Complementary and Alternative Veterinary Medicine Considered

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Foreword by Franklin M. Loew

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There cannot be two kinds of medicine—conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work. Once a treatment has been tested rigorously, it no longer matters whether it was considered alternative at the outset. If it is found to be reasonably safe and effective, it will be accepted.


There is no alternative medicine. There is only scientifically proven, evidence-based medicine supported by solid data or unproven medicine, for which scientific evidence is lacking. Whether a therapeutic practice is “Eastern” or “Western,” is unconventional or mainstream, or involves mind-body techniques or molecular genetics is largely irrelevant except for historical purposes and cultural interest. As believers in science and evidence, we must focus on fundamental issues—namely, the patient, the target disease or condition, the proposed or practiced treatment, and the need for convincing data on safety and therapeutic efficacy.


There are no sects in science, no schools of truth. While facts of Nature are being studied out and until final certainty is attained, there may be legitimate and amicable differences of opinion in the scientific fold; but in ultimate truth there is an essential unity, and no contradictions are possible. The existence of conflicting sects and schools, for instance, of chemistry or astronomy or any objective science, is unthinkable; it is equally incongruous in medicine. The unenlightened public is unable to appreciate the solidarity of truth or to perceive the incongruity of conflicting divisions in medicine or other sciences.

—Nichols, J. B. JAMA 1913; 60: 332–37
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To the memory of Franklin Loew (1939–2003), DVM, PhD, scientist, veterinarian, teacher, humanitarian, historian, dean of two veterinary schools, college president, polymath, entrepreneur, wit, animal advocate, and loyal friend. His influence in all of these areas has been incalculable and will endure.
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Foreword

For 250 years, veterinary medicine and its scientific underpinning, veterinary science, have struggled to gain the confidence and respect of clients, fellow health scientists and practitioners, and the general public. And it has been accomplished by means of the scientific method and strict objectivity. To embrace unproven or even discredited “complementary and alternative” techniques surely is regressive both for patients and for veterinarians.

Veterinary medicine has always been open and sympathetic to new treatment and diagnostic modalities, but only when they have been proven in controlled studies. In 2002, Abraham Verghese wrote in the New York Times about cancer in humans, “I am not a crusader against alternative medicines or its practitioners. I am all for things that make us feel better and that don’t hurt us. But I do wonder at the paradox of even the most rational of us being drawn to these bottles with pictures of ugly tubers and weedlike plants on them. Why do we become dreamy-eyed hearing the songs of the New Age pied pipers whose melodies interweave quantum physics and the workings of the colon in beautiful but completely fictional ways? Like revivalist preachers, they invite our faith, our willingness to search for magic in ancient, undecipherable Oriental practices (as opposed to the new, quite decipherable, Western practices). In return they offer nostrums, tonics, tapes, books, diets, retreats, mantras, votive candles and cruises; they bring color, fragrance and incense to an illness experience that otherwise plays out in black and white.”

This book is a masterful accounting of the “how” and “why” this seems to be happening. It is candid and pulls no punches. The ethical issues surrounding the use of unproven therapies loom large, and the authors fully address these. This book comes at the right time and is as important a book to veterinary medicine as textbooks of surgery or medicine.

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Introduction

Now that I have spent 25 years teaching veterinary ethics and working closely with veterinarians in virtually every area of veterinary medicine, it seems appropriate to make some autobiographical comments, particularly in regard to my recent skeptical work on alternative medicine. I commonly hear the complaint that I am not entitled to be skeptical regarding non-evidence-based, nonmainstream medicine because my own work on ethics was not evidence based, and was, in 1976 when I started the field, certainly not mainstream. Thus I, of all people, should be open to the deviant and unaccepted, since I benefited from openness and receptivity to new views.

This may seem like a strong argument, but ultimately it is fallacious. Ethical issues clearly existed in veterinary medicine and in science despite the fact that the scientific community was ideologically disposed to deny their existence, justifying that denial with the well-known rubric that science was “value-free” and thus, a fortiori, did not make ethical judgments. Thus, scientific ideology largely grew out of the attempt to expunge what is not verifiable and testable from science; ethical judgments are not verifiable, therefore, they were not considered to be part of science.

