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Biographies of the protagonists

Francisco J. Varela

The main figure in the film is the Chilean Francisco Varela, who died in 2001 at the age of 54. He was a famous neurobiologist and a leading figure in the field of cognitive science, who became known for his work (together with H. Maturana) on autopoiesis, a definition of life based on autonomy.

A main focus for Varela's work was the idea of building a bridge between the discoveries of the mind in science and the discoveries of the mind through experience.

After a simple, wonderful childhood in the village of Monte Grande in the north of Chile, and a rapid and successful period of study at Harvard, Pinochet's putsch in 1973 made Francisco confront death for the first time in his life. His father-in-law and friends of his were murdered. Later in exile he was twice confronted with his own death. Once while waiting for a transplant, and again following unsuccessful cancer treatment.

Already as a boy and up until his death, Varela was continually asking himself the same question: How is it possible that our body and mind live as one entity?

His strong humanistic commitment, his clear and realistic way of thinking, his warm-heartedness and the candour he brought to his relationships – with his wife, children, friends, students and colleagues, made him an exceptional man and a great catalyser of ideas. He once said, 'Ideas fly through the air; one only needs to be open in order to catch, understand and develop them.'

Francisco Varela died in Paris on 28 May 2001, two weeks after an unexpectedly severe relapse following the end of his course of chemotherapy. In the last few months before Varela's death Franz Reichle had several intense conversations with him on themes central to the film, and was able to record these discussions onto video.

For detailed information on Francisco Varela's career see: <http://www.ccr.jussieu.fr/varela/varela/index.html>

For detailed information on his publications see also: <http://www.enolagaia.com/Varela.html>

Amy Cohen Varela

Amy Cohen Varela was born in the United States (Boston). After pursuing undergraduate and graduate studies in Comparative Literature (Brown and Columbia Universities), she completed a degree in Clinical Psychology at the University of Paris (Paris VII, Jussieu). She is currently pursuing work initiated with Francisco Varela at the interface between psychoanalysis and neurophenomenology. Amy and Francisco have a son, Gabriel, born in Paris in 1992. His principal interest is archeology.

Evan Thompson

<http://www.yorku.ca/evant>

Canada Research Chair, Associate Professor, Department of Philosophy
York University, Toronto.

Author of:

with Francisco J. Varela and Eleanor Rosch, THE EMBODIED MIND: COGNITIVE SCIENCE AND HUMAN EXPERIENCE. MIT Press, 1991.

COLOUR VISION: A STUDY IN COGNITIVE SCIENCE AND THE PHILOSOPHY OF PERCEPTION. Routledge Press, 1995.

RADICAL EMBODIMENT: THE LIVED BODY IN BIOLOGY, HUMAN EXPERIENCE, AND THE SCIENCES OF MIND. Forthcoming.

Heinz von Foerster

<http://www.univie.ac.at/heinz-von-foerster-archive/>

Together with Warren McCulloch, [Norbert Wiener](#), John von Neumann, and others, Heinz von Foerster was the architect of [cybernetics](#). In particular he developed a second-order cybernetics which focus on self-referential systems and the importance of eigenbehaviors for the explanation of complex phenomena. In von Foerster's words, it is the "cybernetics of observing systems". Von Foerster's famous distinction between trivial and non-trivial machines is a starting point to recognize the complexity of cognitive behavior. A trivial machine is a machine whose operations are not influenced by previous operations. It is analytically determinable, independent from previous operations, and thus predictable. For non-trivial machines, however, this is no longer true as the problem of identification, i.e., deducing the structure of the machine from its behavior, becomes unsolvable. Finally, as long-term director of the [Biological Computer Laboratory](#) in Illinois he provided an fruitful platform for studies of complex systems and had essential influence on many [cognitive scientists](#) and [\(radical\) constructivists](#).

Heinz von Foerster was born 1911 in [Vienna](#), Austria, where he studied physics at the [Vienna Technical University](#). 1944 he received a Ph.D. in physics at the University Breslau. After World War II he taught at the [University of Illinois at Urbana-Champaign](#) where he hold the professorship for signal engineering from 1951 to 1975. From 1962 to 1975 he also was professor for biophysics and 1958–75 director of the Biological Computer Laboratory. Additionally, 1956–57 and 1963–64 he was Guggenheim-Fellow; 1963–65 president of the Wenner-Gren-Foundation for anthropological research; 1971–72 secretary of the Josiah-Macy-Foundation of the cybernetic program. H. von Foerster wrote a large number of scientific [publications](#).

