

PRIMARY PERCEPTION: BIOCOMMUNICATION WITH PLANTS, LIVING FOODS, AND HUMAN CELLS by Cleve Backster. Anza, CA: White Rose Millennium Press, 2003. Pp. 168. \$15.95 (paperback). ISBN: 0-966435435.

The part of me that is attracted to clever, multileveled titles wants to call this book "Tracings," because it reads like a cumulative polygraph tracing of Cleve Backster's public life. Backster's writing is so direct and straightforward that one gets the impression of reading the undistorted truth, WYSIWYG, emerging directly from his viscera. But like a polygraph tracing, this book only reports the surface activities—leaving the reader to infer Backster's personal biases, hopes, or expectations, from the surface tracings. Fortunately for the reader, Backster's tracings are not difficult to interpret.

Cleve Backster is a nicely credentialed expert on human polygraph testing (lie detection). He was a pioneer in that area with the CIA, ran a private sector polygraph business and school, and contributed key techniques and methods to the field during its development. In 1966 he whimsically attached GSR electrodes to a newly watered dracaena plant in his laboratory to see if the polygraph recording would be affected as

the water rose in the plant. Instead, he found serendipitously that the chart-recording pen jumped in synchrony with a rather vicious thought that entered his mind—to burn a leaf of the plant. This was his “Aha!” experience, after which he attached electrophysiological electrodes to a variety of nonhuman things in search of “primary perception,” which is his term for psi. This book summarizes these years of mostly informal experimentation.

Be clear—this is *not* a scientific treatise! Those interested in the science of biocommunication are advised to go elsewhere. Backster provides only the skimpiest of literature reviews, mentioning the names of Jagdish Chandra Bose and Harry Saxton Burr without even providing details or commentary on their works. He does not include the details of his own peer-reviewed experimental study (Backster, 1968). He briefly mentions but doesn't describe the failed replication attempts by others (Galston & Slayman, 1979; Horowitz, Lewis, & Gasteiger, 1975; Kmetz, 1977), arguing that they didn't sufficiently nurture the plant-experimenter relationship. And Backster offers no critical comments regarding his results or observations, such as their shortcomings, rival hypotheses, need for additional controls, or limitations and delimitations, as expected in a scientific discussion.

What the reader *will* find in this book is the charming story of one man's love affair with an idea and the creative ways he's found to woo it. After his initial publication, which featured plants attached to polygraphs showing deflections when healthy brine shrimp were killed, Backster happened upon variations that led to more observations. He cracked open an egg to feed his dog one night, or boiled an egg another night when he was hungry, or opened a yogurt container and started eating it—and unexpectedly observed deflections on the continuously running polygraph attached to some plant. In each case, he eventually found ways to attach electrodes to the eggs, the yogurt and, later, to human *in vitro* cellular materials, to look for polygraph deflections synchronous with the abuse of other nearby cellular materials.

Reading this book reminds me that science is but one way of arriving at truth. Just because Backster's beliefs are not yet scientifically validated (and they are not) certainly does *not* rule out their potential veracity. Backster has found his own variation on the theme of science—he seems to *want* the blessings of science but misses the mainstream by not dotting his “i”s and crossing his “t”s methodologically. He prefers to make a large number of informal, unplanned observations of spontaneous events and present them to the court of public opinion than to do the tightly controlled experiments that appeal to the higher court of science. Backster has done well in the court of public opinion. His grand idea—primary perception in plants—is apparently very appealing in this lower court. That may help explain why he's writing books like this one instead of conducting experiments that could be published in peer-reviewed journals.

In this book, Backster defends his avoidance of controlled experimentation by arguing against science's demand for repeatability, which he says destroys the spontaneity essential to demonstrating the Backster effect. He includes a section on this issue (pp. 139–141) where he argues that anyone can easily replicate his results if they assure spontaneity, by which he means, basically, to hook up the plant or cellular material for electrophysiological recording without sitting and watching it in real time (as you would for a planned experiment) but to go back later and see when something happened (a needle deflection) and examine what was occurring in the environment to explain that deflection. This is how Backster achieved numerous "high quality" observations he offers as support for the primary perception hypothesis.

The problem here is obvious to an experimental scientist—in fact, it is the *reason* we must do prospective experiments with controls the way we do. Backster's "spontaneity" technique is logically equivalent to shooting your arrow at a blank wall and drawing the target afterward! The independent and dependent variables are confused!

As an example, on pp. 116–119, Backster describes some of the "high quality" observations that appeared in his nonexperimental published report in a peer-reviewed journal (Backster & White, 1985). A leukocyte cell sample taken from the mouth of a donor was hooked up to EEG instrumentation. Later, after the donor had returned home (15 miles away), a deflection was noted on the polygraph and the timing of it was matched against what the donor reported doing at that time—watching a program entitled "World at War." Based upon this, Backster concludes, "... the donor's *in vitro* white cells in our lab reacted to the downing of the enemy aircraft." It is good science to make observations and draw one's *preliminary hypotheses* from them, but *no scientist* would ever consider stopping at that point and drawing a conclusion! A correlation was observed, without controls, and not necessarily a causation.

Backster reports that many people were impressed by such "high quality" laboratory demonstrations, and I can fully understand that. The same principle is at work in astrology circles when some pivotal event or crisis occurs in a person's life and the astrologer pulls out the birth chart and notes that some conjunction of planetary alignment "explains" the personal event. Such observations are deceptively convincing, often parading as solid scientific evidence for the veracity of astrology.

This correlation-causation issue is rather difficult to grasp intellectually. Perhaps just as difficult for the Western mind to grasp is that incomplete or inadequate evidence does *not* prove the Backster effect wrong! It could be argued that Backster's continual flow of suggestive, spontaneous, uncontrolled, less-than-conclusive observations serve a real scientific purpose here by keeping the hypothesis fresh and viable and open for discussion and for others to experiment with. But it is simply wrong for Backster to imply that the primary perception hypothesis has been scientifically validated by them.

The readers of the *Journal of Parapsychology* will probably not be the primary audience for Backster's book except perhaps for historical or sentimental reasons. I'd hesitate to recommend it to anyone new to psi research because it's not a balanced representation, and Backster himself seems not to have grasped the reality of his own "high quality" observations. Some might be turned away by the shoddy science while gullible others may be drawn in for the wrong reasons. Perhaps the best audience for this book is composed of those already inclined toward Backster's work who'd like to read Backster directly.

Backster's writing is clear and easy to read. There are very few typos—but on page 105, I had to chuckle that no editor caught the gaff that Bowman Gray Medical School is *not* at Lake Forest University! Scientific criticisms aside, this book can be enjoyed by a very wide audience, partly because of the lack of technical details, partly because the language is refreshingly simple, and partly because the central concept that plants communicate with humans is so very appealing to so many of us at the intuitive level. Backster's sense of humor adds a welcome lightness to the read. Another good reason to buy the book is that the profits go toward further research at the Backster Research Foundation, which is sorely needed. And any kind of research, in my opinion, is better than none at all.

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