

Past Celebratory, Future Subjunctive

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This issue of *Interdisciplinary Science Reviews* is my last as its Editor, short by a year of *ISR*'s fiftieth and my own eightieth. I'm writing to put in context and celebrate the work of its authors, guest-editors, Editorial Board members, friends in various capacities and the editorial staff during my tenure.¹ The context to which I refer is *ISR*'s 'intellectual project', as I once described it (*ISR* 41.1, 2016). Before setting out to explore 'fresh woods and pastures new', in the words of the poet whose work I once studied, it is time for me to look back and see what can be made of it all.

My involvement with the journal began in 2001 with predecessor Howard Cattermole's invitation to submit a public lecture I had given earlier that year. In 2002, I joined the Editorial Board. With Howard's encouragement I then began working to help foster development of the journal along a trajectory that founding editor Anthony Michaelis had set out in 'Future Affirmative', his first editorial: to publish 'Contributions which further the cultural and intellectual links between science and the arts and humanities' (*ISR* 1.1, 1976).² Reach into the humanities was last on his agenda, as befit his principal audience of natural scientists, policy-makers and their publics, but it *was* there. Having grown up in the house of an artist, been trained at university in both of the 'two cultures' and worked as a technologist, my intention was hardly to shift *ISR*'s scope away from the natural sciences, rather to extend it deep into the humanities and arts. Achieving an equitable balance turned out to be far more difficult than I had anticipated, however. Much remains to be done about that.

When Michaelis wrote his inaugural as Editor, 'interdisciplinary' was 'a relatively new term', he said. It was sufficiently unfamiliar among his intended readers to merit the scare-quotes, although it had been in use for some time and, as he noted, practiced for much longer (cf. McCarty 2016). What mattered to me was to make clear through *ISR*'s publications what genuine interdisciplinary research could do to stretch awareness of the possibilities.

Fortuitously a 2003–2004 celebration of the humanities at my home institution, King's College London, provided a signal opportunity to begin work on *ISR*'s trajectory. My department head, Harold Short, suggested that I organise a lecture series as part of that celebration, hence 'Digital Scholarship, Digital Culture', whose proceedings were later published in *ISR* (30.2, 2005). Everyone invited came: Stanley Katz (Public and International Affairs, Princeton); Gordon Graham (Moral Philosophy, Aberdeen); Michael Mahoney (History of Technology, Princeton); Yorick Wilks (Artificial Intelligence, Sheffield); Ian Hacking (Philosophy, Toronto); Timothy Murray (Cinematic and Digital Arts, Cornell); Jerome McGann (English Literature, Virginia).

In 2008, with *ISR* 33.2, Howard stepped down as Editor and I took over, or more accurately, began working with Mark Hull, the publisher's representative, and a then small Editorial Board. Mark's exemplary personal investment in *ISR* provided invaluable support and encouragement. The relation between editor and publisher with which I began was of a different era then coming to a close. From my perspective, it was in many respects more humane than the one we have now.

The first issue I supervised was on Philosophy and Engineering, guest edited by Natasha McCarthy (Royal Academy of Engineering). From the outset, guest-edited thematic editions were the norm. Issues

entirely of unsolicited contributions meeting *ISR*'s criteria played a lesser role: they were and still are relatively rare. At least in the humanities, academic reward structures go a long way to explaining the problem.

Nevertheless, the rich history of the journal during the last sixteen years of my tenure presents the sort of problem one is glad to have: too much to cite and discuss. I need not do that, since the evidence is preserved online. So I can turn instead to some high points in this history, to thematic issues that are particularly relevant to *ISR*'s intellectual project. I will then conclude with a few unsolicited articles.

The first example began with a suggestion from then Board member Brad Inwood: to commission Sir Geoffrey E.R. Lloyd, scholar of ancient Greece and China at Cambridge, to write an essay and name about a dozen and a half respondents from across the disciplines his work involved. Fifteen accepted.³ In developing their essays, we asked them to name critical readers from whom they would most like to hear. *History and Human Nature* (or *HHN*, as we called it) was the result, beginning with Lloyd's 'Cross-cultural Universals and Cultural Relativities', concluding with his 'Further Thoughts' (*ISR* 35.3-4, 2010). Inwood and I were the co-editors.