Heinz von Foerster died on 2 October 2002 in Pescadero, California.

Some of his imperatives and mottos:

** Act always so as to increase the number of choices.*

Handle stets so, daß die Anzahl der Wahlmöglichkeiten größer wird.

** The world, as we perceive it, is our own invention.*

Was wir als Wirklichkeit wahrnehmen, ist unsere Erfindung.

Jean-Pierre Dupuy

Professor of Social and Political Philosophy, École Polytechnique, Paris. Director of research at the C.N.R.S. (Philosophy). Former Director of C.R.E.A. (Centre de Recherche en Épistémologie Appliquée), the philosophical research group of the École Polytechnique, which he founded in 1982. Director of GRISÉ (Groupe de Recherche et d'Intervention sur la Science et l'Éthique), École Polytechnique.

Full Professor (1/3rd time), Stanford University [French and Political Science]. C. S. L. I. (Center for the Study of Language and Information) Researcher, Stanford University. Science-Technology-Society Program Affiliate, Stanford University.

Member of Académie Française des Technologies, Paris; of Conseil Général des Mines; Paris; and of COMEPRA (Comité d'Éthique et de Précaution) of INRA, Institut National de la Recherche Agronomique, Paris.

Latest books:

The Mechanization of the Mind – On the Origins of Cognitive Science, Princeton, Princeton University Press, 2000.

Self-Deception and Paradoxes of Rationality, C.S.L.I. Publications, Stanford University, 1998.

In French:

La Panique, Paris, Les empêcheurs de penser en rond, 2003.

Pour un catastrophisme éclairé, Paris, Seuil, 2002.

Avions-nous oublié le mal? Penser la politique après le 11 septembre, Paris, Bayard, 2002.

Current research program:

The paradoxes of rationality, or the classical philosophical problem of the antinomies of Reason at the age of rational choice theory, analytic philosophy, and cognitive science. The ethics of nuclear deterrence and preemptive war. The philosophy of risk and uncertainty. The philosophical underpinnings and the future societal and ethical impacts of the convergence of nanotechnology, biotechnology, information technology, and cognitive science.

Anne Harrington

Anne Harrington is Loeb Harvard College Professor for the History of Science at Harvard University; and currently also Visiting Professor in the History of Medicine at the London School of Economics. For six years (through 2002), she was Co-Director of the Harvard University Mind, Brain, and Behavior Initiative, that aimed to bring together the tools and insights of the neurosciences with understandings from the humanities and social sciences. She also was a member of the MacArthur Foundation Research Network on Mind-Body Interactions, where she focused particularly on the placebo effect, and currently serves on the Board of the organization Mind and Life (co-founded by Francisco Varela), that facilitates dialogue between the sciences and relevant aspects of Buddhism. In this latter capacity, she helped to edit two of the publications to emerge from the Mind and Life dialogues, including the proceedings from a larger public conference with the Dalai Lama held at MIT in the fall of 2003. She is also the author of several books: *Medicine, Mind and the Double Brain* (1987) *Reenchanted Science* (1997); and *Stories under the Skin* (in final preparation), of numerous articles and of three further edited collections.

Hans Ulrich Obrist

Hans Ulrich Obrist was born in May 1968 in Zurich, Switzerland, and currently lives and works in Paris. In 1993, he founded the Museum Robert Walser and began to run the Migrateurs program at the Musée d'Art Moderne de la Ville de Paris where he now serves as a curator for contemporary art. He is editor in chief of the hybrid artist pages *Point d'Ironie*, published by agnès b and begun in collaboration with her in 1997. He has been a frequent curator for the museum in progress, Vienna and lecturer at Facoltà delle Arti, IUAV in Venice. From 1991 to the present he has curated or co-curated numerous exhibitions including: *The Kitchen Show* in Schwalbenstrasse, St. Gallen, 1991; *Christian Boltanski in the Monastery Library*, St.Gallen, 1991; *Gerhard Richter, Nietzsche Haus*, Sils Maria, 1992; *Hôtel Carlton Palace*, Paris, 1993; *The Broken Mirror* (with K. Koenig)Vienna Festival, 1993; *Manifesta I*, Rotterdam, 1996 (with R. Martinez, V. Misiano, K. Néray and A. Renton); *Life/Live* Musée d'Art Moderne de la Ville de Paris and Centro Belem, Lisbon, 1996 (with L. Bossé); *Do it* (more than 30 versions from 1994 to present); *Cities on the Move* (with H. Hanru), Secession Vienna and CAPC Bordeaux, 1997, and *Hayward Gallery*, London/ *Kiasma*, Helsinki/ *Bangkok*, 1999; *1st Berlin Biennial*, 1998 (with K. Biesenbach and N. Spector); *Le Jardin*, *La Ville*, *La Mémoire* (with L.Bossé and C.Christov-

