

The Wizard of Pescadero: Heinz von Foerster remembered

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Abstract

Purpose – This submission aims to honor and explore the intellectual and personal legacy of Heinz von Foerster as a pivotal figure in the development of cybernetics, constructivist thinking and interdisciplinary communication. It seeks to illuminate his contributions to the Macy Conferences, his unique rhetorical style and his enduring influence on fields such as systems theory, philosophy of science and human communication. The narrative also reflects on von Foerster's role in fostering a community of thinkers who challenged linear causality and embraced circular, recursive and ecological perspectives.

Design/methodology/approach – The article adopts a personal and reflective approach, blending memoir with scholarly analysis. The author draws from her firsthand experiences with von Foerster, including interviews, conferences and personal encounters, to capture his charisma, storytelling and intellectual rigor. The submission integrates historical context – such as the Macy Conferences and the Asilomar gatherings – with thematic explorations of von Foerster's ideas, including his ethical imperative, second-order cybernetics and critiques of language and perception. Archival materials enrich the narrative.

Findings – Von Foerster's work advanced cybernetics as a discipline, emphasizing circular causality, self-referential systems and the observer's role in scientific inquiry. His editing of the Macy Conference proceedings solidified the term “cybernetics” as a unifying framework. The article also underscores von Foerster's constructivist perspective, his critique of Aristotelian linearity and his alignment with Eastern philosophies like Taoism. It notes his engagement with paradoxes, such as the Möbius strip, to illustrate recursive thinking. Furthermore, the article offers lessons about the person behind this work. Von Foerster's charisma, performative speaking style and ability to inspire collaboration created a vibrant intellectual community. An anecdote highlights his role in renaming the Macy Conferences to “Cybernetics”, a moment that moved Norbert Wiener to tears. Von Foerster's optimism and playful approach to complex ideas – exemplified in his Asilomar presentation – contrasted with the melancholy often associated with other intellectual giants, offering a model of joyful, interdisciplinary inquiry.

Originality/value – The article makes a unique contribution to the literature through its blend of personal narrative and academic reflection. It offers a rare insider's view of von Foerster's life and work. Unlike traditional histories of cybernetics, it centers on the human dimensions of intellectual collaboration, capturing the spirit of the communities he built. The use of vivid anecdotes (e.g. the Tiresias myth and the Möbius strip demonstration) and photographs adds depth, while the critical engagement with his ideas – such as his limited exploration of language theories – provides a nuanced perspective. Bridging the gap between biography and theoretical analysis, it captures the spirit of von Foerster's cybernetic research community.

Keywords Von Foerster, Macy Conferences, Constructivism, Second-order cybernetics, Interdisciplinary

Paper type Viewpoint

Received 6 June 2026

Revised 24 July 2026

Accepted 25 July 2026

1. Introduction

If you desire to see

Learn how to act

– Heinz von Foerster

Several authors have met the moment to write the history of cybernetics with distinguished results, notably [Umpleby \(2008\)](#) and [Novikov \(2016\)](#). This year, Heinz von Foerster attracts special attention due to the arrival of the Doomsday Date that von Foerster proposed in 1960 as a thought experiment ([von Foerster et al., 1960](#)). No doubt this date will inspire many reflections about the possibility of predicting global change. Heinz von Foerster's approach to cybernetics is deeply rooted in constructivist thinking, inviting a critical reflection of such histories. As Heinz noted in his formulation of the *ethical imperative* ([von Foerster, 2003](#)), it is more about increasing the number of choices and enabling new directions of development.



Kybernetes
© Emerald Publishing Limited
e-ISSN: 1758-7883
p-ISSN: 0368-492X
DOI 10.1108/K-06-2026-1459

To understand von Foerster's contribution to the development of cybernetics and related disciplines, it is essential to take into account his talent for opening up new possibilities and encouraging original ideas. To illuminate the scope of his thinking, the following pages take a personal approach to writing history. What follows is the perspective of one of the many people he inspired, remembering their first encounter, the impression Heinz made as a person, his engagement in the Macy conference and his specific way of speaking and arguing. In doing so, it tries to recapture the spirit of the community that Heinz built around himself, which has been an important driver of research in cybernetics.

