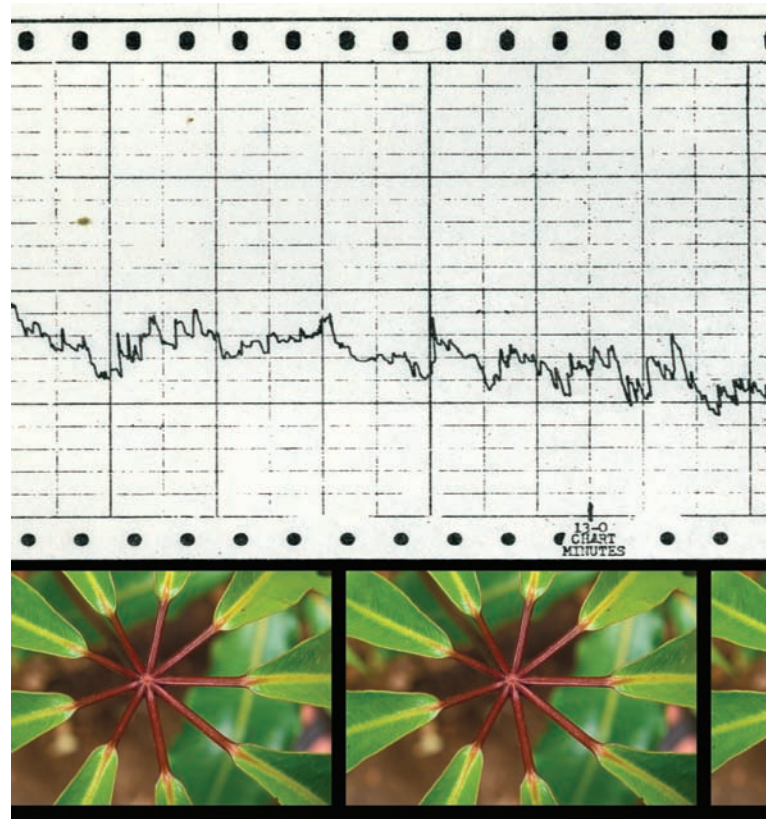


THE WAKE-UP CALL: “On February 2, 1966, an event occurred that expanded the entire focus of my research through a kind of paradigm shift in my own awareness. At the time I had been involved for 18 years in the use of polygraph testing on humans. I was taking an early morning coffee break and decided to water the dracaena cane plant that my secretary had brought into the laboratory. After pouring water into the pot of soil at its base, I wondered if I could measure the rate of moisture as it ascended. I attached the end of a large leaf to the galvanic-skin-response section of the polygraph instrument. The plant leaf was successfully balanced into the polygraph’s Wheatstone bridge circuitry, which I planned to use as a means of reflecting the rate of moisture ascent. The relative increase in the leaf’s electrical conductivity—due to the expected change in its moisture content—would be indicated by an upward trending of the ink tracing on the chart recording. To my surprise, the plant leaf tracing initially exhibited a downward trending, which would ordinarily indicate increasing resistance. Then, about one minute into the chart recording, the tracing exhibited a contour similar to the reaction pattern of a human subject attached to a polygraph who might have been briefly experiencing the fear of detection. I thought: Well, if this plant wants to show me some people-like reactions, I’ve got to use some people-like rules on it and see if I can get this to happen again.

“I decided to figure out how I could threaten the well-being of the plant. I wasn’t into talking to plants—not at that time—so as a substitute threat I immersed the end of a leaf, which was neighboring the electroded leaf, into a cup of hot coffee. There was no noticeable chart reaction, and there was a continuing downward-tracing trend. With a human, this downward trend would indicate fatigue or boredom. Then, after about 15 minutes of elapsed chart time, I had this thought: As the ultimate plant threat, I would get a match and burn its electroded leaf. At that time, the plant was about 15 feet away and the polygraph equipment was about 5 feet away from where I was standing. It was early in the morning and no other person was in the laboratory. At that moment my thought and intent was ‘I’m gonna burn that leaf!’ just to see what the plant would do. The second the imagery of burning the leaf entered my mind, the recording pen jumped to the top of the chart! No words were spoken,

