

BOSTON STUDIES IN THE PHILOSOPHY OF SCIENCE

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# POSITIONING THE HISTORY OF SCIENCE

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TABLE OF CONTENTS

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Positioning the History of Science <i>Kostas Gavroglu and Jürgen Renn</i>	1
Big History? <i>Babak Ashrafi</i>	7
Suggestions for the Study of Science <i>Stephen G. Brush</i>	13
Will Einstein Still be the Super-Hero of Physics History in 2050? <i>Tian Yu Cao</i>	27
For a History of Knowledge <i>Olivier Darrigol</i>	33
Working in Parallel, Working Together <i>Lorraine Daston</i>	35
Challenges in Writing About Twentieth Century East Asian Physicists <i>Dong-Won Kim (Jhu)</i>	39
Why Should Scientists Become Historians? <i>Raphael Falk and Ruma Falk</i>	43
From the Social to the Moral to the Spiritual: The Postmodern Exaltation of the History of Science <i>Paul Forman</i>	49
Between Science and History <i>Evelyn Fox Keller</i>	57
The Search for Autonomy in History of Science <i>Yves Gingras</i>	61
Without Parallels?: Averting a Schweberian Dystopia <i>Michael D. Gordin</i>	65
The Intellectual Strengths of Pluralism and Diversity <i>Loren Graham</i>	69
On Connoisseurship <i>John L. Heilbron</i>	73

reminiscences and anecdotes, solid science and historical analysis: geneticists Jim Crow and Bill Dove (2000) have been editing for almost two decades a section in the journal *Genetics*, entitled *Perspectives on Genetics*, which has presented stories and comments from the history of genetics, usually by scientists who were personally involved. The editors explicitly subtitled this section: *Anecdotal, Historical, and Critical Commentaries*.

Scientists *should bother* about the history of science, although they may also contribute without becoming historians. Yet, some have contributed significantly to both science and history by *becoming* historians of science, and hopefully, will do so in the future.

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## FROM THE SOCIAL TO THE MORAL TO THE SPIRITUAL: THE POSTMODERN EXALTATION OF THE HISTORY OF SCIENCE

The history of science, insofar as it remains a scholarly discipline, must inevitably share the fate common to all scientific and scholarly disciplines in our postmodern era, viz., disintegration and dissolution. Disciplinarity and the disciplines are inventions of modernity. Disciplinarity as constructed social-cultural ideal, and the disciplines as institutional realizations of it, are collective implementations of the enlightenment project utilizing a specifically modern personality structure – take it as governed by Weber's Protestant ethic or by Freud's superego. It was the disciplines that, ostensibly, conducted and directed the huge enterprise of knowledge-for-its-own-sake research and publication that grew up in the first two thirds of the 20th century. But what modernity gave to the production of knowledge, postmodernity is taking away. Disciplinarity enters the 21st century deprived of much of its material and all of its ideological supports. Such support, however qualified, as disciplinarity received from governmental and commercial research establishments peaked in the third quarter of the 20th century, and has now almost disappeared. Meanwhile, in institutions of higher learning, the unqualified support that disciplinarity formerly received has deteriorated to bare toleration by administrators who confidently anticipate the disciplines' future extinction. With hardly anyone anywhere willing to say a good word about disciplinarity or defend it against the ubiquitous deprecations of the disciplines as institutions for knowledge production, there is no plausible prospect for arresting, let alone reversing, our, or any other, discipline's slide toward extinction.<sup>1</sup>

The demise of the discipline 'history of science' does not, of course, equate to disappearance of the subject 'history of science'. The subject is far older, and will continue far longer. For some while the discipline of the history of science will itself continue in its present postmodern mode as a continually renovated – but hardly cumulative – body of representations of science past, even as we aged bearers of the discipline will continue to find those representations on the whole ever more arbitrary and insufficient. Meanwhile, we have already begun to see a revival of that genre against which our discipline in its formation so largely defined itself, the history of science written by scientists – written now by scientists in a commendable though inevitably futile endeavor to buttress their disciplinary

