

## **On Anarchy, or What We Talk About When We Talk About Science**

**Derek Lee**

In 1975, the philosopher of science Paul Feyerabend published his controversial, agonistic, and now infamous manifesto against positivism, *Against Method*. Claiming that the fundamental conservatism of science hinders its potential progress, he argues that a more “anarchic” approach is necessary for engaging with the radical unknowns of nature. Instead of relying upon an episteme mired in uniformity and objectivity, he writes, “we must invent a new conceptual system that suspends, or clashes with the most carefully established observations, confounds the most plausible theoretical principles, and introduces perceptions that cannot form part of the existing perceptual world” (32). For Feyerabend, such a counterintuitive method is epistemologically necessary, for only by incorporating religion, myth, philosophy, and the “ramblings of madmen” can science ever truly understand a universe that is essentially irrational (68).

Although mainstream science has unsurprisingly ignored this call to revolution for over forty years, I must admit that I have been thinking quite a lot about Paul Feyerabend recently. Indeed, I have been turning over the relations between literature, science, and irrationality with renewed frequency because it seems to me that science studies has been slowly veering in a new direction, such that we now stand upon the cusp of what we might call an “anarchic turn,” a reimagining of science liberated from the strictures of orthodox rationalism. By this I do not refer to a wholesale replacement of post-Enlightenment science as Feyerabend demands, but rather an intensification of institutional and ideological processes already underway, namely the simultaneous fragmentation of various scientific traditions and permeating of their boundaries to reflect more accurately the diversity of historical, cultural, and yes, irrational thought. It is an expansion of science from a centralized axis of Western-based empiricism into a rhizomatic network distributed across traditional knowledge systems, occult practices, and other “pseudoscientific” realms once considered unworthy of study. Scientific epistemology has historically distinguished between rational subjects that can be studied and irrational ones that cannot, and I contend that contemporary science studies is not only beginning to challenge the logic of this binary but the valorization of logic itself. Ironically enough, it seems the unexplainable, the monstrous, and the paranormal are increasingly the subjects of the scientific humanities. This is a significant shift because it suggests an anarchic reinterpretation of science from a single, universalizing body of thought to a scrum of natural, unnatural, and even supernatural discourses deriving from a (dis)array of global traditions. Such a transition is not unwelcome, I would argue, for it implies an emancipation from previous modes of intellectual hegemony. Literature plays a key role in this evolution by constructing and consolidating a scientific field for cultural osmosis. Susan Squier has argued that literature and science act collaboratively as “technologies” for institutionalizing the perception, interpretation, and consumption of scientific content, and in this anarchic pivot, literary form performs a new technological function by actively redrawing the bounds of acceptable knowledge (3). As such, literature not only moulds an expanded configuration of science but also amplifies the very conditions of possibility within scientific thought.

The emergence of irrational science and science studies has manifested itself most clearly in the heterodox topics now accepted as legitimate areas of research. As Joshua Blu Buhs' *Bigfoot: The Life and Times of a Legend* (2009), David Kaiser's *How the Hippies Saved Physics*, (2011), and Michael Ruse's *The Gaia Hypothesis* (2013) all illustrate, mainstream and university presses have begun to pay extra attention to the mystic, the psychedelic, and the flat-out weird. Each of these texts handle esoteric science not as truth claims to either prove or disprove but as opportunities to rethink the nature of truth. What differentiates a fact from a non-fact? What are the attractions, audiences, and ideational genealogies of the latter? Demarcating fact from fiction has a long tradition in the history and philosophy of science, but more than ever fiction seems to be having its moment. Perhaps even better bellwethers for the radicalization of science studies are the conferences within the field. At the Society for Literature, Science, and the Arts (SLSA) 2015 conference, only one panel featured what we might call an "untraditional" science topic; one year later, at SLSA 2016, I observed no less than four panels dedicated to topics like alchemy, telepathy, spirit photography, and ufology. SLSA is not alone in this newfound interest in sciences that several years ago might have been laughed right out of the conference hotel. In June 2016, the British Society for Literature and Science, British Society for the History of Science, and several other organizations supported an interdisciplinary conference at Newcastle University to discuss the intersection of nineteenth century literature and pseudoscience, covering topics like antebellum phrenology and the physiology of Frankenstein's monster. Two of the best-attended sessions at the 2016 European Society for the History of Science Conference were part of a "Pariah Science" mini-symposium that generated vigorous debate over the role of forgotten, discredited, and dissenting sciences within scientific discourse. There is, to be sure, an overt sexiness about fantastical subjects like sasquatches and flying saucers, but there is also something larger afoot, a deeper sea change in the way science is being perceived—and produced—by literature, history, and philosophy scholars. What once existed on the fringes of proper science as doxa is migrating to the centre.