2. Serendipity

In 1977 I met communication scholar Art Bochner at an Asilomar Multivariate Statistics workshop led by John Tukey. We were so young, in our early thirties. And perhaps this is as good a place as any to share my deep debt to the senior scholars who treated us at that time with such kindness, patience and respect, including Heinz, Gregory Bateson, Paul Watzlawick, John Weakland, Kenneth Burke and Colin Cherry and whose profound contributions inspire us still.

Decades later, Bochner became president of the National Communication Association. At our first meeting, Art told me he liked an interview I had done with Cherry at Imperial College, London, published in *Human Communication Research* (Wilder, 1977). I was new to California, teaching at San Francisco State and living in Palo Alto with my husband, a computer scientist at then obscure but now legendary Xerox PARC. Art suggested I contact the Mental Research Institute (MRI) in Palo Alto to speak with Paul Watzlawick, co-author of the popular *Pragmatics of Human Communication* (Watzlawick et al., 1967), a virtual translation of Gregory Bateson's demanding theorizing collected in *Steps to an Ecology of Mind* (Bateson, 1972).

Watzlawick graciously agreed to an interview, published in the *Journal of Communication* (Wilder, 1978), and I was soon invited to be a Research Associate at the family-therapy pioneering MRI. Paul insisted that I meet his friend, fellow Austrian Heinz von Foerster, who had recently retired from the Biological Computer Lab at the University of Illinois and was living with his wife Mai on a spread of coastal real estate named Rattlesnake Hill in remote Pescadero, California.

The best part for me about living in Palo Alto was taking a break from it to drive over the ridge to the Pacific Ocean. Within a few weeks of Watzlawick's introduction, we found ourselves climbing the narrow, winding hill up to Skyline Drive with Alice's Restaurant at the top, a popular watering hole for bikers and hackers alike.

Route 84 then snakes down to the coast and Pescadero. Redwood trees reach hundreds of feet on each side of the narrow road, sunlight peeking through with a cathedral effect. Cool and warm at the same time, driving through a gossamer vision grounded only by the need for close attention to the road. A shimmering landscape of woodland, ferns and faeries. The first time I drove that road seduced me to a lifetime in Northern California.

About the time the ocean comes into view, a turn onto West Eden Road up Rattlesnake Hill leads to the sprawling modern compound of Heinz and Mai von Foerster, blending seamlessly into the panoramic site. A compact spritely resident bounces out to greet us, newcomers as old friends. "Greetings! Greetings! Do come in!" My first image of this magical being became my indelible memory of Heinz. When I asked him in a 1986 interview how he made his way to Pescadero, he recalled, "I am convinced that I was looking for it in my mind's eye all my life; I recognized it when I saw it, and I clung to it with all my strength" (p. 156) (Plates 1 – 3).

We spent many a pleasant afternoon over the next decade with Heinz and Mai, who always made visitors feel that they had been friends for life. Part old-Vienna charm, part futuristic vision, Heinz the raconteur loved telling tales, like the story of the Greek seer Tiresias, who was blind:



Plate 1. Mai and Heinz von Foerster, Carlos Sluzki Pescadero, Summer 1982. Source: Author's own work



Plate 2. Carol Wilder, Heinz von Foerster, San Francisco, 1982. Source: Author's own work



Plate 3. Heinz von Foerster, Asilomar, February 1979. Source: Author's own work

Tiresias was walking in the woods and came upon two snakes copulating. So he took a little stick and chased them apart. And when you do that, you change your sex. So Tiresias became a woman. And he was a woman for about ten years, when he again chased them apart and, of course, he changed sex and became a man again.