Bakargiev) Villa Medici, Rome, 1998-2000; Laboratorium (with B.Vandelinden) Antwerp Open, 1999; Sogni/Dreams (with F. Bonami) Fondazione Rebaudengo, 1999; Retrace your steps: Remember tomorrow, Sir John Soane Museum, London 1999-2000; Rumor City, Fri Art, Fribourg and Mutations, Arc en Reve, Bordeaux, 2000; Mutations: Evenement culturel sur la ville contemporaine (with R. Koolhaas, S. Kwinter, S.Boeri) Arc en Reve, Bordeaux, 2000-2001 and TN Probe, Tokyo 2001; Traversés (with L. Bossé), ARC, Musée d'Art Moderne de la Ville de Paris, 2001; Bridge the Gap? (with A. Miyake), CCA Kitakyushu; The Air is Blue (Barragan House, Mexico City 2002/2003); Utopia Station (with M. Nesbit and R. Tiravanija), 50th Venice Biennale, 2003 and Haus der Kunst, Munich 2004; Yang Fudong and Jim Lambie, The Moore Space, Miami, 2003; co-curator of the Dakar Biennial, 2004. For ARC/ Musée d'Art Moderne de la Ville de Paris, he has in recent years co-curated the monographic exhibitions of Olafur Eliasson, Philippe Parreno, Steve Mc Queen, Jonas Mekas, and Yoko Ono at (all with L.Bossé and A. Scherf), as well as Camera (with V. Rehberg); Déplacements (with L. Bossé); the group show Ailleurs, Ici, ARC/Couvent de Cordeliers, 2004 (with L. Bossé); and Anri Sala: Entre Chien et Loup (with L. Bossé and Julia Garimorth), ARC/ Couvent de Cordeliers and the Deichtorhallen, Hamburg, 2004.

Accompanying his curatorial projects, he has edited the writings of Gerhard Richter, Louise Bourgeois, Gilbert and George, Maria Lassnig and Leon Golub and is the editor of a series of artist books published by Walther Koenig including books by John Baldessari, Mathew Barney, Christian Boltanski, Peter Fischli/ David Weiss, Douglas Gordon, Philippe Parreno, and Anri Sala. He has also edited a book about Philip Johnson (in collaboration with Rem Koolhaas), as well as an anthology of interviews, writings, and recollections about Cedric Price in Re:Cp published by Birkhaeuser. The first volume of his ongoing interview project was recently collected in Hans Ulrich Obrist Interviews (Milan: Edizioni Charta, 2003).

Joan Halifax

<http://www.upaya.org/roshi/roshi.html>

Joan Halifax Roshi is a Buddhist teacher, Zen priest, anthropologist, and author. She is Founder, Abbot, and Head Teacher of Upaya Zen Center, a Buddhist monastery in Santa Fe, New Mexico. She has worked in the area of death and dying for over thirty years and is Director

of the Project on Being with Dying. She is Founder and Director of the Upaya Prison Project that develops programs on meditation for prisoners. For the past twenty-five years, she has been active in environmental work. She studied for a decade with Zen Teacher Seung Sahn and was a teacher in the Kwan Um Zen School. She received the Lamp Transmission from Thich Nhat Hanh, and was given Inka by Roshi Bernie Glassman. A Founding Teacher of the Zen Peacemaker Order, her work and practice for more than three decades has focussed on engaged Buddhism.