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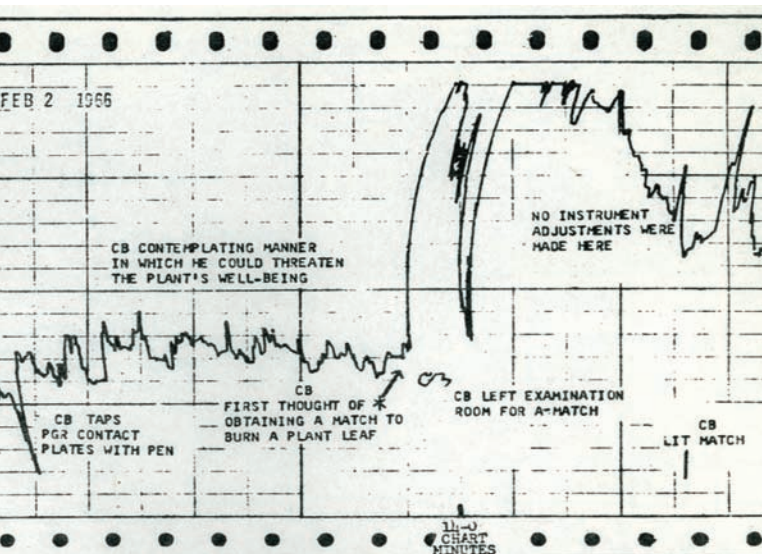


When *The Secret Life of Plants* was first published in 1973, readers were astounded to read of the remarkable findings of a handful of researchers and scientists suggesting that plants had consciousness and reacted to their surroundings. One of those pioneers was

no touching the plant, no lighting of matches, just the clear intention to burn the leaf. The plant recording showed wild excitement. To me, this was a powerful, high-quality observation.”

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Cleve Backster, who remains a seminal and still-active figure in the emerging field of biocommunication. In this article Backster and his editor revisit the startling discovery that transformed his way of thinking and offer some insights on where this research is headed.

THE BRINE SHRIMP EXPERIMENT

Following scientific tradition, Cleve did not release his research to public scrutiny until he had conducted a

scientific experiment he realized had to be done without human intervention and according to the scientific method. He found that any time a human was involved in the structure of testing, human thoughts and emotions could get in the way, so he decided to remove humans as a stimulus source. At the suggestion of several scientists, he used a copper screen cage to shield the plants from electromagnetic interference. [Later on, Cleve added such controls as grounded, lead-lined boxes for his test subjects.] He also discovered that while it's possible to set up a traditional response-subject protocol for this work, you have to let things happen, not plan them. Spontaneity is necessary with biocommunication in order to observe authentic responses.

What other life form, I wondered, could be used in the experiment without stirring up controversy with the anti-divisive folks, particularly if it involved that life form's termination. I decided on brine shrimp, as they were going to die soon, one way or another. My intention was to see if their death would stimulate a response from plants located in separate rooms toward the opposite end of the lab.

The "life termination" portion of the experiment comprised two sessions, involving a total of 7 runs. These runs produced a total of 21 charts. Eight of them were disqualified as per rules firmly established in advance (e.g., gross overactivity, atypical fluidity), leaving 13 qualifying charts. Among those remaining experiments, chance results were exceeded, indicating that the plants did indeed respond to the death of brine shrimp. These findings were published in *The International Journal of Parapsychology* (vol. 10, Winter 1968) in an article entitled "Evidence of a Primary Perception in Plant Life." (See also chapter 3 of Cleve's 2003 book *Primary Perception: Biocommunication with Plants, Living Foods, and Human Cells.*)

PLANTS: JUST THE BEGINNING

By the time Cleve was invited to present his research at the American Association for the Advancement of Science in 1975, he had already started testing eggs, bacteria, yogurt, and other living foods. Each observation led to the next, followed by Cleve's wondering, "What if...?" When Cleve discovered that electroded bovine steak responded

to Ajax dumped on a cutting board still bloody from the steak, it led him to wonder about the sentient capabilities of human cells. Meeting just the right dental researcher led him to the work of extracting white cells (leukocytes) from the human mouth. The next few years were spent observing how the white cells responded to the stress of the donor. He often would have the donor watch a particular television show in order to time-correlate the reactions of the white cells in the test tube. The lab containing the cells would be empty of people during the test.

Biocommunication: the general field of study of communication between different biological life forms, mostly in nature, sometimes in the laboratory. It involves the use of instrumentation to observe reactive events occurring in all kinds of life—animal, plant, cellular, microscopic, and so on—and includes observational biology, high-quality observational studies, and study of the effect of human thought and intention on life forms in the environment.