From an editorial point of view, the reviewing strategy for *HHN* deserves further notice.⁴ For many journals, in many circumstances, the double-blind system of review is a necessary precaution, especially in those disciplines in which misleading information can be harmful. In this case, however, it was possible, indeed immeasurably beneficial, to establish a genre of interdisciplinary exchange to which the journal has repeatedly returned: open rather than secretive reviewing by peers, reviewing based on respect and trust rather than on a 'technology of distrust'.⁵ Some publishers would not allow it. Fortunately ours did.

Historian of science and Board member Frank A. J. L. James took charge of two thematic issues relevant here, *Some Significances of the Two Cultures Debate* (*ISR* 41.2-3, 2016) and *X-ray Crystallography* (*ISR* 40.3, 2015). I draw your attention to the latter. As he wrote in his Introduction to it, the field of X-ray crystallography, initiated in 1915 by Nobel Laureate Lawrence Bragg and collaborators, 'maintains its formidable strength over a number of disciplines' (James cites 29 Nobel Prizes in physics and chemistry from 1914 to 2013).

I cite *X-ray Crystallography* here for two reasons: first, the fine example it provides of interdisciplinary work in the physical sciences; second the question it raises implicitly about how a set of well-developed techniques can migrate so felicitously across different fields of science.⁶ Indeed, that word, 'science' is a clue.

In a justly famous essay, 'Clues: Roots of a Scientific Paradigm', Carlo Ginzburg (contributor to *HHN*) traces the moment at which 'the gulf between the sciences of nature and human sciences began to open up', when Galileo declared in *Il Saggiatore* (1623) that the great book of nature could not be understood apart from the mathematics in which it was written, 'beyond all sensory data' (Ginzburg [1986] 1989, 107-108), beyond all that in which the human figures. Much can and has been said about this by more qualified scholars than I. The apposite point here is Galileo's identification of a language at the basis of many very different ways of knowing. Thus in one stroke he set it in 'the anti-anthropocentric and anti-anthropomorphic direction which it would never again abandon'. We no longer tend to argue for the unity of science (cf. Galison and Stump 1996), but a contrast with the human sciences highlights a very stubborn difference.

This brings me to that difference and how it has been faced in the pages of *ISR*. In 2016 Board member Lloyd invited me to participate in a workshop he created in response to conversations with Brazilian anthropologists.⁷ He named it *Science in the Forest, Science in the Past* (SFSP). To date the workshop has met four times, in 2017, 2019, 2022 and 2024. The proceedings of SFSP I were published in *HAAU: Journal of Ethnographic Theory*, those of SFSP II and III in *ISR*.⁸ The point to be made here is the crucial format of the workshop. About a year prior to each meeting, a handful of leading scholars from a

wide variety of disciplines⁹ were asked to write papers on a stated theme, then to submit their drafts a month in advance for circulation to all authors to read. For the first year the theme questioned one or many worlds and their mutual intelligibility (2017); from there it developed as the series progressed, to a new or revised framework within which to discuss this fundamental question and the many problems thus uncovered (2019); the bearing of these problems on ideas and practices related to health and well-being (2022); and, most recently, on regeneration of life on earth in the face of climate change (2024). On each occasion, the authors met over two and a half days, face-to-face together with invited attendees at the Needham Research Institute, Cambridge.¹⁰ Each paper was briefly introduced by its author with comments from the session chair, then turned over to the meeting for open discussion. All discussions were recorded and made available to the authors. During the following year or so, they revised their papers in consultation with trusted readers they selected.

