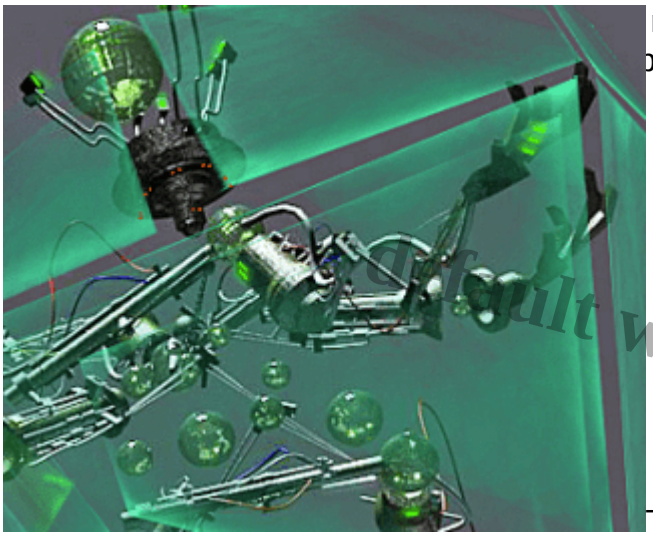
What has science got to do with it?

Description

According to an article by Frank van der Hoeven in the *Architectural Research Quarterly (ARQ)*, the Netherlands Organisation for Scientific Research thinks architecture is not being scientific enough, or at least architectural research suffers from not getting â??the basics of its own scientific foundations



response to this issue, published as a letter to the editor pens up again questions not of science, but of *scientism*.

The critique of scientism and its variants is standard fare in textbooks on the philosophy of science. Consider this account from A.F Chalmersâ?? *What is This Thing Called Science*?, (still in print since 1976) of what he terms naÃ¨ve inductivism. Thereâ??s a popular view that: â??Scientific knowledge is proven knowledge. Scientific theories are derived in some rigorous way from the facts of experience acquired by observation and experiment â?¦ Personal opinion or preferences and speculative imaginings have no place in science.â?• (p.1) He then marshals the full weight of 20th century philosophy to refute this naÃ¨ve conception of science. The criticism from philosophy of science is not just against those who seek to apply scientific principles and processes to areas outside its legitimate domain, but that this popular view of what is science misrepresents science.

The beacons of the philosophy of science include Karl Popper, Thomas Kuhn, Paul Feyerabend, and Bruno Latour who refute scientism from various angles: arguing that scientific observations are theory and value laden, science takes place within communities, science can be anarchic, etc, all suggesting that science is as dependent on processes of interpretation, community, and tradition as any aspect of the humanities. The field of research known as STS (science and technology studies) adds talk of socio-technical systems, the co-dependence of science, technologies, instruments and social relations.

Count the encyclopaedist, systematizer and educational reformer Peter Ramus (1515-1572), the rationalist philosopher Baruch Spinoza (1632-1677) and the philosophers of the Enlightenment amongst the champions of the view that science provides an overarching measure of rationality and understanding.

But scientism had its heyday with the movement known as logical positivism that developed with the Vienna Circle in the 1920s. Under similar influences Ludwig von Bertalanffy was promoting his General Systems Theory (GST) that sought to codify the processes underpinning nature, all the sciences, engineering, human organisation, economics, and even design.

Because of their promise of providing instruments for making decisions and controlling organisations, such encyclopaedism, logical positivism, systems theory and the attendant optimistic scientism have been major influences in management, public administration and education. Scientism instils amongst many a sense of a plan and promises resolution in the event of a social crisis. With its pretence at rationality and externality, and rendering decision-making processes explicit that are otherwise hidden, it suggests public accountability.

The management scientist, Herbert Simon was such an optimistic systematiser. He said in *The Sciences of the Artificial* in 1969

> The professional schools will reassume their professional responsibilities just to the degree that they can discover a science of design, a body of intellectually tough, analytic, partly formalizable, partly empirical, teachable doctrine about the design process. (p.58)

Early systems theory suggests that by logical rules, tables and charts, and that by laying complex issues out on a table or graph one achieves a satisfactory overview. Everything is in its right box. Thereâ??s also a bureaucratic strand to this latter day Ramism.

Hopefully this positivist inclination is moderated in UK education and research fields by a pragmatic liberalism. The liberal influence of the American philosopher John Dewey is well-represented in the writings of theorists of education, organisation, urban studies and design Chris Argyris and Donald SchÃ¶n who offer polite riposte to Simonâ??s systematisation, highlighting the complex interplay of problem setting, reflection, action, interpretation and metaphor within professional life and human rationality.

Research in the UK seems to be characterised by a pluralism so informed. In some quarters thereâ??s a recognition that there are many research paradigms, models, and views in play that are often critical of one another. The differences are for peer review groups to resolve or accommodate. Public accountability is important, and even social, cultural and economic impact, but these do not require putative scientific methods for their assessment, or the requirement that all researchers see their work as science.

Excerpted from a letter to the editor, first published in *ARQ*: Richard Coyne (2011). Whatâ??s science got to do with it?. *Architectural Research Quarterly*, 15 , pp 205-206, doi:10.1017/S135913551100073X

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- also see Being practical and Wicked problems revisited.

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