1 P. Forman, "In the Era of the Earmark: The Recent Pejoration of Meritocracy – and of Peer Review," *Recent Science Newsletter*, 2, no. 3 (Spring 2001), pp. 1, 10–12.

cathedrals against the winds of postmodernity. But primarily and preeminently the history of science will flourish as a popular literary genre practiced by writers and journalists and emulated by members of academic departments with and without the 'history of science' label. And necessarily so, for it is the very essence of the ongoing disciplinary disintegration, the very essence of our postmodern boundariless, all-on-one-plane flatland culture – flatter, even, than Marcuse's "one-dimensional man" – that no line of demarcation can any longer be drawn between intra-disciplinary and extra-disciplinary intellectual productions. Consequently, disciplinarity, with all its strictures, conventions, and standards – above all, standards – must inevitably be overwhelmed by the power of popularity and the *Maechtigkeit* of the market.

Although in the long term the discipline of the history of science has no future, in the short term it will continue to have a trajectory – or, better, a sequence of thematic foci, or, perhaps better still, shibboleths. As in the past, these foci will continue to be adopted from the general cultural milieu, but now and in the future with less and less concern for their pertinence to a comprehensive apprehension of the scientific enterprise. For even if we, collectively, believed such a comprehensive apprehension were possible – and we no longer do – achieving it would not seem a purposeful goal to individual historians of science who increasingly must, willy-nilly, seek the meaning of their efforts outside of the disintegrating disciplinary incentive structure.

With this increasingly extra-disciplinary, increasingly 'elsewhere,' orientation, the historian of science will necessarily be concerned less and less with what science really is and really was, concerned more and more with the imposition of the leading cultural shibboleths – now increasingly personal in character – upon the matter of science. And this makes it rather easy to predict what will be the next thematic focus, and the associated shibboleth, of the history of science. That predictability of the trajectory of the history of science arises from the further circumstance that compared with history at large, the subdiscipline of the history of science is backward, *retardataire*, a follower rather than a leader in the ongoing process of shifting of disciplinary foci to align with normative cultural categories. Thus, although hardly consonant with our wonted arrogance vis-à-vis mere historians, it becomes ever safer to say that where history generally is today, the history of science will be a decade or two from now.

Take, in particular, the shibboleth 'moral', whose currency in the history of science in the past two decades we all well know. But do we also recognize that the thematic focus and shibboleth 'moral' had been adopted by historians generally more than a decade before it became the mode in the history of science? And in history generally 'the moral' has been a much more intensive focus than ever it has become in the history of science.<sup>2</sup> This we-too, follower-discipline pattern is displayed graphically in Figure 1, based on word usage counts in *Isis* and in the

2 Although it is conventional to cite E.P. Thompson, "The Moral Economy of the English Crowd in the Eighteenth Century," *Past and Present*, 50 (1971), pp. 76–136, as aboriginal, in fact, as Figure 1 shows, Thompson was riding the wave at least as much as he was making it.

