Originally published January 1999 in the "Accent on Advocacy" column in *Well Beings*—the now defunct newsletter produced by Sharon Kimmelman, founder of Vaccination Alternatives. This essay has been revised periodically. The date at the end indicates the last change or addition.

FACTS vs. BELIEFS

Lessons For Vaccination Awareness Advocates

By Gary Krasner

The facts are on your side, so naturally you think you'll persuade your audience. But their pre-existing beliefs are far more important than are the facts.

I'll never believe a fact unless it's supported by a plausible theory. About 25 years ago radio talk show host Barry Farber had said that often. If he's on the air somewhere today, I'm sure he's still saying it. It is an important concept to understand. In fact, to be an effective advocate against the status quo, you should understand this concept before anything else.

What I think Mr. Farber meant, and what I've subsequently learned on my own, is that people tend to quickly form conclusions or theories about novel experiences or information based upon surprisingly little corroborative evidence. We arrive at a view of how the world works as early as childhood. By adulthood, we have developed a comprehensive system of social, political, religious, ethical, and philosophical beliefs that are all in accord with each other, as we see it. When new information comes to our attention, we test it against these constructs. If the information supports or helps to explain the construct, then the information is accepted as true and is seamlessly integrated into it. If not, then it's the information that's rejected; not the construct.

There are several reasons why we do this. One of them relates to our need for certainty. All theories have one thing in common: they help people to make predictions about their world. It can be very costly to require experiential evidence for every novel event before we react to it. Perhaps you've never had direct experience caring for an infant, but you know never to let one hold a razor blade. You've never been mugged, but you know better than to walk down a dark alley in a bad area. And you know that the flu is contagious, so you know that you should get the flu vaccine. Right? There's the problem: The difficulty in getting people to accept something new and different is that the many disparate things that they've already accepted have become tightly bound into their core belief systems—or theories about life. There may be no apparent connection between some of the things they accept. Perhaps they were just learned at an early age from a parent or teacher. But the bottom line is this: As an advocate, it's not enough for the information you present to be valid and accurate for people to accept it. It must also conform to their pre-accepted system of beliefs. As long as those beliefs serve them, people are not prepared to abandon them on the basis of mere facts alone.

I hadn't paid much attention to the aforementioned Farberism until I learned disturbing facts about established and accepted health-related issues, like water fluoridation, vaccination, the standard meat-based diet, and various aspects of conventional medicine. When I related these facts to other people, it didn't alter their faith in these practices. Facts alone didn't seem to have enough of an impact.

As some of you may have learned, citing serious adverse reactions alone is insufficient to shift public opinion against vaccination. Proponents say that such reactions occur infrequently (albeit, not demonstrated satisfactorily) compared to the total number of doses administered, and therefore the benefits, they allege, outweigh the risks. Also, challenging vaccine effectiveness has also had a limited impact. The way that the conventional theory of germs and viruses was formulated and periodically revised guarantees that vaccination shows efficacy, despite when medical

studies indicate that a vaccine has failed based on their own precepts and assumptions of immunity, resistance, and the like. The structure allows for the acknowledgment that some vaccines may fail, but not the practice of vaccination itself. Not the basic belief.

In February, 1994 I gained a deeper understanding and confirmation of this dynamic after viewing the final episode of the acclaimed BBC-TV documentary series, The Day The Universe Changed. The series examined pivotal scientific achievements throughout history. The final episode was titled, Worlds Without End: A Personal View by James Burke. (Burke wrote and presented this series, as well as the subsequent BBC science series', Connections and Connections 2). The Worlds Without End episode was a work of singular distinction and insight in the way science really operates.

The episode opened with a re-enactment of a trial of a woman accused of witchcraft in 17th Century Scotland. Apparently, ill-fortune had befallen many of those who had come in contact with her. To the viewer, every word spoken during the trial was understandable. Even their intent to burn the woman alive—supposedly to free her soul—was a humane act from their perspective, and thus had an internal logic to it. *"They were as certain of their facts as we are of ours"* [Burke]. But obviously it didn't fit our view of the world today. Still, how far removed are we from modern versions of this kind of paradox? If any fact can show validity (can be explained) in the right universe (the construct we choose to believe in), then how do we know which universe to believe in: Homeopathy, Allopathy, Natural Hygiene, Herbalism, or what?