This format was crucial because it framed and supported the implicit goal of SFSP: neither consilience nor convergence towards some agreed-upon understanding but an interdisciplinary reach from multiple points of view, without loss of significant differences. What this means, what was achieved, is best understood by reading, for example, through the most recently published proceedings (*ISR* 49.1) – at minimum I suggest Lloyd’s Introduction and my own Afterword.

Back to the natural sciences, to biology, in *Making Sense of Metaphor: Evelyn Fox Keller and commentators on language and science* (*ISR* 45.3, 2020), guest-edited by historian and philosopher of biology Marga Vicedo and philosopher of biology Denis M. Walsh. Like many others in *ISR*, this issue is in genre a typical thematic one, offering the elements of an implicit exchange from several points of view. Nothing is typical about its contents. In her response, ‘In gratitude’, Fox Keller acknowledged, indeed celebrated her surprise at discovering ‘a hornet’s nest I was opening’, hence ‘the richness, the breadth, and the uncontainability of the subject’ she expected to contain. The new directions her respondents reached towards, she commented, were ‘so congenial to the arguments I have been making over the course of my career’. Again, it is the reaching-towards that exemplifies the ambitions of *ISR*.

I commissioned this issue out of my own gratitude for her work as well as in recognition of its intrinsic importance to the interdisciplinary project. At first Evelyn wanted a memoir; I replied that *ISR* doesn’t do memoirs, or festschrifts for that matter. Fortunately her memoir was published in Fox Keller (2023). After her death, I asked Board member Philip Ball to write the obituary for *ISR*, which became ‘*Éloge: Evelyn Fox Keller and the new biology*’ (49.1, 2024). It concludes with her comment, Ball writes, ‘that the dramatic shift underway in biology’s narratives meant “I only wish I was just starting rather than ending my career”. We might wish that too’.

I just said that *ISR* does not do festschrifts. But neither does it do what she condemned, and in condemning cast a strong light on work to which she contributed so much. In ‘The Dilemma of Scientific Subjectivity in Postvital Culture’, for example, she observed the historical replacement of ‘the first-person narrator of the scientific text... by the abstract “scientist”... who could speak for everyman but was no-man, in a double sense: not any particular man, and also a site for the not-man within each and every particular observer’. Between the seventeenth and nineteenth centuries, she went on, ‘a hollow place had been carved out in the mind of every actual or virtual witness into which a machine could vicariously be placed’, and still is placed by scientists and non-scientists to this day (Fox Keller 1996, 418–419). One whom I am privileged to call a colleague remarked to me once (I would say the same of him) that when she spoke you gave her 100% of your attention – and *that* can be said only of a *very* few.

There is so much I must leave for the curious reader to discover among the many other fine issues of *Interdisciplinary Science Reviews*. This is where my conclusion in a ‘last but not least’ means exactly what it says – and moves slowly to its end.

Without those colleagues who have guest-edited the great majority of issues, *ISR* would not be what it is. Without the authors who have survived its stringent criteria, the same may be said; enormous patience was required of many of them while we struggled to find reviewers willing to give generously of their time and resources. Without those reviewers, the articles would not have been published. *Do ut des*, ‘I give that you may give’, makes the academic world (and the social) possible.

My Associate Editor, Tara Mahfoud, joined the Editorial Board in 2019 prior to her appointment in Sociology at the University of Essex, became Managing Editor in 2021 and Associate just last year. Her contribution has been crucial. At some point she quietly took on more than half the operation of *ISR*, which is to say, all of what unsolicited submissions require. The core of her work has been, like a prospector who pans for gold, to sit by the stream of incoming material and patiently sift for the rare nugget. Both of us have worked hard to increase the richness of the take by communicating what *ISR* is seeking from unsolicited submissions, rewriting the journal’s ‘Aims and Scope’ numerous times.¹¹ True, *ISR*’s criteria set the bar very high. But most submissions are so far out of scope as to show no sign that the author has even tried. Evidently the criteria have either been ignored or simply not read. The situation authors face in or on the periphery of their chosen profession is not difficult to understand, given the pressure to publish and the fashionable misuse of ‘interdisciplinary’ to mean ‘anything goes’. The small fraction of submissions that fit within scope is nevertheless worth all Tara’s discerning patience – for which I am most grateful. I end with evidence of nuggets she has picked out.