During that time, there was a strenuous debate upstairs in Olympus between Hera and Zeus about who among the couple who sleep together has more fun. Zeus said "Of course, the woman!" Hera said "Aha – not at all! I just do it to amuse you, to humor you." Zeus was not quite convinced, so he asked Tiresias: Tiresias, you have the experience on the two sides. Who has more fun, when the man and the woman are sleeping together? Tiresias said "Well it is very clear. The woman has about ten times as much as the man."

Hera was so outraged she took away his first sight. But Zeus was most grateful and gave him second sight, so he became a seer (Von Foerster, 1979).

Heinz told this story at the 1979 dinner in honor of Gregory Bateson, where he concluded his homage to Bateson "*the seer among us, who does not only have second sight, but has preserved his first sight*" (Von Foerster, 1979).

3. Macy Conferences

WWII was full of desperate and harrowing experiences for Heinz and his family in Austria and Germany, years of “close shaves and some unbelievable adventures,” including having their house “bombed into oblivion.” In 1949 friends invited Heinz, Mai and their three children to New York: “After years of starvation diet, mentally and physically, I became immediately drunk with the energy that was driving New York and with the resulting excitement: it was if I was on a high all the time.” (Wilder, 1986)

In short order Heinz was invited to Chicago, where friends had brought his work to the attention of Warren McCulloch, “a towering man.” He was invited to present his ideas to the University of Illinois, Department of Neuropsychiatry. “I could hardly speak English, to say nothing about lecturing. It did not matter. They all listened. If I groped for a word, they helped me. It was intoxicating. In complete contrast to the culture I came from, it was the content that mattered, not the form of presentation” (Wilder, 1986). McCulloch was so impressed that he invited Heinz to join the 6th Macy Conference, then named “Circular Causal Feedback Mechanisms in Biological and Social Systems.”

The next step was life-changing for Heinz; he joined the 6th Macy conference. The conference organizers “were appalled by my poor English and were thinking about a device for me to learn English fast.” Coming out of the business meeting, they announced: “We have found a solution. We decided to make you editor of these conferences. “They were right,” Heinz recalled. “I learned English fast.” (Wilder, 1986)

Among my own most treasured possessions are first editions of the 6th to 8th Macy Conference proceedings. When preparing this essay, I returned to them after decades away to refresh my memory, and was charmed anew by the breadth, depth and prescience of the conversations. It is worth noting that the meeting preceding the long series of conferences was on “Cerebral Inhibition,” featuring Milton Erickson on hypnotism and Howard Liddell on operant conditioning – two ideas that foreshadow much of the dark side of the cultural and political landscape that has emerged during subsequent decades.

In rereading these beautiful green books, I saw the conference records anew as nothing less than Socratic dialogues for the 20th century. Questioning, seeking, teasing out all byways of the topic at hand. My favorite is Gerard’s, 1950 musings on analog and digital, two concepts later to explain a whole culture (Pias, 2003/2016). While it is fair to say that Plato, unlike the Macy participants, had carefully planned foregone conclusions for his dialogues, both sets of conversations offer provocations for further attention that will last as long as literature.

Shortly after making a note of this thought, I read the introduction to the 8th edition (von Foerster *et al.*, 1952), the first written by Heinz and Assistant Editors Margaret Mead and Hans Lukas Teuber. Indeed, they wrote, “For well over two thousand years the symposium has been a setting for matching and sharpening ideas. Evolved from the Attic age, the literary form created by Plato has persisted through the Middle Ages and the Renaissance” (p. 148). Their mention of Plato was in service of making the point that while “few of the classical symposia were anything but prose poems of one man’s making,” the symposia they edit took place in the age of “stenotypists and tape recorders.” One is reminded here of Plato’s criticism at the end of the *Phaedrus* (Plato, 1973) of the new-fangled art of writing, with Socrates asserting “it shows great folly . . . to suppose that one can transmit or acquire clear and certain knowledge of an art through the medium of writing.” (p. 97) Similarly, von Foerster *et al.* argue that with modern mid-century devices, “communication transmitted has been infinitely multiplied in volume but the thinking of simplifying ideas has not kept pace.” (p. 148) Written in 1951!