But the key point is that the ethical judgments were there, whether they were acknowledged or not! For example, every veterinary practitioner must ultimately make an implicit (if not explicit) commitment to whether he or she has primary moral obligation to the animal or to the owner; without such a commitment, the veterinarian could not make rational treatment decisions. The fact that such judgments were not previously consciously examined or even acknowledged did not stop them from being operative.
Similarly, every animal researcher has had to implicitly make the judgment that the knowledge gained from an invasive experiment was of greater value than the suffering in the animal it engendered. Thus, when I pioneered in calling attention to ethical issues in veterinary medicine, I was simply illuminating what had been ignored. I was not creating something *ex nihilo*. And in calling attention to neglected ethical issues, the social status of veterinary medicine was being strengthened, not eroded.

Is this analogous to being open to “alternative medicine”? In a trivial sense, it is. No advocate of science, including the authors of this book, suggests that it is impossible that new therapies may arise from implausible bases. We are quite willing to be convinced that other cultures, even so-called primitive cultures, might have arrived at promising therapeutic modalities—it may even be likely. However, this situation is not analogous to the ethics case. It is neither ethical nor scientific to claim that alternative modalities work *prior* to satisfying the canons of evidence that science and medicine have set up as justifying such claims. Advocating application of therapies that are antithetical to science is not like calling attention to ignored ethical issues; it is more like making a claim that there are deep supernatural issues in veterinary medicine, and demanding that they be considered. And insofar as veterinary medicine is chartered by society to be science based, not adhering to scientific canons weakens veterinary medicine, rather than strengthens it.

Thus, however open-minded I may strive to be, I am under no obligation to accept as therapeutic any modality that has not been tested by the criteria that scientific medicine uses to accept or reject mainstream therapies. On the other hand, I welcome and encourage the scientific testing of new modalities as well as any mainstream modalities that have been accepted without testing—the requirement of testing holds just as strongly here as it does in alternative medicine. As anyone trained in scientific methodology knows, it won’t do to say “I saw it work”—with no proof of causation, we don’t know that we didn’t simply see this treatment followed by this phenomenon,, or that we aren’t operating by wishful thinking, the Rosenthal effect, or any number of other biases. That is why double-blind randomized clinical trials serve as a “gold standard” for proof in science!

Other criticisms I have faced are equally ill founded. For example, one colleague chided me for proliferating animal suffering in demanding evidential bases for treatment. I pointed out that relevant evidence could first of all be garnered via clinical trials, without deliberately hurting animals or making them sick. In addition, I pointed out that using unproven therapies could also cause animal suffering. For example, many years ago I witnessed a disturbing “wet lab” involving surgery done on a rabbit with acupuncture. The animal was heavily sedated, restrained with leather straps, yet it still struggled and vocalized. The “true believers,” however, saw what they wanted to see—“successful”
surgical anesthesia. Additional suffering could occur if a therapy doesn’t work, or if, by receiving an ineffective therapy, an animal is prevented from getting something that does work.

Another criticism I have received is equally troubling. “You,” I have been told, “have directed many criticisms at science, from its denial of ethics to many other components of its unexamined ideological presuppositions. Yet here you seem to uncritically accept it.”

Once again this criticism is ill founded. Unfortunately, too many people in society have polarized into pro-science and anti-science. What veterinary medicine must try to do is to discard what is indefensible and hold on to what is valuable. This just makes sense. In my writings, I have pointed out that science has often been tainted with bias, corruption, favoritism, old-boyism, and so on. The exclusion of women from much heart research earlier in the twentieth century, the funding of AIDS research over breast cancer research, the protection of established theories (e.g., stress as a cause of ulcers), the powerful hegemony of paradigms (e.g., Freudianism in psychiatry earlier this century, replaced by biopsychiatry), the influence of economics and politics on such hegemony, the publish or perish system, all taint science and impair its alleged objectivity and tarnish the ideal of science as an objective path to empirical truth. But, in the end, science has built into it self-correcting mechanisms. Their effectiveness may vary, but they are there and will, we can hope, invariably become operative. No other modality for learning about the world contains such a self-correctional mechanism.

That I criticize science in some areas does not mean that I cannot view it as the best approach we have for gaining knowledge of the world. To my knowledge, no other method contains within itself the machinery for rejecting false conclusions, however slowly and haltingly it may work. Even Newton’s authority could not save absolute space and time from Einstein’s devastating critique; medicine eventually did establish that *Helicobacter pylori* causes ulcers, in spite of initial criticisms; and experiments that allegedly demonstrated cold fusion were ultimately shown to be flawed.