Burke then used the analogy of optical illusions to show how we *"alter reality [in our mind] to make something fit what we feel it should be."* And only one theory can be accepted: Burke showed how a picture can show two different things, but we can see only one of them at a time. *"Without that structure—a theory of what's there—you don't see anything."*

Burke continued, *"Science is the same: without hypotheses—preconceptions about the world—you can't ask the right questions in research to test its validity. For things to make sense, you have to make up your mind about them in advance.."* But, he warned that *"sometimes the hypothesis is so strong you'll see things that aren't there"*, because it is part of a structure that *"provides a rule book for the kinds of questions you ask about the world, because it gives you a theory of how things are supposed to work"*. Burke illustrated this with the notorious fake fossil remains—known as Piltdown Man—that had been discovered in England in 1912. For forty years thereafter archeologists ignored mounting evidence doubting its validity, *"because science was expecting to find the missing link between ape and man with a developed brain."*

Burke said, *"Structure controls how science in particular progresses. Science is thought to be objective; seeking and discovering the truth. But the truth is what the structure says it is. There is progress and change, but that happens because the rules of the structure controls investigation at every level, until you get down to a bit of detail that the structure can't handle."*

To be fair, Burke generously peppered this episode with many examples from the history of scientific discovery. Yet on that last point I would single out allopathic medicine as being amazingly resilient to those "bits of detail". Just one of many examples was the "problem" of bacterial Pleomorphism that had plagued (pun intended) proponents of the germ theory. Pleomorphism refers to the transformation of one distinct strain of bacteria into other strains within a single life cycle. For example, the virulent tubercle bacillus could be made to degenerate into harmless non "acid-fast" cocci, and then into "diphtheroid" coccobacilli just by altering their food or environment. Ultraviolet light can induce the rod-shaped anthrax bacillus to transform into the spherical coccus. Fixed species of bacteria is the central part of the biomedical model of specific etiology of disease (classifying a specific germ as the singular causative agent of a specific disease). But Pleomorphism implies that it is based upon a faulty construct. Pasteur explained away the contradiction to prior contamination of the specimen. Others disputed variability of bacteria to different degrees. Later, bacteriologists allowed for some transformations, but only between some strains, and restricted in its range. Today, what bacteriologists actually think of this phenomenon is no longer an issue in any practical sense. The classical Germ Theory has become

institutionalized and entrenched into modern clinical medicine. Microbiological research is guided by the economic needs of that structure, as Burke would refer to it.

A case in point: In Sept. 1978, the Office of Technology Assessment of the U.S. Congress issued a report entitled, Assessing the Efficacy and Safety of Medical Technologies stating in part, *"It has been estimated that only 10 to 20 percent of all procedures currently in medical practice have been shown to be efficacious by controlled trial."* Add to that all the books and magazine articles about pills that don't work, iatrogenisis, diagnostic tests that are false, hospitals that bilk, drug companies that falsify data and bribe doctors and medical journals, and health officials that recall bad drugs—and what do we have? What we have is a society that still worships Modern Medicine and sees their doctor regularly. Because belief in an established structure trumps facts. After all, how many people are even aware of an alternative paradigm to the conventional theory of infectious disease, which would enable them to embark on filtering facts through that alternate theory to test its validity? This "testing phase" often takes years before the tester might gradually shed the old theory and cautiously adopt the new one.

As an advocate against vaccination since 1980, I've noticed this long-term phenomenon personally. Often, parents I've met who initially wanted merely the right to select which vaccines are appropriate for their children had mentioned to me many years later that they've come to believe that no vaccines (none) seem warranted. In other words, over the years, through their interest in the issue of vaccine safety, they were probably also exposed to arguments that directly challenged the actual practice and efficacy of vaccination. And through that aforementioned *testing phase,* over the years they were able to resort and reconcile all their related beliefs that intersected the issue of vaccination, enabling them, finally, to reject the alleged efficacy of vaccination in its totality.

The power of ideas over facts may begin to make sense when you consider, for example, how often religious practices or diets have later been found to be medically efficatious. Does it deminish their religious faith? Not at all. Religious beliefs are planted in us when we're young, while we're formulating our core beliefs. Adults who continue to believe in God have adopted psychological aids that helps them accommodate and reconcile the secular with the religious. Even scientists have been adept at that.