One yearns to hear the Macy voices speak to the 21st-century communication environment. What would Bateson, who introduced “meta” into communication theory, think of Mark Zuckerberg’s choice of “Meta” as a name for his rapacious company? What would Heinz think of Zuckerberg’s branding with a Möbius strip? Who are the equivalent seers of today?

It is interesting that the first editors’ introduction does not appear until the third volume of the conferences they edited. Perhaps Heinz was taking his time to get a solid footing in the extraordinary complexities of the meetings in both content and form. He writes: “This account

attempts to capture a fragment of the group interchange in all its evanescence, because it represents to us one of the few concerted efforts at interdisciplinary communication.” (p. 341) *A fragment*. Given the wild richness and complexity of this 734-page “fragment,” one can only imagine the transcendent experience of the lived meetings.

All conference members were concerned with “the problems of communication and of self-integrating mechanisms. And revolving around these concepts, the discussion was communication about communication. The two core concepts were information theory and language, and “the notion of circular causal processes.” This line of inquiry led to the replacement of “one-dimensional cause-and-effect chains” with the “bi-dimensional notion of a circular process.” At the same time, anthropologists like Radcliffe-Brown and Bateson had introduced the notion of “ecology” in cultural systems.

Adoption of circular causal systems signals a sharp break with Aristotelian linear causality as defined by the syllogisms and the law of non-contradiction (Aristotle, 2009), the powerful drivers of Western epistemology since their introduction. Moving from “either/or” to “both/and” thinking is much more aligned with Confucianism and Taoism. Heinz touches briefly upon Eastern thought in the epic Muller and Muller interviews (2014), mentioning Taoism, which he acknowledges he would like to study more closely. (p. 134) Perhaps it was only a lack of broad awareness of Eastern thinking that failed to lead the Macy participants further down that comparative path. While many of the Macy conversations were grounded in mechanical examples, the philosophical message of wholeness is pervasive.

I am more persuaded by the mechanical and epistemological arguments that von Foerster advances than by his assertions about communication and language. It is well enough to claim that “language is a special system of communication that can talk about itself.” But his familiarity with the likes of Piaget, Chomsky, van Glaserfeld and Lenneberg while turning little attention to Korzybski, I.A. Richards, Sapir and Whorf and other more culturally oriented theorists, suggests a limited acquaintance with the full range of language studies available at the time. In fact, von Foerster oddly turns Korzybski’s “the map is not the territory” into the phrase “the world is not a map,” appearing to rearrange the idea that the representation is not the thing represented, the cornerstone of general semantics, – a notion certainly consistent with his own thinking. To be fair, the study of human communication beyond classical rhetoric had barely begun at the time of the Macy meetings, flourishing in their wake during the decades following. And we must account for the possibility that the translation chain from “the map is not the territory” to “the world is not the map” contributed to the confusion.

To immortalize the many contributions of Heinz von Foerster to the Macy Conferences, one story might suffice. When he reached the U.S. in 1949, Warren McCulloch urged him to read Norbert Wiener’s recently published *Cybernetics* (Wiener, 1948). Heinz, of course, complied. When he was appointed editor of the series, he asked:

May I make a motion? I would like to call these conferences not “Circular Causal and Feedback Mechanisms in Biological and Social Systems,” but “Cybernetics.” Great applause – they thought it was a good idea. I remember that Norbert Wiener was so touched by the unanimous embrace of his brainchild that he left the room to hide his wet eyes. (Wilder, 1986)

4. The Rhetoric of Heinz

Asilomar Conference Grounds, Spanish for “refuge by the sea,” was originally the home of the indigenous Essalen Tribe. The 104-acre coastal park is now the site of a landmark cluster of Julia Morgan’s Arts and Crafts style buildings. In February 1979, I organized a conference at Asilomar in honor of Gregory Bateson, the last public recognition before his death the following year. Thanks to the invincible ignorance of my youth, I managed to gather a list of luminaries, several of whom had not spoken for years: literary giant Kenneth Burke, Bateson protégé John Weakland, Paul Watzlawick, Carlos Sluzki, California Governor Jerry Brown, and, of course, Heinz.