Looking at alternative medicine—or rather, the veterinary community’s reactions to it—has led me to a disturbing conclusion reinforcing what I have learned in 25 years of teaching nascent veterinarians: our teaching and training are seriously deficient in the area of critical thinking. We are so busy making sure that students have memorized and can spit back the relevant facts that we do little to assure that they know how to use them and logically manipulate them. As an example, one of my colleagues at CSU, in fact a supporter of alternative medicine, invited me to address his class in complementary and alternative medicine. “Challenge them [the students],” he said to me. “Make them think.” I began by asking them to think about what science can and cannot do. For example, I suggested that science cannot confirm or deny the claims of
those practitioners who claim to be able to speak with the souls of sick and dead animals, allegedly taking advice from these souls regarding electing humane euthanasia. “Surely,” I confidently affirmed, “science cannot test claims about communications with souls.” “Why not?” far too many students chimed in. “You are putting illegitimate limits on science.” In other words, they could not grasp the difference between an empirically testable question or claim and one that could not be empirically tested! This in turn displays an appalling lack of conceptual sophistication among those supposed to be scientifically trained.

To paraphrase Kant, learning facts without the ability to reason about them is empty, even as learning reason in a factual vacuum is blind. Not only in veterinary medicine, but also in all disciplinary education, we are doing more training than educating, and we are failing to assure that students can reason and logically manipulate the material they learn. Even more disturbing is the fact that a significant number of students of mine who are candidates in the sciences were favorably disposed toward using unproven alternative medicine, despite an almost total lack of empirical evidence in its favor in terms of efficacy or safety. This in turn evidences that even in the case of these students whom we are training as scientists, there has been a failure to grasp the rudimentary principles of scientific reasoning.

If veterinary educators confront this appalling lack of critical thinking ability in our graduates, then the debate over alternative medicine will have strengthened our ability to produce graduates who can reason in both veterinary medicine and veterinary science. But if we do not heed these disturbing signs, veterinary medicine may well relegate itself to a world of medical anarchy, where no approach to knowledge or treatment has pride of place, because there are not objective standards for proof and truth, and “anything goes.”

I was fortunate enough to begin my career in veterinary medicine by teaching with Dr. Harry Gorman, arguably one of the greatest veterinarians of the twentieth century, inventor of the artificial hip joint, supervisor of the aerospace program’s use of animals, founding member of the American College of Laboratory Animal Medicine, president of the AVMA. In addition, Dr. Gorman was instrumental in conceptualizing what he, two others, and I turned into federal law, assuring the well-being of laboratory animals. He was what he liked to call a “closet philosopher,” possessed of sound common sense and Humean skepticism always aimed at pomposity, nonsense, and obfuscation. I learned enormous amounts from him. One thing he constantly stressed was that veterinary medicine had found its way from obscurity and lack of academic status to a highly respected position in medicine by ever-increasingly hitching its wagon to scientific inquiry, and accepting nothing in the absence of evidence. “Above all else,” he admonished me, “make sure that we never lose our way by failing to observe the principles of science, common sense,
and common decency.” I dedicate this work to his memory and to the spirit of that admonition, though I doubt he could have guessed how readily some of his colleagues would abandon that which moved veterinary—and human—medicine into high social credibility. For this reason, I gratefully acknowledge Dave Ramey’s drawing me into this fray when he phoned me and said, “You helped teach me how to reason, now I need your help in defending it.”

Bernard E. Rollin

I am a practicing veterinarian who specializes in the care and treatment of horses, with 20 years of experience gained from almost daily work “in the trenches.” I have seen my clinical work glorified and vilified, and I’ve seen promising therapies come and go. In the crucible of clinical medicine, where no one has all of the answers, the only constant is the parade of options available to make things better for the horse. You work hard and do the best you can.

The learning curve in the practice of veterinary medicine is initially steep. When one enters the field, new facts and ideas come at a frenetic pace, defying even the most committed efforts to absorb them. However, after several years of study and experience, the slope of the curve tends toward the horizontal, and the realization that we are relatively poorly armed in the fight against disease and injury takes hold. And it was at that time, perhaps 12 years ago, that I became drawn to alternative veterinary medicine.

