

Da Vinci Medal 2012 citation, Arne Kaiser

The da Vinci Medal is to be awarded “to an individual who has made an outstanding contribution to the history of technology, through research, teaching, publications, and other activities.” The recipient for 2012 is Wiebe Bijker. He has made important contributions in all the four areas mentioned in the da Vinci award description. His research has produced some of the most influential texts in our field during the past decades. Almost every newcomer to our field learns about the various bicycle models in the 1860s and 1870s and the various social groups that contributed to their construction from reading Wiebe Bijker’s and Trevor Pinch’s iconic text “The Social Construction of Facts and Artifacts.” Many of his other publications are also standard reading in courses on history of technology and sociology of technology all over the world, and his name is tightly connected with the concept of the Social Construction of Technology, or just SCOT. Moreover, he has made substantial contributions to teaching, not only at his own home university in Maastricht, but also as visiting professor at many other universities. And finally he has served in many capacities within SHOT and in other academic contexts, along the way encouraging historians of technology to look outward, to make connections with new disciplines like sociology, philosophy and political science, and to address new topics, new regions - beyond Europe and North America - and new concerns facing the world today, not least globalization and vulnerability.

Wiebe Bijker was educated as an engineer at Delft University of Technology. He would have liked to study civil engineering like his father, Eco Bijker, who was professor of coastal engineering, but because he did not want to sit in his father’s classes he chose to study physics instead. He continued with studying philosophy of science at the universities of Amsterdam and Groningen.

The early 1970s was a period of radicalization, and like many engineering students at the time Wiebe became concerned with issues such as the risks of nuclear energy, the proliferation of nuclear arms and escalating environmental degradation. He was soon drawn to the emerging science-technology-society movement which strove to increase awareness of these issues among the general public, and also tried to integrate those issues into the curricula of both universities and secondary schools.

In 1975 Wiebe started teaching physics in a secondary school in Rotterdam, and maybe not surprisingly he found the textbooks that were used boring and the pedagogy old fashioned. So he set out to make a change. He started writing articles in pedagogical journals arguing for educational reforms, and then went on to write a whole series of science textbooks together with two friends. These books, of course, included sections on current STS issues. In 1986, these text books won a prestigious didactic award.

After a couple of years as activist, teacher and text book writer, Wiebe returned to academia in the early 1980s. His ambition was to better understand the development of technology and its relation to society, and to help devise new ways of thinking about this relationship that would be helpful for societal actions on technology issues. And so he did. In a conducive research environment at the University of Twente and in a fruitful collaboration with Trevor Pinch, he developed a new theoretical approach combining detailed empirical case studies with general conceptual frameworks inspired by social constructivist approaches within the sociology of science. Together with Trevor Pinch he made a now classic case study of

bicycles, and introduced concepts such as “relevant social groups”, “interpretative flexibility” and “closure”.

As an important stepping stone in the endeavor to develop new theoretical approaches for understanding the relations between technology and society Wiebe and his colleagues organized two workshops in Twente, and they managed to attract remarkable groups of scholars to these workshops. Some of these already were established scholars in the field, like Thomas P. Hughes, Ruth Cowan Schwartz and Ed Constant, while the majority was scholars that would become leading in the field in the following decades, like Bruno Latour, Donald MacKenzie, Trevor Pinch, John Law, Michel Callon, Tom Misa, Bernie Carlsson, Madeleine Akrich and many others.

These workshops became seminal in the development of the SCOT approach, not least through the publication of two edited volumes: *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (MIT Press 1987) co-edited by Wiebe Bijker, Thomas Hughes and Trevor Pinch; and *Shaping Technology/Building Society: Studies in Sociotechnical Change* (MIT Press 1992) co-edited by Wiebe Bijker and John Law. In the former volume, Bijker and Trevor Pinch laid down the SCOT program, which Bijker later extended in his monograph, *Of Bicycles, Bakelite, and Bulbs: Toward a Theory of Sociotechnical Change* (MIT Press, 1995) through three detailed historical case studies. Wiebe’s explanation, championing, and continual improvement of the SCOT framework has enabled it to continue to be a lively source of ideas for anyone trying to understand how technologies and societies co-evolve. In addition to these three important books, Wiebe’s CV lists forty peer-reviewed journal articles and another forty edited volume chapters, another half-dozen edited volumes, and a couple dozen reports and professional publications. One of his journal articles, co-authored with Karin Bijsterveld, was awarded SHOT’s 2002 Usher Prize.

In terms of education, Wiebe Bijker has supervised almost thirty Ph.D. dissertations, and sat on close to another forty-five dissertation committees. He has developed many innovative courses at both the graduate and undergraduate levels. He has been chair of Maastricht University’s Department of Technology and Society Studies since 1995, including four years as dean of the university’s Faculty of Arts and Social Sciences. And he has also served as visiting professor at universities around Europe and North America.

In terms of “other activities,” Wiebe’s contribution has been unusually rich and varied. He has been a member of several committees in SHOT, including the Executive Council from 2004 to 2007, and the Editorial Committee of Technology and Culture from 2008 to 2013. Furthermore he has served as President for the Society for Social Studies of Science from 2001 to 2003, and this society awarded him its Bernal Prize for “distinguished contribution to the field” in 2006. He is widely called upon to review proposals and departments in Europe, North America, and India. He has been a member of ten editorial advisory boards for journals and handbooks in the fields of science and technology studies and history of science, technology, and medicine. Perhaps most importantly for members of SHOT, he was (and continues to be) a founding editor of MIT Press’ Inside Technology series. This series has published more than ninety monographs and edited volumes, including many landmark publications in the history of technology.

He has also served on a large number of Dutch academic boards and in public functions of other kinds. His high esteem in his home country was demonstrated when the Dutch queen

appointed him to Officier in de Orde van Oranje Nassau in 2009, which is very prestigious indeed.

Finally, Wiebe's contribution to our field goes beyond countable metrics of education, publications, research, board memberships, prizes, and so forth. Throughout his career, he has invited historians of technology to broaden their intellectual horizons while at the same time inviting other scholars to appreciate what historians of technology have to say. It is noteworthy, for instance, that the now-famous *Social Construction of Technological Systems* volume not only laid out the SCOT program but also included definitive statements from leading historians of technology, such as Thomas Hughes on "large technological systems", Edward Constant on the "social locus of practice," and Ruth Schwarz Cowan on the "consumption junction". Moreover it included very early statements of actor-network theory by John Law and Michel Callon.

Wiebe has co-authored and co-edited extensively, and in doing so has knit his own research – and the history of technology more generally – into a wide-ranging, interdisciplinary, intellectually fertile network of scholarship. Most recently, he has called for historians of technology to expand our geographic focus beyond Europe and North America – and he has led by example with a new project on environmental technologies in South Asia conducted in partnership with historians at Indian universities.

For three decades, Wiebe Bijker has thus contributed immensely to the field of history of technology. He has played a significant part in making SHOT a less internalist discipline, in every possible sense of that word. And he has done so with a distinctive style not always common among academics - good humored, self-effacing, and low key. Throughout his career, his academic scholarship has not been academic; he has worked to use the history of technology to "build a better world."¹ For all this, we are immensely pleased to award Wiebe Bijker SHOT's highest honor, the da Vinci Medal.

¹ Wiebe E. Bijker, "Globalization and Vulnerability: Challenges and Opportunities for SHOT Around Its Fiftieth Anniversary," *Technology and Culture* 50, no. 3 (2009): doi:10.1353/tech.0.0313.