I believe there are several reasons behind this movement. The first is the mainstreaming and intensification of postcolonial criticism across the humanities. One of the core practices of the postcolonial project has been to give voice to marginalized groups, texts, and traditions on their own cultural terms rather than through the filter of the West; its subject is not the "rational" Western man but the non-Western Other. The telos of this approach has been an emergent appreciation for what Bruno Latour calls "nonmodern" thinking that does not necessarily subscribe to Western systems of logic. Unfortunately, postcolonial science has lagged behind other fields of postcolonial critique because of the widespread belief that science exists beyond history and culture, but even this misconception is beginning to fade. In *Is Science Multicultural?*, Sandra Harding identifies science as "any systematic attempt to produce knowledge of the natural world," a remarkably inclusive definition that dovetails with the ethos of both postcolonial and anarchic sciences (10). "What a tragedy it would be," she writes, "should the human species arrive at one and only one universally valid scientific and technological tradition" (Harding 6). The richness of scientific thought across world history deserves an equally rich analysis of that thought. Recent decolonizing studies on Vishalyakarani herbs from Indian legend and "qi" energy demonstrate that non-traditional science is a supremely generative site for revealing the overlooked cultural and epistemological dimensions of "premodern" objects (Mukhjari 65; Lei 319). Moreover, this research lays the groundwork for

further scientific anarchy since it becomes easier to imagine what bloodletting or geomythology, for example, might explain about the intellectual practices of their age.

Another forerunner of the anarchic turn is the rise of occult modernism in literary studies. The most famous example here is W.B. Yeats, whose association with groups like the Theosophical Society and the Hermetic Order of the Golden Dawn critics had discounted for decades for fear of crippling his artistic standing. Instead, the explosion of occult studies in the 1970s and 1980s invigorated Yeats scholarship. Since then occultism has emerged as a major force in modernist studies with work on James Joyce, Aleister Crowley, May Sinclair, and others appearing every year. As with postcolonial science, occult modernism challenges our typical epistemic boundaries and shows how de-rationalized approaches to science can open vast new tracts of criticism.

This returns me to Feyerabend and the role of literature in contemporary science studies. With five hundred years of post-Enlightenment inertia behind it, modern science may never unwind itself into the anarchic epistemology that Feyerabend may have preferred, but this transformation may be unnecessary since literature already fulfills many of its purported roles. As an episteme drawing from mythic, philosophical, Western, and non-Western sources, literature implicitly serves a Feyerabendian function in speculating beyond—and thereby challenging—scientific conservatism, in conjuring “a dream-world in order to discover the features of the real world we think we inhabit” (32). Literature is intrinsically anarchic because it owes allegiance to no single paradigm of knowledge or history. The role of literature here is not to replace science, though, but to *reshape* it—to reconfigure our understanding of it as a permeable body of knowledge in which the real and physical can productively blur with the fantastical and otherworldly. Literature, society, and science all co-constitute each other, and I would argue that literature and literary studies are already collaborating to diversify what counts as scientific thought. This is a burgeoning thematic across contemporary literature. In *Who Fears Death* (2010), for example, Nnedi Okorafor conjures a post-apocalyptic Africa where Western science has been lost and replaced by the dominant paradigm of juju. In Jeff VanderMeer’s *Southern Reach Trilogy* (2014), mainstream science proves incommensurate for interpreting Area X, the mysterious ecological disaster zone where irrationality is the only rule of law. Jonny Steinberg provides a nonfiction account of the porous rational/irrational border in *Sizwe’s Test* (2008), which describes a thoroughly nonmodern South Africa where HIV is spread by *tikoloshe* spirits just as easily as through sex. The thought-systems in these real and imagined worlds do not constitute a science, obviously, but they do demonstrate a willingness to think beyond traditional paradigms of scientificity.

I interpret all these various investigations into unorthodox science not as individual cases but as points on a line gesturing toward a novel understanding of science emerging in literary studies. Such a science is not a strictly Western episteme birthed by the Royal Society in the seventeenth century and living today in the pages of *Nature* and *Science*. Nor is it another positivist variation of the “master narrative that could be called the ‘the history of Europe’” (Chakrabarty 27). It is, instead, a multiplicity of rational and irrational thought systems, rituals, and assemblages passed down to us through channels as diverse as *Grey’s Anatomy* and *The Book of the Dead*, and continually produced in academic journals as well as contemporary fiction. This sprawling reinterpretation of science is anarchic precisely because it accepts formerly unscientific subjects as desirable objects of study. There are, no doubt, potential pitfalls along this pathway. As Massimo Pigliucci has forcefully argued, there are

grave political consequences when misinformation is applied as scientific knowledge (e.g. anti-vaccine discourse) (57). But there is much more to be gained than what is lost in this expanded definition of science: fresh insights into lost histories, present beliefs, future outcomes. Feyerabend writes "science is much closer to myth than a scientific philosophy is prepared to admit," and as the best technology we have for traversing both science and myth, literature is ideally situated to reformulate what science has been and what it might conceivably become (295).

Traditionalists may still cling to an internalist view of scientific historiography, but literature stands at the fore of an anarchic epistemology complicit in the shifting of the intellectual firmament beneath us. In its embrace of the strange, the archaic, and the illogical, it observes science not as a continual movement towards Truth but something both messier and more genuine. In this respect, then, literature can produce a new vision of science, one equally at home with its positivist past and its postcolonial, postsecular future. This is not the classic, rationalist science of my own youth, but it is nevertheless a science that I am eager to see.

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