I recall being fascinated with the ideas that other cultures had wisdom that had eluded those of us unfortunate enough to be limited to Western ways. I became interested in learning what other approaches to the care and treatment of patients involved. At the core, I was hopeful that I would learn new and better ways to help the horses for which I care. I attended lectures and seminars on such things as acupuncture and chiropractic, and I was duly impressed by the enthusiasm of the presenters and encouraged by the promise of the new and the strange. I even went so far as to request application for acupuncture certification—but something always nagged at me.

That something was the lack of intellectual sophistication in the presentations that I had heard. It was weird. In the course of my education, both pre- and postgraduate, I had been to countless lectures. I had even published research of my own. I was comfortable in the scientific debate; I relished the opportunity to dig deep into questions and look at the trail of ideas that led up to current thought; I reveled in the stimulating debates. But in my initial forays into alternative medicine, I was dismayed by what I found. Rather than critical analysis, I found naïve acceptance; rather than a respect for scientific education and rigorous methods of analysis, I found cults of personality and messianic zeal. Rather than evidence of effectiveness, I found testimonials. Not being one who is swayed by authority, I began to look into the field on my own. And, in the time-honored tradition of science, I began to publish what I found.
At about the same time, I began to see the influx of nonsensical ideas into my own geographical area. For a short time, many show horses were being shod with a pad on one fore foot and the diagonal hind. Why? Their legs were uneven. How did we know? “Ask the chiropractor.” Did such pads make a difference? Not that I could determine. After a year or so, horses were no longer shod in that fashion. I haven’t seen it done in years. Perhaps I’m lucky enough to now be taking care of a group of horses with even legs. More likely, they never were uneven at all. Nonetheless, my practice career has seen a nonstop parade of magnets and lasers and acupuncturists and massage therapists and psychics, and it doesn’t look like it’s ever going to slow down. But they’ve all gone away—or at least the initial furor died down. Charades can’t last forever. But a new game, with new players, comes along every day.

The veterinary profession needs to get off this merry-go-round. The history of medicine is instructive. We have thousands of years of ghastly and/or ineffective medicine. Thousands of years of treatments that providers thought worked, and that in fact were killing and maiming the animals: bleeding, burning, purging, cupping. Thousands of years of doing things that maimed and killed—or doing things that did nothing at all—and doing them over and over and over and over again. Never stopping once to do rigorous tests to see whether they were actually safe and effective. Tormenting a new generation of animals with the same things that tormented their sires and dams, and their sires and dams—and describing them as time-honored treatments. Sprinkled among the lethal treatments may have been a few that worked, or at least did not cause overt harm. But most of those—like putting ice on an ankle sprain—have already shown their worth. We need to move on.

Say you’re driving from point A to point B. There could be any number of routes to get there. You might choose the route that takes you by the park, or the one that takes you by the lake, or several other alternatives. The thing that all routes have in common is that you’re going to get where you want to go.

Say, however, that there’s another route that will take you on a long drive but you’ll never end up at point B. I suppose one could consider that route an alternative to the other routes, but why would you want to take it? In fact, it’s not really an alternative at all, if you consider the term alternative to imply another way of achieving your goal (point B). Taking such a route would be a complete waste of time.

That’s the beef with the alternatives to established therapies that get discussed in medicine. People should not be restricted in how they reach their destination—it’s just that if they’re going to go on a trip, they should be able to have a pretty good assurance that they’re going to get where they want to go. To extend the analogy further, people embarking on such an alternative route may even enjoy the ride, stopping for gas, buying food, the lovely conversation, and so on, but what’s the real point of the trip if they’re going to end up
somewhere out in the woods? And what about those who sell the alternative route takers on the wonders of their “new” directions—are they practicing a “new paradigm” of cartography?

So here’s the next question: is it acceptable for a professional to just do anything under the guise of good intentions? Or do they have an obligation to show that we’re actually doing something helpful for the animals for which we care? If they do have such an obligation, then clearly, they must separate safe treatments from unsafe, and effective from ineffective. Clearly, they then need to use some method to do so. And, clearly, they’ve got that method in place and most veterinarians would seem to agree that they should use it. And, to a large extent, they have, and alternatives to scientific medical practice have consistently been found wanting.

So what’s the allure of alternative medicine? It’s the appeal of the healer; the call of the hero; the desire to help, even when all hope is fading. It’s the fear of death and disease, the realization that there’s no cure for every ill, the unwillingness to say, “I can’t do any more.” It’s innumerable systems for innumerable conditions with formulas and theories and even the best of intentions. But it is not scientific medicine. And it has been science, after all, that is the only thing that allows veterinarians to rise above all others who claim to be able to help treat animals.