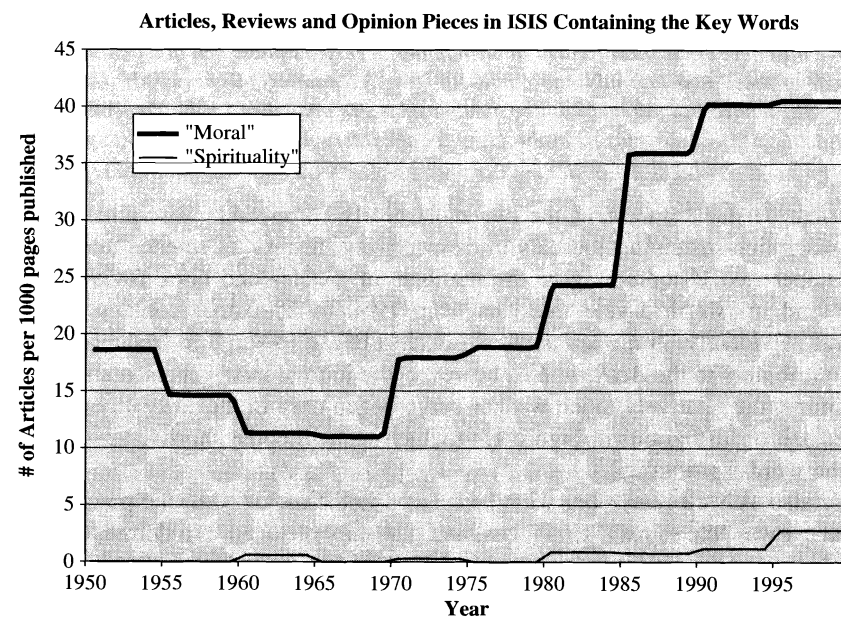
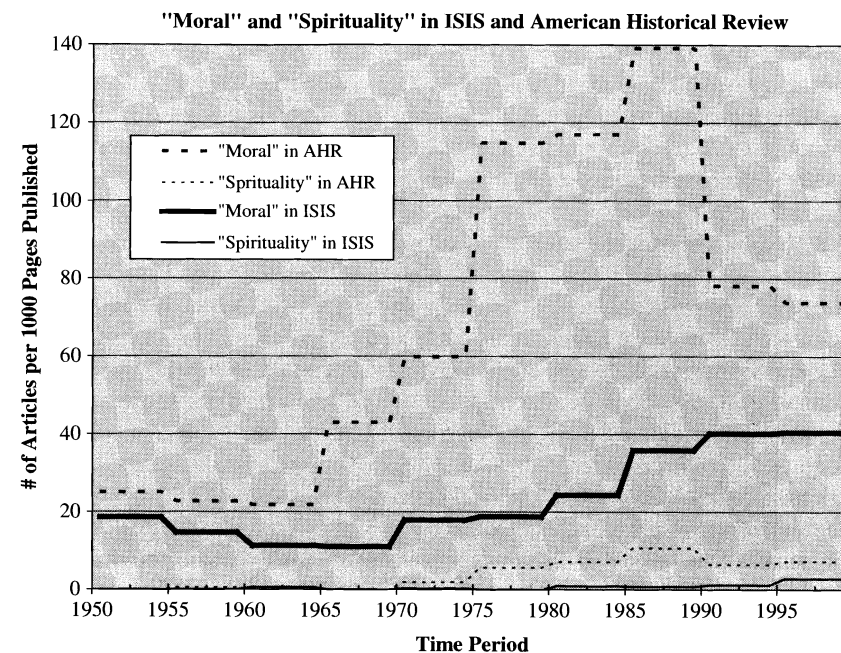


Figure 1: (Continued)

