

For Francisco Varela: Explorer of the phenomenal world

ELEANOR ROSCH

Department of Psychology, University of California, Berkeley, CA 94720, USA. Fax: (510) 642.5293
e-mail: rosch@socrates.berkeley.edu

ABSTRACT

Francisco Varela was an innovative thinker and researcher as well as a pioneer in the present dialog between science and Buddhism. In this essay, I will first speak briefly about some of Francisco's contributions to the world at large and then relate a few vivid moments from my own interactions with him.

The relationship between science and spirituality (in its broadest sense) may be one of the most important open questions in the world today, a question whose resolution will determine what sort of world, if any, we are to have in the future. Francisco Varela, my friend, colleague, collaborator, and the person with whom I have been most honored to have had vigorous debates about almost everything, was an outstanding figure in the science-spirituality dialog. What may we say about that now that he is no longer with us?

One aspect of science is that it takes itself to be objective. Hypotheses must be verifiable by empirical observations. Those observations must be repeatable through time and shared across observers, and they must conform to certain overt or assumed rules of evidence. Spirituality, on the other hand, is generally held to be private and inner (or as a matter of the human relationship to supernatural beings). Challenging the objectivity of science and scientific evidence, attempting to reinstate first-person experience as a source of scientific knowledge, and opening scientific inquiry to methods such as meditation – these were among Francisco's lifelong commitments, and, indeed, passions.

Francisco's challenges to science fall into three categories. The first was to develop, along with his great mentor Humberto Maturana, a characterization of living beings that did not separate them from their environment. Collaboratively they created

the structure they called *autopoiesis* (self organizing systems). The most radical aspect of autopoiesis is that neither environment nor organism nor even the mind of the observing scientist was to be objectified; all are seen as mutually self organizing interdependent systems. Autopoiesis was intended not only as philosophy of science in the phenomenological tradition, but as a framework and guide for research, as Francisco himself proposed in his work on the immune system.

Francisco's second effort was to establish first-person experience as a legitimate contributor to science. One way of doing this was to introduce phenomenology and encourage phenomenological discussion in other than entirely philosophical contexts. One such example was his editorship of *The View from Within* (a collection of papers on first-person phenomenology published as a special edition of the *Journal of Consciousness Studies*) and his paper on Husserl's treatment of time included in that volume. Another strategy was to argue that there was a centuries-old method of training the mind, Buddhist mindfulness meditation, which could render first person reports authoritative for science, especially science conceived in a non-objectivist framework. In this strategy meditation is treated as the development of a skill, somewhat like learning to play the piano. Such a position is controversial, however, in the Buddhist traditions in which meditation is viewed not as gaining but as

jettisoning expertise in order to discover the 'beginner's mind' already present. Toward the end of his life, Francisco was working on a conceptual scheme to try to reconcile these two views of meditation.

Francisco's final contribution is the significant role he played in establishing the present dialog between science and Buddhism. In the late 1970s Francisco was one of the organizers of a series of Summer Science Programs at Naropa Institute, a small college in Boulder, Colorado, founded by the Tibetan Buddhist teacher Chogyam Trungpa Rinpoche. Naropa's mandate was to combine the curriculum of a Western university with the meditative and contemplative disciplines of the East, and Francisco's Science Program was a part of that endeavor. Later, Francisco met and found rapport with His Holiness the Dalai Lama. His Holiness, most widely known as a world icon of non-violent spirituality, also has great interest in and an affinity for science. The outcome of his meetings with Francisco and others was the Mind and Life Institute, an organization whose mission it is to generate communication between science and Buddhism. The Mind and Life Institute has sponsored a series of conferences in which scientists from a variety of fields have come to Dharamsala to converse with His Holiness the Dalai Lama. Reports from these conferences are gradually being published. The Institute has also sponsored or encouraged research projects to study the effects of meditation on the brain. Francisco remained involved with these projects. In the years following the first Mind and Life Conference, Francisco, Evan Thompson, and I worked on the book *The Embodied Mind: Cognitive Science and Human Experience*, a work intended to bring together Francisco's and our interests and open communication between Buddhism, phenomenology, and the human sciences.

This is the point at which one might expect an evaluation of this endeavor. But communication between these three great traditions is not a simple matter. To be sure, of the world's major religions, Buddhism is particularly well suited to interact with science because of its

teachings that wisdom is to be found in the stream of on-going experience itself and its consequent development of techniques to investigate such experience. However Buddhism is more than this. The 'awake wisdom mind,' Buddhism teaches, has a different mode of functioning than our limited consciousness, and the categories of Buddhist thought are designed to transmit and awaken that wisdom mode of knowing within the student's own mind. Present day science – even phenomenology – are quite different kinds of endeavors. Can the non-objectivist science that Francisco envisioned provide the missing connections? *The Embodied Mind* was intended neither as an act of scientific imperialism nor as a sermon, but as the tentative first steps in an interaction whose outcome is presently open and (one hopes inspiringly) unpredictable.