I've also counseled hundreds of parents who claimed the religious waiver from school immunizations. Few are so one-dimensional as to hold solely secular or solely religious beliefs on the issue. Most incorporate what they read about vaccination (from news periodicals, for example) into their existing religious philosophy. Their expressed rationales are thereafter so intertwined as to be impossible to discern where the secular components leave off and the religious ones begins.

Returning to the BBC documentary series, with interesting historical examples as illustrations along the way, Burke concludes: "What you think the universe is and how it works, controls the kinds of questions you can ask—not some supposedly detached scientific view of things. Whole areas of investigation can be off limits when it looks as if the results may contradict the accepted view. It is the structure—the current view of things—that controls what science does at every level: from the cosmic questions of the whole universe, to what bits of that universe are worth investigating; to how far you let the questions take you; what experiments you do; what evidence you can and cannot accept. It even tells you what instruments you should use." ". . . The whole argument comes full circle when you get to the raw data itself—because it isn't 'raw data'. It's what you planned to find from the start. Then when some detail doesn't fit, that's when you see science hanging on like grim death to stop the rug from being pulled out from years of happy status quo."

Burke made no references to vaccination or infectious diseases, but it sounds like he could have been describing them. In terms of its message, Burke's presentation was nothing less than a landmark achievement for a television broadcast. The message for us is clear. Theories, constructs, structures, systems, paradigms—whatever you want to call them—determine what we believe; not stray facts. It suggests that conversion is a slow process, and is affected by pre-existing beliefs. So, for example, political conservatives would generally be more receptive to opposing mandatory vaccinations

because it is in line with their views that favor less government involvement in our lives. From there it would be facile for them to accept various medical critiques of vaccination, because it builds upon an established construct. Liberals however, would more likely resist your message, because they tend to see all public health measures as egalitarian and benevolent. Given limited time and resources, it's important for advocates to understand the various pre-conceived biases of any given audience, with paying due diligence to exceptions to the generalizations.

According to Burke, conflicting structures have never coexisted peacefully. One structure must always supplant another. Politically, this explains why ethnocentric governments have failed to assimilate multiethnic people. America was the first culturally diverse nation to avoid ethnic strife only by intentionally subordinating religion to the Constitution—in other words, to a singular construct—which has helped to avoid favoritism, sectionalism and dual loyalties in the U.S. Assimilation in the U.S. is easier than in many other nations that have failed to establish common belief systems that would be receptive to their entire population.

Parents searching for the truth about vaccination are similarly faced with dual and conflicting theories. A parent must ultimately decide either that their child's measles is a discomforting, but harmless self-limiting discharge of waste through the skin (Natural Hygiene), or else it's a viral attack that may consume him unless drugs are administered to kill the germs (Allopathy)? It must be one or the other, else rationally deciding upon a therapy would be impossible.

And even when one does choose a theory, there may be further daunting issues that one must still deal with. You can follow the dictums of any given health or medical theory, and not be guaranteed a positive outcome. If it pertained to your child's health, and you had chosen a therapy not considered standard medical practice, and the therapy didn't lead to a positive result, then you would have to justify your decision to the satisfaction of child welfare authorities. This is why I urge parents to thoroughly understand the theories of health they choose for their children, and on top of that, try not to be too doctrinaire about it. Even natural approaches to health have had to amended when clinicians found that the practice didn't show the promise predicted by the theory. Always obtain a broad consensus of views whenever possible. Sometimes that's the best insurance against error and tragedy.

In our May '98 issue, my essay, "A Call In The Night" tried to show that parents who oppose vaccination must understand an alternative paradigm to allopathic medicine to support their decision not to vaccinate. They should understand the real function of (inflammatory) diseases and know the correct steps to take when they occur. They'd also be able to defend themselves with knowledge and conviction against the pressures of the majority view. Also, if we hope to influence public opinion about vaccination, we have to begin now to offer another theory that explains observations and information in a way that is different from the currently accepted construct; a theory that does not suggest that disease is transmissible between people, nor that a drug must be mandated to prevent it.

Acknowledging the virtue of self-examination, Barry Farber would sign off every broadcast with the phrase, "keep asking questions". Next time, I'll ask hard questions about some of the belief systems that we believe, and which one has the best chance to supplant the prevailing system of medicine.

CFIC
Coalition For Informed Choice

GARY KRASNER, *Director*
188-34 87th Drive, #4B
Holliswood, NY 11423
718-479-2939
CFIC@NYCT.net
www.CFIC.us

"For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled" ...Richard P. Feynman