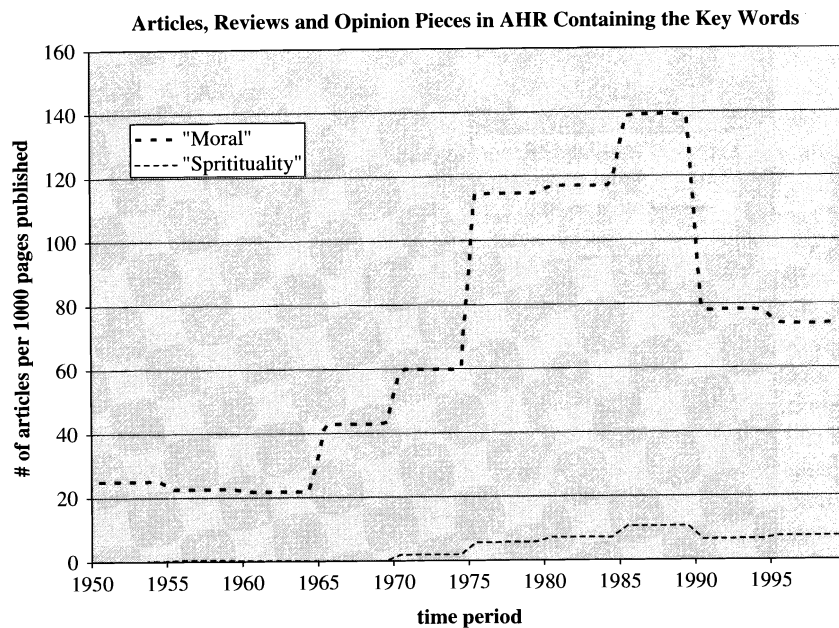


Figure 1: Frequency of occurrence of articles or reviews containing 'moral' (upper histograms) or 'spirituality' (lower histograms) in *Isis* and in *The American Historical Review*. Data based on full-text searches in JSTOR. In order to normalize the data and remove the effect of the upward drift in the number of reviews published in an annual volume of each of these two journals, the counts of items containing the keywords, 'moral' and 'spirituality' have been divided by the number of pages published by the respective journal in the given 5-year interval

*American Historical Review*, the two most nearly comparable, discipline-defining and discipline-sustaining journals in, respectively, history of science and history. The upper two histograms give the numbers of articles and book reviews in the *AHR* and in *Isis* in 5-year intervals from 1950 to 2000 that contain the word 'moral'. Evidently, in the late sixties this term began to surge in frequency of use by contributors to the *AHR*. In *Isis*, however, the journal most representative of our discipline, the relatively much weaker surge began only in the early eighties. (The lower pair of histograms in Figure 1, to which we will come shortly, give like data for the word 'spirituality'.)

We also all well remember what had been the thematic focus that preceded 'the moral': it was 'the social.' This focus, and that shibboleth, rose to dominance in the broader historical discipline already in the 1950s, but in the history of science only in the 1970s, roughly twenty years *en retard*. Yet just at the time that 'the social' was beginning to be embraced, belatedly, by historians of science, it was beginning to fall rapidly in the public consciousness in Europe and North America. In this

epochal political and cultural shift, the transition from modernity to postmodernity, 'the social' lost the primacy that it had held in the public consciousness from the era of the Great Depression, and 'the moral' gained primacy as normative category – primacy over 'truth' and even 'reality' – in a social-economic-political field characterized by radical individualization and individualism. For the American polity this reorientation is epitomized by the wide acceptance of the view that "Cutting taxes is really a moral issue because that means that people have more money in their pocket."<sup>3</sup> And if we suppose that 'mere' historians, with their good noses, sensed relatively early the ease with which cynicism and hypocrisy have appropriated 'the moral,' that might explain the rapid fall in references to 'moral' in the *AHR* in the early 1990s. Meanwhile, we historians of science, as slow to let go as to take up, persist with the shibboleth of 'the moral,' oblivious to its emptiness.

But in turning their backs on 'the moral,' historians are most definitely not turning back to 'the social'. Much rather that transient fixation on 'the moral' was only a first, not yet unabashedly individualizing 'move' in what is an ongoing, epochal, rejection of 'the social', an ongoing exaltation of the individual. Insofar as we can speak any longer of society, it must be conceived as an increasingly individualized agglomerate of persons. Take, for instance, the creative writer in Germany. In the early 1970s it seemed to Wolfgang Hildesheimer, born 1916 and bred on pre-War modernism, that he was witnessing "The End of Fiction": "a majority of younger writers – at least in Germany – would sneer at you at the very mention of the word masterpiece. The task of the writer, they would say, is to contribute towards the changing of society." Today, to the contrary, under the headline "For Young German Writers, All Is Ich", the *New York Times* quotes writer Judith Hermann, "There has been a very remarkable German revival. The older generation has been more interested in the past, the war, politics. My generation looks at itself"; then the *Times* quotes magazine editor Andreas Petzold, "Today there is nothing to belong to. Young Germans are therefore asking themselves, 'What can I do to be happy?'"; and the *Times* reports that every one of the younger writers interviewed saw as objectionable any "overtly moralizing" fiction, in particular that of the socially highly conscious Gunther Grass.<sup>4</sup>

