



CHICAGO JOURNALS



History
of
Science
Society

Eloge: Casper Hakfoort, 6 January 1955—44 March 1999

Author(s): Floris Cohen

Reviewed work(s):

Source: *Isis*, Vol. 93, No. 1 (March 2002), pp. 75-77

Published by: [The University of Chicago Press](#) on behalf of [The History of Science Society](#)

Stable URL: <http://www.jstor.org/stable/10.1086/343246>

Accessed: 01/05/2012 11:54

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



The University of Chicago Press and The History of Science Society are collaborating with JSTOR to digitize, preserve and extend access to Isis.

<http://www.jstor.org>

NEWS OF THE PROFESSION

Eloge

CASPER HAKFOORT, 6 JANUARY 1955–4 MARCH 1999



Casper Hakfoort was born on 6 January 1955 in 's Heerenberg, a Dutch town close to the German border. He studied physics at Nijmegen, then at Utrecht University from 1973 to 1980; his *cum laude* M.A. thesis considered scientific method in Descartes's and Newton's optics. Between 1980 and 1985 he wrote his Ph.D. dissertation on issues in eighteenth-century optics under the supervision of H. A. M. Snelders at the Utrecht Institute for the History of Science. In 1985 he became a research assistant at Eindhoven Technical University; in 1986 he moved to the Department of History at the University of Twente, first as assistant professor and then (from 1990) as associate professor. He fell ill in the summer of 1998 and was no longer able to work. Casper Hakfoort died on 4 March 1999.

His publications in English amount to one

book, six articles, and a few reviews. These show that Casper was originally concerned with aspects of Huygens's and Newton's optics and with how that diverse legacy was handled, particularly in eighteenth-century Germany. He then turned—rather suddenly and, it might seem, mysteriously—to a sketch of the Nobel Prize-winning physical chemist Wilhelm Ostwald, describing him as the creator, at the turn of the twentieth century, of a detailed and purportedly science-based conception of the world at large. In fact, what seemed a new tack was actually a development of twenty years of adventurous thought on some truly fundamental problems in the history as well as the historiography of science. In the brief exposition of his major writings that follows, I seek (using Casper's published and unpublished writings in Dutch as well as his works in English) to clarify this connection.

For all its brevity, the "Epilogue" to *Optics in the Age of Euler: Conceptions of the Nature of Light, 1700–1795* (the translated version of his 1986 Ph.D. dissertation, published by Cambridge University Press in 1995), is a revealing piece. Here Casper observed that Kuhn's stimulating attempt to analyze the Scientific Revolution in terms of a transformed classical-mathematical and a newly arisen Baconian mode of doing science—with the productive integration of the two modes beginning to occur by the early nineteenth century—not only fails fully to explain developments in optics in the eighteenth century (this had been noted before) but breaks down in a more fundamental way as well. Casper pointed out that natural philosophy—in the sense of a comprehensive, unifying search for the underlying realities of the natural world—should be recognized as a third, independent category, distinct from the Baconian and the classical-mathematical modes. Thus, we can see that even the best work in optics in the period between Huygens and Newton, on the one hand, and Malus and Fresnel, on the other,

was marked by a certain lack of integration between theory (e.g., medium and emission conceptions), mathematical description, and experimental outcomes.

The significance of this attempted expansion of Kuhn's schema went far beyond the history of optics. Casper began to argue in the late 1980s that a "fundamental tension" runs through modern science from Newton onward—and that this tension accounts for a good deal of what has, over time, propelled it forward. It was not, of course, new to see such a tension at work in Newton's perennial concern to bring his mathematical and experimental science into line with his drive to achieve a comprehensive and coherent grasp of the world. But it was a daring move to relate Newton's delicate compromises to the variety of positions taken in an explicit modern exchange in which scientists (rather than philosophers and other intellectuals) debated the place of mathematical-experimental science in our understanding of the realities of nature: at a meeting in Lübeck in 1895 German scientists argued as to whether the unifying foundation for physical science should be sought in matter in motion, in energy, or in the electromagnetic field. In a pioneering piece of writing that he never published, Casper analyzed the views of participants like Boltzmann and Ostwald on what the scientist may properly claim about reality and the extent to which those views were consistent with their actual practices. He did so by introducing productive, historically derived analytical distinctions such as that between "ontological unification" and "mathematical-cum-ontological unification."

