

Albert Müller

### Heinz von Foerster. A Short Biography

Heinz von Foerster was born on November 13th 1911 in Vienna as the son of his recently married parents Emil and Lilith. His father was an engineer, his grandfather was in the Vienna of the Ringstrassen-era a famous architect and urban planner. His mother was an artist close to both the tradition of the Wiener Werkstätten and representatives of the avant-garde like Oskar Kokoschka. The grandmother, Marie Lang, is held as one of the protagonists of the Viennese women's liberation movement. In 1914, at the beginning of World War I the father of the three years old Heinz had to join the army and became soon prisoner of war for long years. So, for the growing up of Heinz his mother and a network not only consisting of relatives became great significance. Especially close became and remained a relationship with his uncle Erwin Lang, an artist, and his wife, the dancer Grete Wiesenthal, and their son, Heinz cousin Martin Lang. To the persons of this network, Heinz had contact with as a child, also belonged Ludwig Wittgenstein.



Heinz von Foerster, born  
November 13th, 1911,  
Vienna

The about four years old  
Heinz presents himself as an  
elegant young man

Fig. 1

Attending school in Vienna for Heinz was not without frictions. He described himself as a bad and lazy student, nevertheless surprising his teachers again and again with his talents and gifts in mathematics and sciences. More interest than to school the young Heinz devoted to doing magic together with his cousin Martin, with whom he also shared playing music in a jazz-band. Climbing mountains, sports and acrobatics contributed to the scale of Foerster's activities and ambitions.

In 1930 Heinz von Foerster enrolled at the Viennese technical university (Technische Hochschule) to study the recently created discipline technical physics. From 1933 on he attended lectures of members of the Vienna circle, organized by Karl Menger. Foerster's most special interest was devoted to Ludwig Wittgenstein's Tractatus. This all together furthered his interest in basic problems of mathematics, for instance for the foundational debate in mathematics.

After student days at the Technische Hochschule Foerster joined the Cologne-based company Leybold which produced technical equipments for laboratories. 1938 he worked for the research lab of Siemens. Together with his wife Mai, who had been an actress in Vienna, he moved to Berlin, not least to escape the risky situation of post-Anschluss Vienna. In Nazi-terminology he would have been regarded a "Mischling zweiten Grades" (half-cast grade 2), therefore he could not produce the required proof of "Aryan" descent. Nevertheless he managed to work for GEMA since 1939, in the field of short wave and plasma research, both regarded to be "kriegswichtig" (important to the war effort). Foerster talked about a "coat of importance" of his work in the research lab, which prevented him from being called to military service for a long time. Foerster succeeded with his family – three sons had been born – to survive World War II. In spring of 1945 he went back to Austria – to Tyrol first, soon to Vienna.

He started to work with a telephone and electrical engineering company, Schrack-Ericsson, doing important work of rebuilding this company; at the same time he became a journalist and science writer for Radio Rot-Weiß-Rot, the broadcasting company of the U.S. occupation forces, using the pseudonym "Dr. Heinrich". The versatility of Foerster found its expression also in writing "Das Gedächtnis. Eine quantenphysikalische Untersuchung" ("Memory. A quantumphysical investigation"), published in 1948 by the Viennese Deuticke Verlag. He did not only succeed to give a quantumphysical interpretation of Ebbinghaus' data on the capacity of human memory, he also produced a work, documenting for the first time a specific Foersterian thought style and work style.

This example of creativity, however, was ignored by post-war Viennese academe, but it turned out as an admission ticket to the academic world of the United States.

Until 1948 Heinz von Foerster worked under the pseudonym "Dr. Heinrich" for the broadcasting station "Radio Rot-Weiß-Rot". He organized regular live-discussions on a great variety of themes on science and societal development. The photograph shows Margarete Bauer-Chlumberg, HvF, Diego Hanns Goetz and Viktor Frankl