What, then, will be the new thematic focus rising to prominence in the history of science in the next decade or two? And what will be its shibboleth? My surmise,

3 John Kasich (R-OH), Chair, House Budget Committee, in news conference, February 1, 1999. Transcript by Federal Document Clearing House, Inc., thru Nexis. Kasich, who two weeks later would formally announce his candidacy for the 2000 Republican presidential nomination, made the moral crusade for tax cuts his defining issue. Already three years earlier Newt Gingrich, then still Speaker of the House, was proclaiming the "moral case for cutting taxes" for "the more money you have in your pocket, the better parent you can be." Quoted by Adam Clymer, "An Enthusiast Again, Gingrich Proposes a Tax Cut a Year," *New York Times*, July 12, 1997, Sect. 1, p. 8.

4 Wolfgang Hildesheimer, *Das Ende der Fiktionen* (Suhrkamp Taschenbuch, 1988), p. 107. The title essay was written in English for delivery at Irish universities in 1975. Nora Fitzgerald, "For Young German Writers, All Is Ich", *New York Times*, July 19, 2003, Sect. E, pp. 1, 5.

evident in Figure 1, is that 'spirituality' is that shibboleth, for 'spirituality' is emerging as the keyword of a nascent era of generalized but wholly individualized religiosity, at the center of which is belief in personal transcendence, especially personal immortality. "Spirituality has become a vastly complex quest in which each person seeks his or her own way," says Robert Wuthnow, widely regarded as the leading sociologist of American religion.<sup>5</sup> In so saying, Wuthnow takes the meaning of this nearly neological term to be self-evident. (Nor could he do otherwise, for in truth its application is so broad as to render it almost meaningless apart from very vague connotations of immateriality and non-rationality.) Striking evidence of the rising cultural role of the shibboleth 'spirituality' is provided in Figure 2, showing the relative frequency of its occurrence in the titles of 'serious' books in English. After the expected falling-off in the proportion of titles that included the words 'religion,' 'religious,' or 'spiritual' in the third quarter of the 20th century – the era of high modernity – there was a steep rise in 'spiritual' and 'spirituality' in the fourth quarter, a rise that has been especially steep in the last decade. And though there is a hint that now 'religion' too is again on the rise in relative frequency of occurrence, what is much more impressive is the degree to which 'religion' has been superseded by 'spirituality,' a word wholly lacking in social as well as doctrinal implications, or even connotations.

From the perspective of intellectual history, or, better, its historiography, what is most striking in this 'spiritual turn' is that it is a *volte-face* from that denial of all transcendences that was a defining characteristic of postmodernism. Thus, for example, Ihab Hassan, often cited as conceptor of 'the postmodern', and coiner of 'postmodernism', now, in his old age, says of postmodernism: "I ignore it because my own interests have drifted away from it toward the possibilities of a spirituality that addresses all the issues of the postmodern turn."<sup>6</sup> Though Hassan obfuscates it in acknowledging it, postmodernity is turning out in this as in other important respects to be the very opposite to the realization of postmodernism.

Another important respect in which postmodernity has turned postmodernism on its head is in 'the return of the author', that originator of the masterpiece whom postmodernism had annihilated. This resuscitation of the creative individual, the natural result of our new nominalism in which only persons have real existence and real value, has had the beneficent effect of revalidating biography as a scholarly genre. More than that, it has led to the reassertion of claims for the exceptional individual scientist as author of science – what Sam Schweber had rightly continued to emphasize through the decades in which 'the social' and 'the postmodern' were at one in their minimization of the role of the individual.

