find it. My stress escalated as I continued to search and search for the other part of the research. I was finally able to end the stress by coming awake enough to tell myself to stop the dream. I wasn't *really* getting funding. I drifted back to sleep.

Comfrey was one of the first herbs I grew and made medicine out of. It is an integral part of my comfrey salve which I used on cuts and abrasions. It was also used internally by herbalists for ulcers along any part of the digestive tract. I say “was” because in 1990 it was “banned” for internal use by the FDA. The ban was based on the presence of compounds in comfrey that are toxic to the liver. Despite centuries of use of comfrey internally, including a recent period where people considered it a “health food” it was now considered too dangerous to be used internally.

It is puzzling to me that acetaminophen, a liver toxin known to kill people, is allowed to stay on the market, while a herb with less toxicity is “pulled”. In an attempt to correct this situation, I did an extensive literature review trying to ascertain comfrey safety. The data appeared inconclusive to me, so I planned a series of experiments using rabbits and pigs to test the safety of comfrey. Pigs are considered one of the most sensitive animals to the toxic effects of pyrrolizidine alkaloids, the toxic compounds in comfrey. Based on anecdotal reports, I expected both animals to be able to handle high amounts of comfrey without any toxicity.

My original literature review was based on articles indexed in Medline, an extensive database focused on medically relevant research. Before I submitted my proposal for institutional review, I checked a second database that included more general biological subjects and agriculture. Here I found research indicating that comfrey had no toxic effect on both pigs and rabbits when fed in large amounts as part of their diet. Needless to say additional research was not needed.

Why ban comfrey? Given the data available, the FDA's action puzzled me. I decided it was a case of benefit vs risk. There are many toxic substances, acetaminophen, saccharine, etc., that remain on the market because people think the benefits outweigh the risks.

I talked with a doctor about the situation. She had once used comfrey extensively in her practice. Now she was faced with a moral dilemma. She had a patient that was scheduled for surgery to correct a stomach ulcer that wasn't healing. The doctor knew that comfrey would close that wound in just a couple of days, eliminating the need for surgery. However, to recommend comfrey would be grounds for losing her medical license. On the other hand, to not recommend it would be unethical. She would joke about her predicament, "I continue to recommend comfrey to my friends and relatives, but I can no longer use it professionally." It is ironic. Apparently, the FDA is unaware of the benefits. Certainly surgery is more risky than comfrey.

When I entered the next cycle of REM sleep, I continued the stress dream. The committee had run out of time so I didn't have to present a summary of my proposal. That was a big relief. However, I was stressed about accepting money for a project I didn't want to do. I had no interest in investing time, money, and energy into research that was designed to show comfrey was safe. I already knew it was relatively safe. I also new that the research wouldn't change FDA policy.

If I were to refuse the money, this was the time. The agency would then be able to award a runner up immediately. Once the meeting was over, the committee would be disbanded and it would be difficult for them to award a different proposal. Still, money to do research isn't something to be turned down lightly. I scrambled through my proposal trying to decide how I could salvage the project. I wondered how come I got funding at all from this agency that usually funded alternative energy and community improvement projects. I suddenly realized it was because of the goats. I had proposed to do the research on a herd of goats that was already being kept at the community center as part of an enrichment program for kids. Somehow my research would bring an added benefit to keeping the goats for the children. This kind of reasoning only makes sense in dreams.

As the stress of trying to figure out how to change the proposal before the meeting ended woke me up, I found I had almost solved the problem. I could send a change of proposal to the agency explaining how I'd found published research regarding comfrey that would make my original proposal obsolete. I would then propose research that measured the direct benefit of goat keeping on the that visited the enrichment program. Now that was research that was important and I could get excited about!

The dream and conclusion reminded me of the process I underwent as part of my graduate education. Although I was very interested in how the human body works and reading the research done by others regarding the mechanism of action of herbs, I was never personally interested in “proving” the efficacy of herbs or determining how they interacted in the body. After very little time studying in graduate school, it became clear to me that a great majority of human ailments could be corrected by diet and exercise. What was very intriguing was that despite knowing the “cure” for many diseases, humans continued to behave in ways that were self-destructive.

This awareness, coupled with my personal struggle to change behaviors that didn't serve me, has made me more interested in research that investigates health behavior change. It seems to me that health behavior change occurs when we are motivated. Motivation comes to me when I am inspired. Inspiration comes to me from a variety of sources, but always involves a complex inter-relationship between things or people. It is from my relationships that I create meaning for my life. I refer to relationships in the broadest and most diverse sense. The children in my dream with the goats. The farmer with his plants. A set of relational databases. My elderly father with his aging dog. My mother with her son. My brother with his kids. Me with myself.

I create meaning in my life by analyzing the relationship of my actions to the rest of the world. That is just part of the process. The other part

of the process is to choose to act in a way that supports my values. When I do something that matches my values, no matter how small, I give myself credit. I'm a melancholy and an addict. Combined this means I'm never really satisfied with life and it seems meaningless most of the time. The experience of living from those two beliefs is very, very depressing, I have chosen to pretend that life is okay, satisfying, and meaningful. I guess some people just live from this reality everyday, but for me it is a conscious choice. This is my spiritual practice and when I do it it still feels like I'm pretending. It is worth it though. I bring meaning into my life by connecting my actions to positive outcomes even when I can't see those outcomes.

I wake up, I wash the dirty dishes. Not only am I denying entropy, I am making ready for the next meal. This is creating ease in my life. If I have ease in my life I am ready to be present when my daughter comes home from school. I am ready to be present for my friends on the phone when they call about their troubles. You see, I don't really care about the dishes. In fact, cleaning them used to be way down on my scale of accomplishments. A worthless task. Life isn't very meaningful when it is filled up with worthless tasks. Now, I choose to see how cleaning dishes connects to the things I value. I still wish it was bigger or more splashy, but I feel greater satisfaction knowing I am creating a life in alignment with my values. I value connecting with others a lot. Now that I can see how taking care of my chores helps me connect with others I am more inspired to do my chores.

I have always wanted to contribute to the well-being of others. As a scientist, I imagined that I would do some groundbreaking research that would benefit many people. I have yet to find a research project that has enough meaning or really gives people what they need to lead satisfying lives. I have been hungry for purpose, but I could find no line of research to address the issues that really bring misery into people's lives. Despite my high energy and productivity, I have been plagued by depression and inertia. In part this is because I have been

unable to find research work that matches my values.

My goal is to live simply and enjoy life. My desire is to encourage others to do the same. I want serenity for myself. I want to help others get the same for themselves. It sounds quite simple, but acting in alignment with what we know is best for ourselves is apparently one of the hardest things to do.

At a recent conference, I heard Tierona Low Dog, a visible leader in the field of alternative medicine, explain how she used to go into schools and talk with children about health. She would line up some food choices: a hamburger, french fries, an apple, some candy. Then she would ask the kids which one was the most healthy. They always picked the apple. Every kid knew what the best food for their body was. We know what is best for us. We know it intellectually and we know it intuitively. More knowledge isn't what we need.