Thus, there is this book. This book is the other side of the coin. It promotes no particular therapy. It is not against alternative medicine. Rather, it is a lengthy exposition on various aspects of the whole, diverse field. It is based in research, not anecdote. It also carries a strong bias—a bias for effective therapies, for science as the best way to flesh out empirical claims, and for truth. Would that the entire profession shared such a bias. All would be better for it.

David W. Ramey
Complementary and Alternative Veterinary Medicine Considered
Various unrelated and diverse therapies are euphemistically described as “holistic,” “alternative,” “complementary,” or “integrative”; in veterinary medicine, the popular acronym is CAVM, for complementary and alternative veterinary medicine (with so many names, some, as per the suggestion of medical historian James Whorton, might even call it vernacular medicine). Many interesting questions can be raised regarding these therapies, including “What are the reasons for their apparent popularity?” and “Why now?”

The questions are intriguing, but the answers, while easy to speculate, are difficult to substantiate. Yet the temptation to answer is overwhelming. Undoubtedly, no one single factor can explain the whole phenomenon. Certainly the factors vary in importance and in their temporal appearance. Some even become self-perpetuating or combine with their antecedents to become apparently new again.

We gratefully acknowledge the assistance and contribution of Wallace Sampson, M.D. Dr. Sampson is board certified in internal medicine and is a Fellow of the American College of Physicians. He is a Clinical Professor of Medicine at Stanford University, where for 20 years he has taught the analysis of dubious medical claims. He is editor-in-chief of the Scientific Review of Alternative Medicine.

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PREDISPOSING AND ANTECEDENT SYSTEMS

Many predisposing psychological and political influences account for the rise of “alternative” medicine. In addition, the traditions of various cultures may hold clues as to why alternative medical approaches have proliferated. For example, in Germany, *Naturphilosophie* was a widely supported, although much criticized, general view of nature, popular at the beginning of the nineteenth century. It started by seeing divine patterns being repeated through the world, both inorganic and organic, and ended with something close to pantheism, identifying people with a larger creator. Add a tint of Samuel Hahnemann’s homeopathy, which prescribed infinite dilutions of substances to affect “vital forces,” Rudolf Steiner’s anthroposophical medicine, which purported to reintegrate humans with the world of the spirit, and a few mystical legends, and one may discover a German tradition of “alternative” thinking. In Britain, the tolerance of the unique, eccentric, and bizarre appears to be something of a source of national pride. In Asia, the sense of tradition is also strong, and spirituality and cosmology have been partnered there with all phases of life since records have been kept.

In North America, such influences may include the traditional mistrust of authority that characterized the earliest settlers, including government, politicians, elitists, and professionals. Historically, North Americans adopted a mélange of folkways from European countries, and combined them through the eighteenth and nineteenth centuries into a new brand. For example, North American herbalism evolved from a blending of Native American herbalism and European household medicine, through the vitalist underpinnings, codification, and popularization of the practices by Samuel Thomson in the nineteenth century. W. K. Kellogg developed a process of manufacturing a breakfast cereal for sanatorium patients that revolutionized American breakfasts and popularized concepts of nutrition as the key to health. The cereal maker C. W. Post, who made his first cereal product in a sanatorium; the clergyman Sylvester Graham, a rip-roaring advocate of temperance, vegetarianism, and the graham cracker; and Mary Baker Eddy, the founder of Christian Science, all interpreted and recombined vitalistic concepts. These in turn passed through people such as D. D. Palmer (the founder of chiropractic) and Jack La Lanne, in human medicine to such people as Andrew Weil and Larry Dossey, and in veterinary medicine to such people as Allen Schoen and Susan Wynn. Deregulation, the lack of governmental oversight, economic considerations, and do-it-yourself medicine, perpetuated by the rise of the internet and the resulting easy exchange of anecdotes and information, appear to play a part in the more recent wave of interest in alternative approaches to medicine.

