

Book Review: The Law-Science Chasm: Bridging Law's Disaffection with Science as Evidence by Cedric Charles Gilson

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The Law-Science Chasm considers the problematic relationship between science and law, with author **Cedric Charles Gilson** offering a way to mediate and translate their different perspectives and assumptions. A demanding read with little light relief, but it is a book that will likely appeal to philosophers of law and of science, as well as scholars of the law-science relationship who yearn for the degree of theoretical excavation and reconstruction that is available here, writes **Fiona Raitt**.

The Law-Science Chasm: Bridging Law's Disaffection with Science as Evidence. Cedric Charles Gilson. Quid Pro Books.

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The relationship between law and science has a strong tradition of interdependency, matched by an equally robust academic critique of the relationship, its strengths, frailties and flaws.

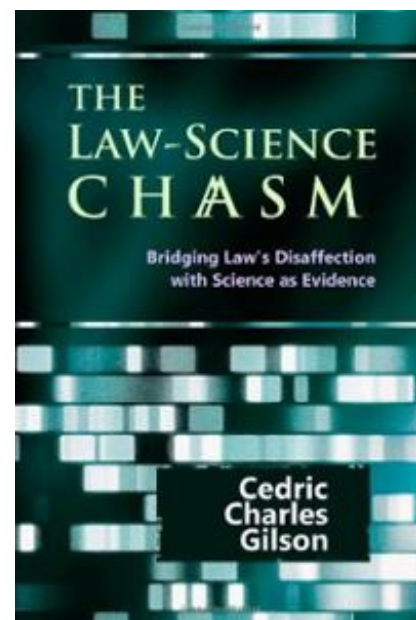
The essential aim of [Cedric Gilson](#)'s book is to interrogate the law and science relationship from a vantage point which positions faulty science as the primary problem, and converting that to reliable evidence as the goal. As Gilson sees it, science and law are "functionally differentiated". They therefore "collide in the legal forum due to their different constructions of reality, divergent philosophies, disparate epistemologies and evolution."

To address this problematic relationship the book is devoted to a detailed exploration of how systems theory from sociology could be harnessed to reconcile the law and science disciplines. Gilson's approach seems to involve bringing science to heel and make it more amenable to serving law's needs, in part by asking them to "talk to each other" rather than the present arrangement whereby he claims they "talk past" each other.

The analysis is undertaken in six chapters and draws heavily on social systems theorists such as Habermas, Luhmann and Teubner. The complexity of the propositions laid out by the author will be familiar to philosophers of science or of law, but will not be so readily negotiated by the reader who has picked up the book expecting some tactical advice on the use of expert scientific evidence in the courtroom.

Following the introduction and methods discussion in chapter 1, Chapters 2 and 3 discuss, respectively, disparate knowledges, and social systems theory. This is where Gilson explores in depth the epistemological issues arising from the operational difficulties facing law because of the ways that the admissibility of medical and scientific evidence is determined and interpreted. To illustrate the argument Gilson draws on some well-known legal cases, such as [Bolam and Sally Clark](#) as well as the class actions concerning the thalidomide, and bendectin drugs. Such examples offer the reader who is less at ease with Gilson's de-construction and conceptualisation an opportunity to imagine how his ideas might be applied in practice.

Chapters 4 and 5 consider some of the large scale public health controversies which the author characterises as "contemporary crises of science in society". These range from the MMR vaccine to Bovine Spongiform Encephalitis (BSE) and shaken baby syndrome. Gilson regards this mixed bag of issues as poised in a state of trans-science,



comprising science that is 'sub-scientific' or 'extra-scientific' and thus dangerous if introduced in law "as they may transgress the boundaries of true science or even are not sufficiently known to science." This description of Trans-science is unduly negative. More familiar depictions of this entity would describe them as emerging science, or science in its infancy, to convey the sense of their relatively early evolution within their fields but nonetheless their qualification as science. Such science undoubtedly has the scope to be high risk, but may equally be of considerable value provided it has been validated and its status fully acknowledged. An example that comes to mind is the use of techniques in forensic anthropology that enable identification of perpetrators in online sexual abuse through capturing digital images of the abuser's hands. (see S.M Black et al., "Forensic Hand Image Comparison as an aid for Paedophile Investigations", (2009) 185 Police Professional 21.

The thrust of the book's critique suggests there is something inherently problematic about the uncertain state of science, which may be unnecessarily defeatist. An alternative approach is to acknowledge that instability is the natural state of science and then focus on improving the methods law invokes to ensure that only reliable evidence is admissible. At least that approach would limit the potential for misleading conclusions to be reached in public policy decisions or in litigation outcomes. Admittedly that alternative approach would mean a resort to conventional adversarial practice which is probably indifferent to the potential for sociology and systems theories to resolve its issues with science. Gilson frequently invokes legal practice though, specifically the merits of law in its assumed capability to elicit truth through adversarial processes. It is curious therefore that he does not make more of the deeply contested concept of "truth" or whether cross-examination is as good as it is professed to be at obtaining said truth, especially as his thesis centres on the constructed nature of law.

The final chapter 6 brings the argument together with some practical suggestions of methods that could bridge the gap between the two disciplines, such as alternative dispute resolution options, though it should be noted that these too have shortcomings.

Towards the end of the book there is a reference to exchanges in 2005 between Professor Alec Jeffreys, a renowned expert on fingerprint evidence, and members of the House of Commons Science and Technology Committee, on the vexed question of the reliability of fingerprint evidence. Jeffreys argued pragmatically for stronger criteria to enhance reliability when determining a match. Six years later the Scottish Fingerprint Inquiry altered practice overnight when it recommended that fingerprints should no longer be treated as evidence of fact, but only as evidence of opinion. That small legal re-categorisation constituted a huge impact to the status of the science. Change can therefore contribute greatly to the uncertainty of the status quo and represents a ceaseless challenge to those engaged in law and science endeavours. In whatever ways participants undertake those endeavours they will learn something from this book. It is a demanding read with little light relief, but it is a book that will likely appeal to philosophers of law and of science, as well as scholars of the law-science relationship who yearn for the degree of theoretical excavation and reconstruction that is available here.

Fiona Raitt is Professor of Evidence and Social Justice at the [University of Dundee](#). [Read more reviews by Fiona](#).

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