One laboratory experience I had involved the stress factor. The in vitro cells of an associate were being monitored in my lab. He went home to watch a favorite detective show, which I thought was being recorded in the lab along with his leukocytes. As usual, I left the lab during the process, but upon returning, I discovered that I had selected the wrong TV channel so the program intended for split-screen time-setting was useless. I was disappointed and somewhat outraged at my mistake, which I shared via telephone with another person who was helping at the time, and the cells that were still being monitored produced huge reactions. These cells appeared to feel my distress. We have observed in vitro cells reacting to the donor consistently, but they seem to be able to pick up on another nearby person's stress as well.

Cleve did many white cell experiments showing that an invisible link between the cells and their donor exists and that the electroded cells demonstrated a consistent and instantaneous response. He published the clearest examples in a report titled “Biocommunications Capability: Human Donors and In Vitro Leukocytes” (*The International Journal of Biosocial Research* 7, no. 2: 132–146, 1985).

THE NEXT PHASE

The first time I heard Cleve present his findings (at the California Institute for Human Science), I was thrilled to at last hear of research that validates what many Eastern mystics (and some Westerners) have revealed from the practice of various meditative disciplines. Paramahansa Yogananda, for example, a friend of the late agricultural scientist Luther Burbank, mentioned how seeds and plants responded to human thoughts, enabling this great gardener

Primary Perception: the vehicle of communication; the invisible, unrecognized field that interconnects all species and life forms, whereby biocommunication can occur. Coined by Cleve Backster, primary perception is distinct from extrasensory perception (ESP) in that it occurs *before* the human specialized senses of taste, touch, hearing, sight, and smell. It is likely going on all the time.

to change how they would grow in the next generation.

I realize the implications of this research have had an effect upon the scientific world, both positive and negative. Some scientists have secretly told me they were impressed with my work and have witnessed similar observations. One man, Marcel Vogel, started out to disprove my research and then, in a course he was teaching, found that there was merit. He set out to prove me a fraud and found instead that leaves, even detached, have response capability. Others in traditional science have labeled my research a waste of time, quackery, or “pernicious nonsense.” I don’t want to aggravate traditional scientists or people of certain faiths, just point some things out. Instantaneous responses, for example, without any physical or electromagnetic connection, suggest an invisible link. When it comes to prayer and meditation, all is instantaneous. Some people have come up to me after a lecture saying that my work implies the existence of a Supreme Being. One guy told me I shouldn’t tell people about these things but let them draw their own conclusions. And in fact I don’t conclude anything from all of this. But I often say, “Gee, isn’t this interesting!”

I don't conclude anything from all of this. But I often say, "Gee, isn't this interesting!"

The future of research in biocommunication is still being outlined. This area correlates closely with quantum physics and nonlocality (a non-time consuming field that allows consciousness and the phenomenal world to share an invisible web). Cleve is still busy planning a new protocol that pursues simultaneous testing of a human subject at a distance and uses the regular polygraph, with an EEG monitoring both white cells and a separate tube of the subject's live blood. This will be a fascinating study, perhaps leading to electroded human cells being monitored in the lab while an astronaut visits the moon or a football hero sacks the quarterback.

Introducing a personal EEG-type device to make it possible for people to witness this phenomenon, this primary perception, and to draw their own conclusions will be of great importance. We have tested a number of such devices in a San Diego lab, and there will probably be two levels available: one for lab research and one that will link to a laptop for digital readouts. We hope that both will have the sound signal to allow for long-term monitoring without having to look at the instrumentation; staring at the device often interferes with the outcome.

Someone with a negative or skeptical attitude can certainly affect the results of such experimentation, just



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as someone with strong healing capacities can influence outcomes. You can attach electrodes to a detached leaf and often the reactions correlate with what the plant is going through. But again, whatever you plan or expect is going to happen with these things, you may actually prevent them from happening. On February 2, 1966, my thought of burning that plant was with full intention of doing it. It responded accordingly. I got the point right then and there. I didn't need to go ahead and burn it. 🌍

Portions of this article were excerpted from Cleve Backster's book *Primary Perception: Biocommunication with Plants, Living Foods, and Human Cells* (White Rose Millennium Press, 2003) and a 2002 interview. For further information, visit www.primaryperception.com and consider joining the Biocommunication Web, an international online group whose members share their observations and findings.

FRANCI PROWSE is a minister, musician, healer, and author of one novel, five manuals, and numerous articles. Her recent project was to edit and publish Cleve Backster's book *Primary Perception*. Her Web site is www.anzasanctuary.com.

