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An American in Zurich: Jerry Schnoor as an Ambassador for U.S.

Environmental Science and Engineering

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16 Since the early 1980's, Jerry Schnoor has been a regular visitor to Switzerland and a key figure linking
17 the Swiss and U.S. communities in environmental science and engineering. This began when Jerry
18 met Werner Stumm at a conference in New Hampshire. Werner had returned to Switzerland in 1970
19 after teaching at Harvard for over a decade and was in the habit of inviting former students and
20 postdocs to visit him at Eawag (the Swiss Federal Institute for Aquatic Science and Technology). He
21 extended this invitation to Jerry, who spent the first 8 months of 1982 as a Visiting Professor in René
22 Schwarzenbach's laboratory at Eawag. Although René recalls some mishaps in the lab, he says that
23 "the wonderful part is that we became close friends for life" and "our joint lab adventure ended in a
24 very nice paper published in ES&T".¹

25 During this time, Jerry's interests in acid deposition and Werner's interests in the geochemistry
26 of mineral weathering converged and stimulated a field program to study these processes in the
27 Swiss Canton of Ticino. Werner and Jerry made their first trip to Lake Cristallina in July 1982 and
28 returned for summer field trips over the next decade (see Figure). Their first paper appeared in
29 *Naturwissenschaften* in 1983.² Over time, Eawag colleagues Laura Sigg and Jürg Zobrist joined this
30 project, which became more focused on chemical processes³ and kinetics.⁴ With the participation of
31 Barbara Sulzberger, iron photochemistry was included.⁵ This also stimulated a student exchange
32 between the University of Iowa and the Swiss Federal Institute of Technology (ETH); Steve (Barney)
33 Banwart did his Master's research with Jerry and his doctoral research with Barbara and Werner.

34 After Werner's retirement, Jerry's next sabbatical at Eawag was in 1994 at the invitation of the
35 new Director, Alexander (Sascha) Zehnder. Jerry was then just beginning his work on
36 phytoremediation. This topic was also of interest to Eawag microbiologist Hans Peter Kohler, who
37 was studying the microbial degradation of organic contaminants, including herbicides. Hans Peter's
38 interactions with Jerry at Eawag led to his sabbatical visit to the University of Iowa in 1998-1999.

39 At this time, Jerry became involved with the lively discussions at Eawag on the topic of
40 sustainability, particularly its societal and ecological aspects. Jerry had attended the 1992 Earth
41 Summit in Rio de Janeiro. At Eawag, he became enthusiastic about the ideas that were later

developed at ETH into the concept of the 2000-Watt Society (<http://ourworld.unu.edu/en/2000-watt-society>). Jerry helped to transfer these ideas to the U.S. academic world, primarily through the Association of Environmental Engineering and Science Professors (AEESP). Jerry continued intensive discussions on sustainability with Sascha, returning to Eawag for another sabbatical in 2000 and also enjoying discussions on the beach near Sascha's vacation home in Spain. Although Sascha and Jerry's plan for an on-line course on sustainability was too far ahead of its time and the book they started was not completed, they served as co-editors of the influential Wiley-Interscience Series of Texts and Monographs on Environmental Science and Technology.

Another strong link between Jerry and his Swiss colleagues was their mutual engagement with this journal, *Environmental Science and Technology*. When Jerry became an Associate Editor (AE) of ES&T in 1991, Eawag colleague Walter Giger was already serving as AE and Sascha (then at Wageningen in the Netherlands) was on the editorial advisory board (EAB). René joined the EAB in 1999. In 2000, Sascha (then Eawag Director) became the senior AE for Europe and Laura was appointed as AE. During Jerry's tenure as Editor-in-Chief (EIC), several additional Eawag and ETH colleagues (Janet Hering, Thomas Hofstetter, Stephan Hug, Annette Johnson, Ruben Kretzschmar and Urs von Gunten) served as Guest Editors, AEs and/or members of the EAB.

Working with Jerry at ES&T, we have been impressed with his ability to lead by example in a calm, competent and friendly style. Jerry emphasizes fairness and support within the scientific community while maintaining a standard of the highest quality. We could always count on his help and counsel in controversial situations, such as politically-sensitive viewpoints, disagreements among reviewers, author rebuttals or ethical issues.

Another impressive aspect of Jerry's tenure as EIC was his willingness to grapple with issues of political significance and societal impact. His editorials on environmental policy were often sharp and courageous but always based on facts and scientifically-rigorous analysis. They covered topics ranging from biofuels to e-waste to the Gulf of Mexico oil spill and displayed leadership and vision in establishing an international presence for ES&T.

Jerry's breadth of scientific interest made him a perfect candidate for the advisory board of the Competence Center Environment and Sustainability (CCES) of the ETH Domain, which he joined in 2011. Jerry has been an invaluable member of the board and is on the program for the final CCES conference in February 2016 as a challenger for the topic "monitoring and long-term data repositories". In 2015, Jerry returned to Eawag at the invitation of Director Janet Hering for exchange on a broad range of topics. During this stay, Jerry and Janet collaborated on a manuscript addressing the need for scientific synthesis of water research, specifically in the context of meeting the Sustainable Development Goal to ensure the availability and sustainable management of water and sanitation for all. Jerry is also working with Urs von Gunten and Eawag sabbatical visitor Fernando Rosario-Ortiz on a comparison of the Swiss and U.S. practices in drinking water treatment and distribution. In the U.S., a disinfectant residual is maintained in the distribution system. In Switzerland, this is avoided by combining rigorous source water protection, minimization of bioavailable organic matter using multi-barrier treatment and careful maintenance of the distribution system. This comparison highlights the need for epidemiological data as a basis for assessing the potential public health risks of both approaches.

We have all benefited greatly from our scientific discussions with Jerry and have also enjoyed his friendship and support. We hope that Jerry will continue to find Switzerland to be an interesting venue for scientific exchange and look forward to many future visits.

Figure. Jerry Schnoor conducting field sampling for the study of iron cycling in Lake Cristallina (Ticino, Switzerland) with Werner Stumm and Barbara Sulzberger, July 1989.



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