William Irwin Thompson

<http://www.williamirwinthompson.org/>

William Irwin Thompson was born in Chicago in 1938, but moved to Southern California in 1945, where he grew up to graduate from Los Angeles High School in 1957 and Pomona College in 1962. He received a Woodrow Wilson Fellowship to study at Cornell in 1962 and a Woodrow Wilson Dissertation Fellowship to do his doctoral research in Dublin in 1964. He received his doctorate from Cornell in 1966 and published his first book, *The Imagination of an Insurrection: Dublin, Easter 1916* in 1967. Thompson has taught at Cornell, MIT, and York University in Toronto. His interdisciplinary interests are indicated in that he studied anthropology, philosophy, and literature at Pomona, and literature and cultural history at Cornell. He has served as visiting professor of religion at Syracuse University (1973), visiting professor of Celtic Studies at St. Michael's College, the University of Toronto (1984), and visiting professor of political science at the University of Hawaii at Manoa (1985). Thompson became nationally known for his best-selling book, *At the Edge of History*, which was nominated for the National Book Award in 1972. He received the Oslo International Poetry Festival Award in 1986 for his science fiction fantasy novel, *Islands Out of Time* and his poetry book, *Blue Jade from the Morning Star*. As a cultural historian, he is most widely known for his book, *The Time Falling Bodies Take to Light: Mythology, Sexuality, and the Origins of Culture*. As a philosopher of science, he is known for his three books, *Imaginary Landscape: Making Worlds of Myth and Science*, *Gaia, A Way of Knowing*, and *Gaia Two: Emergence, the New Science of Becoming*. (See "[The Gaian Politics of William Irwin Thompson](#)" in Earth Light Magazine.) His most recent book of cultural history was *Coming into Being: Artifacts and Texts in the Evolution of Consciousness* (1996 & 1998), and in 1997 he published *Worlds Interpenetrating and Apart: Collected Poems, 1959-1996*. In the new century, Thompson has continued with his studies in the evolution of consciousness by

publishing four articles in *The Journal of Consciousness Studies*. His latest book, *Self and Society: Studies in the Evolution of Culture* has been published by Imprint Academic of England: <http://www.imprint.co.uk/> In 1972, Thompson founded the Lindisfarne Association as an alternative way for the humanities to develop in a scientific and technical civilization. Lindisfarne became an association of scientists, artists, scholars, and contemplatives devoted to the study and realization of a new planetary culture. Lindisfarne began its activities in Southampton, New York in 1973, moved to Manhattan in 1976, and, finally, to Crestone, Colorado in 1979 where today the Lindisfarne Fellows House and the Lindisfarne Chapel are located in association with the Crestone Mountain Zen Center. In 1995, Thompson designed an evolution of consciousness curriculum for the Ross School in East Hampton, New York, and continues to serve as a Founding Mentor and Guest Lecturer to the senior class (See www.ross.org). In 1997, Thompson retired from the presidency of the Lindisfarne Association; although he no longer travels around the country giving public lectures, he continues to give lectures to the seniors at the Ross School, as well as the occasional talk or poetry reading in New York or Massachusetts. Thompson now lives in scholarly retirement in Cambridge, Massachusetts, and, for reasons of health, can no longer respond to correspondence or receive and read unsolicited manuscripts.

Antoine Lutz

<http://tezpur.keck.waisman.wisc.edu/~lutz/index.html>

Antoine Lutz is a post-doctoral fellow at the Keck laboratory, University of Wisconsin-Madison. His research interests focus on the relationship between brain integrative mechanisms, such as neural synchrony, and high-order cognitive and emotional activities, including consciousness. He currently do research with Dr. Richard Davidson on the neuro-functional and neuro-dynamical characterization of meditative states of long-time Buddhist practitioners. Engineer in Telecommunication and Computer Science (INT), he also received a BA in Philosophy at the Sorbonne University, Paris. He worked during his doctoral research in cognitive neuroscience with Dr. Francisco Varela at Paris University on the use of first-person methods to study the relationship between large-scale brain dynamics and subjective experience (neurophenomenology approach).

Christian Valdez

Name: Christian Valdes Pascal

Date of birth: 2/07/1947

1970-1975: Studies of Cinematography and Photography
at the State Institute of Cinematography in Moscow (VGIK)

1980-1989: Cameraman of the finnish TV in Moscow.

1989-1991: Cameraman of the finnish Tv in France.

1991-2004: Cameraman of the spanish TV in France.

My work as a cameraman always goes together with my
activity as a photographer. I've had various
exhibitions in Chile, Finland, Netherlands, Sweden,
France, Portugal, Spain, etc.

Raúl Varela Rodríguez

Born in La Serena – Chile on November 30, 1914

Married to Corina García Tapia. Two sons: Andrés and Francisco; one daughter: Corina.

Degree: Civil Engineer, graduated from the University of Chile on December 1937.