By the early 1990s, Casper found himself at an impasse in his investigation of these questions. It was characteristic of him to face a crisis head on, to plumb its depths and then seek a productive way out. Abandoning his focus on the foundational and epistemological concerns of the Lübeck debaters, he began to inspect instead the precise way in which Wilhelm Ostwald, the chief proponent of the energeticist stance, used the concept of energy to derive not only the whole of physical-chemical science but, indeed, all other sciences and more: philosophy, human culture and society, our search for happiness and the best formula for (quite literally) computing it, and so on and so forth—a "theory of everything" if ever there was one! Casper began to see how Ostwald's secular religion, which postulated science as the new deity that Ostwald celebrated in his monist "Sunday sermons," exemplified in a particularly outrageous yet his-

torically instructive fashion a pervasive current of thought that has accompanied modern science from the start. Most often labeled "scientism," that current is still very much with us today. As Casper concluded, authors from Descartes and d'Holbach, to Darwinists of many stripes—from the extreme social right to the extreme social left—to monists like Haeckel and Ostwald, and to Capra and Hawking in our own time, have regularly deployed both the actual contents and the authority of science to establish purported yet remarkably different and even wholly incompatible truths about society, culture, and the noumenal.

This soon proved to be a rich domain of historical research. Once again, Casper was not quite the first to explore it, as he shows in a characteristically fair-minded survey, "The Historiography of Scientism: A Critical Review" (*History of Science*, 1995, 33:375–395). Yet the article that, in my view, remains his masterpiece, "Science Deified: Wilhelm Ostwald's Energeticist World-View and the History of Scientism" (*Annals of Science*, 1992, 49:525–544), shows that he knew how to bring new perspectives to the theme. Here, Casper's penchant for the bold stroke serves to put into enlightening perspective a wealth of illustrative and (as always) meticulously researched detail. Here, too, his fundamentally analytical approach to history, which in several other writings led to a somewhat bloodless overschematization, was brought into beautiful harmony with the empirical material that was meant to be clarified by his historical-analytical concepts. His ongoing concern to discuss big questions in a manageable way found its fullest expression in this essay.

Yet once Casper felt he had seen through a problem, his interest in the empirical flesh on the bones of a historical structure he had discerned tended to wane. This explains in part why his work on a book-length biographical study of Ostwald's scientism, undertaken with the same zest as the article it was meant to enrich and amplify, could peter out over the course of a few years, eventually stalling almost entirely about a year before the diagnosis of a particularly malignant brain tumor made further work impossible.

For about a dozen years Casper served as a core member of the Department of History at the University of Twente. With his solid, almost painful honesty, he was a pillar of support to me, quite as brightly critical as he was loyal, as ready to salute what he found praiseworthy as to withstand the temptation for a fairly tight-knit group to turn into a sect or a mutual admiration society. He was committed to reaching out and learning from the free exchange of ideas, most regularly

with colleagues in Great Britain and the United States. His eagerness to provide both unstinting praise and penetrating criticism, from which we all benefited, came to the fore most tellingly with his students, beginning or advanced. They were all subjected to the special “Casper treatment”: incisive questions and intense, hours-long discussions designed to make his pupils grasp what they were truly after and understand how to move their work far beyond what they themselves had ever imagined possible. When his pleasure in his own work faltered, his joy in the progress of his students grew in proportion. Casper had a rather brooding nature, but his gener-

ous and radiant laughter often helped him—and others—recover from a mood of somber musing. He leaves behind one son; the profound impression he made on everyone around him by the characteristically thorough and earnest way he sought to come to terms with his impending death; an enduringly acute sense of the loss of a fine colleague and a good friend; and much scholarly promise unfulfilled.

H. FLORIS COHEN

*Raiffeisenlaan 10C
3571 TD Utrecht
Netherlands*