For three days, one hundred academics from forty institutions gathered to participate in panels and speeches honoring Bateson and the singular effect he had across anthropology, cybernetics, psychology, ecology and communication theory. The book of conference proceedings, *Rigor and Imagination: Essays from the Legacy of Gregory Bateson* (Wilder and Weakland, 1981), received the National Communication Association Golden Anniversary Book Award in 1982.

Heinz delivered one of the major addresses – “Frontiers in the Philosophy of Science” – as well as writing the “Foreward” to the conference book. His presentation revealed the vivacity, charisma and magical spirit that could be called the “other half of Heinz” – the personality that is missing to readers who have read only his work. Some of this comes through in online clips of his speaking but never was the full force of his charm more captivating than in his Asilomar presentation.

Others had noted his indelible speaking style. His student Stuart Umpleby recalled:

Heinz was a performer – a trait that came from his youth when he performed magic. His style of presentation was like pulling a rabbit out of a hat. He’ll make you think he was going in one direction, and in the end, he would come up with a different conclusion.

Umpleby called him “The Magician of BCL.”

Umpleby’s description was on full display at Asilomar, where Heinz literally danced his way through an hour-long presentation in a state of perpetual motion, punctuating the challenging text.

The speech began with a reference to [Abbott’s \(1884\)](#) novella *Flatland: A Romance of Many Dimensions*, the story of a two-dimensional world that transforms to three dimensions, with allusions to gender, class and perception. It was the perfect analogy for Heinz leading the audience on an adventure from a focus on the individual to his recursive vision of second-order cybernetics: “there must be another dimension; a frontier into another dimension” ([von Foerster, 1979](#)).

I am confident that most of the audience of communication scholars and psychotherapists watched his performance with as much wonder and bafflement as did I, as Heinz took us on a tour through shortcomings of the Kuhnian notion of paradigm, the lessons of the Copernican revolution, and how “my study of the brain must include a study of the brain that writes that theory.”

Most cogently, Heinz argued that “if you want a theory of the observer you need three things.” First is to address the “incredible difficulty” we have with language; secondly the “political stance” that if you believe in an “absolute reality” we are reduced to “a rhetorical device; ” and lastly the “logical difficulty” addressed by Russell’s theory of types and the “charm of the set.” (“The set of all apples is not an apple.”)

At about this point in the speech, Heinz pulls out a length of paper that he fashions into a Möbius strip, then writes on the easel a long series of mathematical notations. This seemed to me to be pure performance art, given Heinz must have known that no one in his social science audience would have had a clue about the meaning. More scientific findings follow, including a reference to Jean Piaget’s observation of the childhood development of “object constancy,” and the experience of those in experiments using inversion glasses, both examples leading to the conclusion that “seeing oneself through the eyes of the other is one of the essential things.”

Then: “I would like to end with a note from Viktor Frankl, who happened to be a very good friend of mine. Frankl shared the case of a patient who was a holocaust survivor whose wife had tragically died. The man was desperate and depressed. Frankl listened to his story and responded:

If I were endowed by God to create a woman who would be an exact replica of your wife, she’s precisely what she was, she could speak in the same accent, have the same memory that your wife would have. Assume I have the power of God to create that woman. Would you like that?

No, the man replied.

Heinz: What is going on? What was going on was that the eyes through he could see her were gone, and he saw that it was time for him to see anew.

If there was ever a human less likely to make you think of doomsday, it was Heinz von Foerster. Both solid and kinetic; a survivor, raconteur and passionate lover of life, his presence lit up any

room lucky enough to welcome him. To know his seminal contributions to cybernetics as a science is to understand but half of the man, who taught us that the melancholy often associated with masters like Michelangelo and Oppenheimer is not the only way to live a life of singular meaning.

Editorial note

Due to the nature of this viewpoint, it was subject to single anonymous peer review rather than the same double-anonymous peer review process that the rest of the articles in this issue were.

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