But along with the return of the individual scientist as author of science, 'the return of the author' brings also the reconstitution of the scholar as writer – writer,

5 Robert Wuthnow, *After Heaven: Spirituality in America Since the 1950s* (University of California Press: Berkeley, 1998), p. 2.

6 Frank L. Cioffi, "Postmodernism, etc.: An Interview with Ihab Hassan," *Style*, 33, no. 3 (Fall 1999), pp. 357–371.

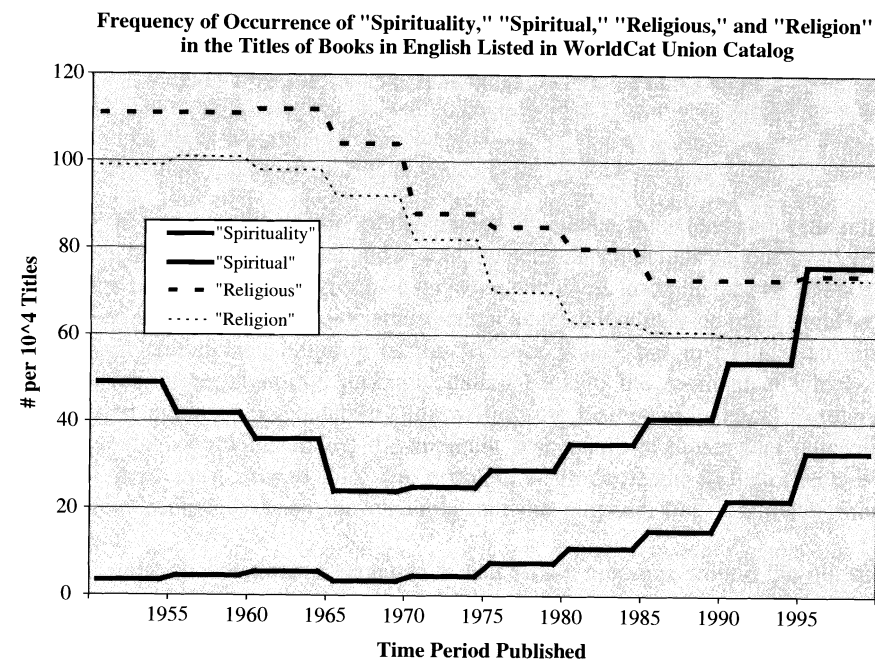


Figure 2: Frequency of occurrence of books in English in the OCLC union catalog of university libraries in whose titles appear the words (from bottom to top) 'spirituality', 'spiritual', 'religion', or 'religious'. The raw numbers were divided by the total number of English-language books with imprints in the given 5-year interval in the OCLC catalog in order to produce a frequency (number per 10,000 titles). I am grateful to Deborah L. Bendig, Online Computer Library Center (OCLC), for the year-by-year counts of the contents of their catalog, and to Emily McHugh for assistance in collection, analysis, and presentation of the data.

rather than discipline-oriented researcher – with all that that implies for motivation and reward in our all-on-one-plane flatland culture. Inter alia, it means, as I said at the outset, increasing disregard for the demands of disciplinarity in the interest of the scholar-writer's creative self-expression – and wider sales. In the future this further exaltation of the scholar to the status of writer may bring even a Nobel Prize for the historian of science herself: "Horace Engdahl, permanent secretary of the Swedish Academy, which awards the literature prize, envisages more emphasis on philosophy, history and autobiography .... 'The borderline between the literature of fact and the literature of fiction will gradually weaken,' he predicts."<sup>7</sup>

Smithsonian Institution, Washington D.C.

7 Christopher Brown-Humes, "The Nobel Century," *The Financial Times*, September 29/30, 2001, Weekend Sect., p. 1.