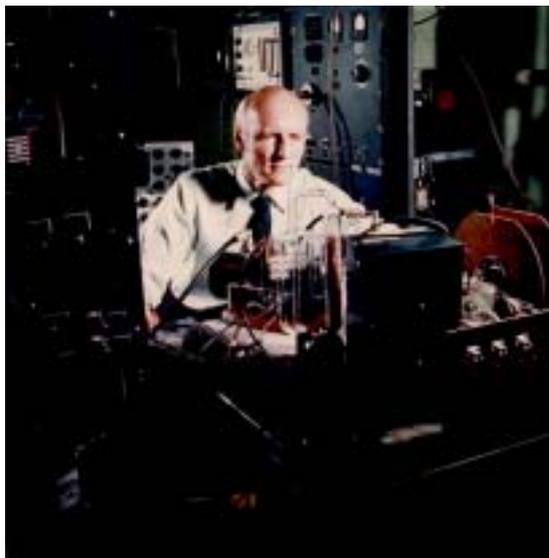


Fig. 2

Soon after the publication of the book, by chance of a trip to America received the support of Warren S. McCulloch; Foerster was invited to present his ideas on memory to a conference of the Josiah Macy Jr. Foundation dedicated to problems of cybernetics. Soon after, still in 1949 Foerster received a position at the electron tube lab of the University of Illinois, Urbana, where he became professor of electrical engineering in 1951.

In 1949 Foerster also became secretary of the regular Macy-meetings, doing editorial work on the yearly conference proceedings. In such a way he was moved into a central position within the development of a then still very young field of science: cybernetics.

Foerster's specific interest in cybernetics led to the foundation of the Biological Computer Laboratory (BCL) at the University of Illinois in 1957. For the following two decades the BCL became a centre of innovation for cybernetics and cognitive sciences. The foundation of the BCL marks a turning point in Foerster's publications. While in the 1950ies themes in the fields of electrical engineering and physics had been dominating, he now shifted to themes like homeostasis, self organizing systems, system-environment-relationships, bionics, biologic, machine communication and many more. Foerster succeeded to an extent still needing evaluation by history of science to bring creative potential to the BCL. The names of Ashby, Günther, Löfgren, Maturana, Pask, and many more stand for this. In retrospect it turns out that many problems and themes of 1990ies' cognitive sciences had been anticipated by the BCL decades earlier.



HvF at the BCL, 1959

Fig. 3

The importance of didactic innovations at the BCL focussing on interdisciplinarity and the direct participation and involvement of students as well also has to be mentioned here. Publications such as the volume "Cybernetics of Cybernetics" may be seen as impressive documents of these innovations. Nevertheless they did not always find consent. Upset parents and, therefore, nervous colleagues demanded from Foerster to defend his didactic principles in a hearing in 1970 after one of his interdisciplinary heuristic courses, which took place in the climate of student revolts.

In the general crisis of research funding in the USA as an outcome of the so called Mansfield amendment, the BCL, too, came in serious difficulties in the first half of the 1970ies. Quite promising research-proposal could not be funded, so the BCL had to be closed when Foerster left university for retirement.



Home of Mai and Heinz von Foerster, designed by architect Andreas von Foerster

Fig. 4

In 1976 Foerster became professor emeritus, and together with his wife Mai he moved to Pescadero, California. After some difficulties he built a new home there, designed by his son Andreas, most of the work done by his own hands. At the same time his scientific approaches and findings gained a new, additional dimension. First it were the psychologists and therapists of the School of Palo Alto – among them Paul Watzlawick – to acknowledge the epistemological significance of Foersters work for their own. Consequently in Europe, too, a broad reception of Foerster's ideas started, especially outside the more closed circles of cybernetics, in the fields of social sciences and humanities. Professor emeritus Heinz von Foerster who already had retired to a paradise-like place in California, now gained a large number of new readers and new audiences hearing hundreds of lectures, Foerster was invited to now worldwide. This quite unexpected development also led to a larger amount of publications since the early 1980ies which – besides their general epistemological relevance and their contributions to constructivism and to systemics – may be characterized by the following: by the again and again new and creative combination and recombination of ideas in a sometimes irritating way for new fields and sets of problems on the one hand; and on the other hand by the confirmation of the ethical dimension not only of the sciences but of human life as a whole.

Suffering from severe illness forced Foerster to reduce his wide ranging activities from 1997 onwards. In 2000 he decided to donate his archives to the department of contemporary history of the university of Vienna. In October 2001 Foerster made his last trip to his hometown Vienna: to visit his archives, to receive decorations in the Viennese city hall and to be honoured by an audience of more than thousand. Heinz von Foerster died on October 2nd 2002. Mai von Foerster followed him on June 22nd 2003.



HvF taking part in an opening ceremony, Heinz von Foerster archives, Vienna

Fig. 5

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Photos : 1 | 2 | 3 | 5 : Heinz von Foerster-Archiv; 4 : Dr. Gerhard Grössing