The foregoing descriptions have dealt with Francisco's public persona and accomplishments in the world. Much of my interaction with Francisco involved working together in that context. But when someone passes away, one tends to have vivid memories of relatively trivial moments, tableaux in time, that capture something special and undefinable. I have several such 'snapshots' of Francisco.

The first took place at the conclusion of one of the Summer Science Programs at Naropa Institute (now Naropa University). I had joined Francisco and several other Naropa faculty members for a summer session primarily dedicated to organizing a conference on Buddhism and Cognitive Science. The conference had just concluded. A number of my cognitive science colleagues had attended the conference, but they had found the presentations largely incomprehensible and had, midway through the program, revolted. Now Francisco and I sat facing each other, alternately disputing (as was our habit) Merleau-Ponty and engaging in a rather feisty post mortem dissection of the conference. Suddenly there was a shock of mutual recognition that left us speechless for several long moments – we realized that we did not understand each other *at all!* Interestingly, it was out of this that our future collaboration was born. These days as I hear broadcasts of world

news, how I wish upon the participants just such a shock!

The next vignette is from a three-month meditation and study intensive run by Chogyam Trungpa Rinpoche, at which Francisco was teaching a science class. The atmosphere had become quite intense – how else can meditation teachers get through to the deeper levels of the student's mind? And we were responding as pressured people will. One day I was in the office struggling with an ill-functioning electric typewriter when Francisco happened by. "That's simple to fix," said Francisco. It wasn't. Then suddenly he changed the task to a deadpan spoof of scientific method ("Pure Monty Python," my laughing office mates proclaimed). How memorable the moment of release that laughter brings!

Let us move now to the first of the Mind and Life conferences. The plan was for the conference participants to meet in Delhi, rest for a day, then travel together to Dharamsala. But that 'day of rest' turned out to be October 27, 1987, the Black Monday of the world-wide stock market crash. All day we heard disconnected snatches of dire news about the financial markets and wondered if there was still going to be a world to go home to. To add to the mood, we were told that our gamma globulin shots (routine inoculations in the U.S. for anyone going to India) might put us at risk for the AIDS virus (since disproved). Furthermore, this was the period of a Sikh uprising and religious unrest in India, and that particular day was also the eve of Diwali, the Festival of Lights, at which both fireworks and a certain amount of mayhem are customary. I remember our group sitting in the lobby of the hotel that evening, the jet-lagged and innocent American scientists bug-eyed as Francisco cheerfully identified for us whether each explosion was a firecracker or gunfire. It was then that it dawned on me: Francisco was perfectly comfortable. This was a person at ease and in harmony with both his body and the environment of the larger world. To travel around the globe, country to country, was

not a fearsome experience; Francisco the journeyer could feel at home anywhere. Later, when all the well-immunized Americans at the conference (and only they) became ill, Francisco showed another side: he looked upon his drooping charges with bemusement and with great kindness.

Perhaps to be at ease and accepting of life in the body is also to be accepting of mortality. Francisco's last days were reported to be profoundly peaceful. My final story comes after that. Some time after Francisco's passing, I ran into a colleague in the cognitive science community who also knew Francisco. He told this story: he and Francisco were not especially close friends, and there were long periods when he neither interacted with nor thought of Francisco. One night he had a vivid dream in which Francisco was very ill. The next day, on impulse, he telephoned Francisco in Paris who told him that, yes, his final illness had just been diagnosed the day before. This kind of meeting of minds was not a possibility dreamt of in this good person's philosophy (nor in any of the supposedly cutting edge 'paradigm shifts' in cognitive science). As he spoke of it, his eyes widened, and his expression became gentle and deep. "It just blows my mind," he said. Have the effects of Francisco's life and work, perhaps, only just begun?

Coda: In the days when Chogyam Trungpa Rinpoche was alive and teaching and putting on "Dharma art exhibits," groups of his students would go out, in preparation for each exhibit, to search their city and countryside for inspiring materials to use in the exhibit. These students were called the Explorers of the Phenomenal World. Surely this title could also be given to scientists at their best, their most open. Let us present this title now to Francisco: Francisco Varela, Explorer of the Phenomenal World. Francisco, wherever and whatever you are now, may you and all those you have influenced stay open and go on exploring.