Consider, for example, Sarah Dillon and Jennifer Schaffer-Goddard’s ‘What AI researchers read: the role of literature in artificial intelligence research’ (*ISR* 48.1, 2023). This gem might well be regarded as an implicit response to Shunryu Colin Garvey’s fine thematic issue, *Artificial Intelligence and its Discontents* (*ISR* 46.1-2, 2021). Dillon and Schaffer-Goddard do not oppose discontent with and within AI but redirect our attention to its imaginative origins in the readings of its practitioners, and so bring in both literary studies and cultural criticism, for example in the work of Donna Haraway.

Among those others Tara has spotted and shepherded into publication are, for example, two that appeared in the penultimate issue of last year: Maiya Murphy’s ‘Thinking again: Enaction as a resource for “practice as research” in theatre and performance’ and Dawid Bernard Juraszek’s ‘Clustering of cognitive biases in Walt Whitman’s “Crossing Brooklyn Ferry”: An Ecocritical Analysis’. While it is true that an editor cannot rely solely on titles, note in each of these the promise of something worth the candle. It is quite remarkable how often that promise, or even a hint of one, is fulfilled.

From earlier years I recall colleagues expressing relief mixed with joy at discovering *Interdisciplinary Science Reviews*, at finding a home for the kind of work that is so often promoted but very rarely understood and practiced. To whomever becomes the Editor (undetermined at the time of writing) this project is a half-century inheritance of huge potential, only just begun.

Willard McCarty
Editor-in-Chief, *ISR*

Notes

1. Readers interested in the *much* broader context in which *Interdisciplinary Science Reviews* came to be and its history during its founding Editor’s time will want to consult Michaelis (2001), esp. 310–320.
2. The complete run of the journal may be found at <https://www.tandfonline.com/journals/yisr20>, then <https://journals.sagepub.com/home/IDS> (7/9/24).
3. These were: Lorraine Daston, Ian Hacking, Robert A. Foley, Francesca Rochberg, Carlo Ginzburg, Simon Schaffer, Marilyn Strathern, Almira Salmond and Anne Salmond, Eduardo Viveiros de Castro, Philippe Descola, Zhang Longxi, Tim Ingold, Patrick Bateson, Pascal Boyer and Alan Blackwell.

4. The process from start to finish is described in detail in our Editorial to that issue.
5. Fox Keller (1996, 418, citing Porter 1992).
6. In *Image and Logic: A Material Culture of Microphysics* Board member Peter Galison has written at length about the felicitous and often productive exchange of things and techniques across what he has called ‘a trading zone’, the objects adapted and reapplied under very different conditions (Galison 1997, 781–844; see also Gorman 2010), and note the role of anthropology). A striking example of such migration is given by Thieme and Yang (2000); note the role of mathematics.
7. Aparecida Vilaça (Museu Nacional, Rio de Janeiro); Mauro William Barbosa de Almeida (São Paulo); Manuela Carneiro da Cunha (Chicago). For further development of this conversation, see Lloyd and Vilaça (2023).
8. *HAU* 9.1, 2019, then in Lloyd and Vilaça (2020); *ISR* 46.3, 2021, then McCarty, Lloyd, and Vilaça (2022); *ISR* 49.1, 2024.
9. Among others, the disciplines have included social anthropology, history and philosophy of the natural sciences and mathematics, cognitive science, artificial intelligence, engineering, sinology, classics and biology.
10. Coincident with the location of SFSP I-IV, biochemist and Sinologist Dr Joseph Needham was a member of *ISR*'s Editorial Board from its inception. See Michaelis (2001), 478, also 318, 446–447.
11. See [https://journals.sagepub.com/overview-metric/IDS? \(7/9/24\)](https://journals.sagepub.com/overview-metric/IDS? (7/9/24)).

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