PROFESSIONAL ACTIVITIES

- | | |
|-----------|---|
| 1937 | Port Construction Engineer in Talcahuano, Chile. |
| 1941 | Begins his contracting activities building the Immaculate Conception School in Talcahuano. |
| 1943 | Starts his construction entrepreneur activity with the Architectural Department of the Public Works Ministry: The Housing Corporation Social Prevision Institute; and other private constructions in Concepción and Talcahuano. |
| 1948-1995 | Begins contracting activities for Public Works in Santiago and other important cities of Chile, from La Serena to Osorno. This activity has continued as a Public Works Contractor and through his different Construction Companies, having built |

a great number of public and private buildings. In 1995 he left the Construction Company in the hands of his descendants.

1963-1969 Professor of Construction 5th year at the engineering School of the Catholic University of Chile

INSTITUTIONAL ACTIVITIES

1944-1945 President of the Rotary Club in Talcahuano
1955-1956 President of the Rotary Club of Providencia in Santiago
1948 Founder associate of the Chamber of Construction of Chile
1953 Director of the Chamber of Construction of Chile. He was a director for the Chamber almost continuously during its first 15 years
1961 Founder and first President of the Medical Service of the Chamber of Construction of Chile.
1967-1968 First Vice-president of the Chamber of Construction of Chile and interim President during 6 months.
1971-1972 President of the Chamber of Construction of Chile
1982-1984 President of the Coordinating Committee of Social Action of the Chamber of Construction of Chile
1984-1993 Founder and first President of Isapre Consalud (Health Services and Insurance) of the Chamber of Construction of Chile.
1993-1998 President of Tabancura Clinic of Consalud (Chamber of Construction of Chile)
1951-2004 Active member of various Chamber of Construction Committees, Advisor to the Directory and member of various Special Commissions. National Council Member since its creation up to now.
1964-1970 Director of Zig-Zag Editorial Co.
1968-1971 General Council member of the Engineers Association of Chile
1975-1995 First Vice-president of FUSA – Financing Company – since its creation until it was sold
1994-1997 President of the Council for the Elderly of the “Hogar de Cristo” Foundation
1996-2004 Member of the Arbitration and Mediation Center of the Commerce Chamber of Chile.

AWARDS AND RECOGNITIONS

1990 “Julio Donoso” award from the Institute of Engineers of Chile, for his work on

- 1991 improving human relations in the process of production.
- 1992 The "Gold Medal" of the Chamber of Construction of Chile, award that has only been granted to 5 members in 46 years existence of the Chamber

Alejandra Vega

Alejandra Vega-Varela was born in Santiago, Chile in 1967. She spent her childhood years in Santiago, Costa Rica, the United States and Paris. She completed her bachelor's degree in history at the University of Paris (Paris VII, Jussieu) with a specialization in the colonial period in Chile (16th-18th centuries). Specific themes of this work include indigenous populations, migration, the culture of the elite, cartographical representations and religious art. She is presently a doctoral student at the Universidad Católica de Chile, where she is researching iconographical and textual representations of the Andes Cordillera between the 16th and 18th centuries.

Leonor Varela

<http://www.leonorvarela.com/>

Leonor Varela first came to the attention of American audiences when she starred in the title role of the epic mini-series "CLEOPATRA" produced by Robert Halmi Sr., which aired to critical acclaim on ABC during May 1999 sweeps. The mini-series garnered the network's highest movie-of-the-week rating in young adults that season. As the ambitious Queen of Egypt, Cleopatra used her wit and sensual allure to bend the fortunes of men and countries to her unwavering will. Dally Variety called Varela "a true find, inhabiting the role with a smoldering gusto borne of defiant confidence."

Varela recently completed shooting the female lead opposite Jean Reno and Gerard Depardieu in the tentatively titled comedy "TAIS-TOI/LES TOURTERAUX." In this film, directed by Francis Veber and produced by Gaumont, Varela plays the double role of "Sandra" and "Katia." "Sandra" is a rich and compromising woman who gets killed early in the film and "Katia" is an

illegal Albanian immigrant whom Jean Reno tries to help because she reminds him of the woman he loved. The film is scheduled to be released in October 2003.

Varela will next be seen starring as a free spirited and liberal Spanish surgeon in the French film PAS SI GRAVE directed by Bernard Rapp. Pathé is releasing the film in March 2003 in Paris.

Varela was last seen starring opposite Wesley Snipes in the New Line film BLADE II directed by Guillermo Del Toro. She portrayed "Nyssa", the strong, darkly exotic daughter of Blade's sworn enemy who comes to meet Blade to formalize a truce.