People separate slowly from folk methods. They stick to the common consciousness. In addition, people may be reluctant to accept new ideas, or ones
that are not easily understood. It is much easier to reflect and repeat the quaint ideas and irritating habits with which people are familiar. For example, the idea that toxins build up in the human colon was one of Kellogg’s basic premises (he called it “putrefaction”). Such revelations were proclaimed to the unawakened public. Efforts to remove those toxins resulted in the feared, torturous enema, in fact, something of a punishment for having gotten ill, but one that was to be eagerly solicited by those with ill-founded concerns. “Colonics” are still in vogue in some venues today. Indeed, “There is no branch of knowledge in which error is so wide-spread and deep-seated, or looseness and superficiality of thought so prevalent, or theorizing, amateurism, faddism and mysticism so general, as in the field of medicine.”

Long-established customs die hard. They appeal to those who want to explore the past for overlooked nuggets of wisdom, to those who long for a simpler time, or to those who hope to find answers to unanswerable questions in mysteries. Historians and psychologists note that these emotional-spiritual undercurrents of need are strong determinants of behavior. On the other hand, technical, professional, scientific medicine is only about a hundred years old. There is no long-established tradition. It may seem foreign and inaccessible. As such, those with alternative approaches can easily reject scientific medicine.

But there is certainly more. For example, one may point to a growing concern, particularly in the industrialized countries, of the risks and dangers associated with an indiscriminate application of modern sciences and technology to shape human life and exploit the natural environment. Disasters from Bhopal in India to Seveso in Italy, from Three Mile Island in the United States to the pollution of the Rhine River by the Swiss chemical industry in Germany, have almost certainly contributed to a widespread hesitation among Western populations to trust in chemistry, physics, and modern technology as the sole means of constant progress and perpetual improvement of quality of life.

In fact, with the improvement of relations between the former Soviet bloc and the West, environmental concerns appear to have largely supplanted the prospects of a nuclear war as the dominant existential fear in industrialized nations of the West. As a result, such fields as chemistry and technology, which previously appeared to have only positive connotations, began to lose their attractiveness, despite the fact that almost any aspect of daily life was unthinkable without chemistry and technology. Regular reports about the negative effects of chemistry on the cleanliness of air, soil, and water, on animal life and the safety of food, and hence on the body and its health, caused chemistry to be seen in a different light, and provoked fears that extended to modern medicine.

The same general process of change can be seen in attitudes toward technology. The impact of technology on daily life, once celebrated in world exhibitions
as the solution to the millennia-old problems of humanity, now came to have a pale aftertaste for a certain section of the population. According to that section, technology is felt to destroy nature and also to destroy relationships between human beings. The picture of the railroad and freeway is no longer associated principally with communication between distant regions; it is equated with the carving up of stretches of land once intact.

This increasing aversion to the impact of chemical science and technology on human life has repercussions in various arenas of Western civilization. Environmentalists have raised their voices, and so-called Green parties have been able to express the fears of their voters in national parliaments. Nuclear power plants have come under attack, and a general “back to nature” attitude has affected food habits, clothing, and the construction of houses.

Health care has been no exception. Health care is the response of humans to the most serious threat to their existence or to the existence of their animals, that is, illness and the risk of early death. Modern veterinary medicine uses modern chemistry and technology, much as in human medicine, and hence it has come under suspicion as polluting and harming the individual animal’s body, in the same way that chemistry and technology pollute and are claimed to destroy the environment. Such fears and suspicions may help account for the wider trend that provides numerous types of traditional and alternative health care with a faithful clientele.

Still, whether an undercurrent or a propelling force (a case could be made for either), the essence of all these threads seems to lead to a loss of standards for thought and action and a disregard for intellectual discipline. Combined with a celebration of individualism, the cultism associated with followers of strong personalities, and their messianic zeal, “alternative” approaches challenge the rigor and routine that characterize scientific medicine.

**CULTURAL RELATIVISM**

Cultural relativism was born in the early twentieth century in the innocence of academic fairness and objectivity. Its intent was to omit prejudice and emotion when investigating other cultures. Previously, the trend had been to describe other cultures with xenophobic, supercilious descriptions that even extended to American subcultures. Observers of such cultures typically used pejorative terms such as quaint, backward, primitive, pagan, and savage to describe them. Relativism raised cultural anthropology from biased emotionality of supercultures and superraces to realistic, judgment-free, academically productive understandings. It allowed an appreciation for the healthy diversity of human cultural evolution.

But cultural relativism became inappropriately applied. As applied to medicine, cultural relativism is a blunt instrument. As such, relativism has been