

THE EROTICS OF SCIENCE



PEOPLE HAVE BEEN putting the boot into science lately. British pundit Bryan Appleyard, who deems the rationalist philosopher Bertrand Russell “one of the most fabulously stupid men of our age”, smites science with a sort of Argument by Temperature: it has a “cold vision of doubt and indirection”; its cosmology is “cold, inhuman”. That’s hard to square with typical avowals from, say, neuroscientist Steven Rose (in his splendid *The Making of Memory*): “I know of no other sensation quite like this sense of joy, at the same time intensely cognitive but deeply emotionally satisfying.”

For critics more staid, more balanced, than Appleyard (such as Professor Rose himself), the motivating *interests* of science – set by policy and ideology alike – regularly deform its growth, warp its practitioners, and damage its victims. Such factors are so pervasive, we’re told, that they’re mostly hidden in plain view.

That’s plausible. It took hefty spade-work by the women’s movement before we noticed that traditional science is a man’s game of carving things up into small bits. Until quite recently, the domination of research and teaching by senior men, with their specific (even ruthless) cast of mind, seemed ordinary as the sun’s rising. Now even that bastion of orthodoxy, *Scientific American*, admits – in a recent essay by Professor Anne Eisenberg – that “the discourse of science is soaked in testosterone”.

So it is easy to grant that the activity of science has mixed motives. Still, mightn’t we prefer to support molecular genetics and DNA engineering rather than the blunderings of commonsense or, worse, the absurdities of astrology? Despite scandals and demystification, isn’t the scientist still today’s pre-eminent creative seeker after truth?

Well, perhaps not. David Foster, Australian novelist and former cancer researcher, caustically asserts that the scientist is, by contrast, the operational definition of a hack. Despite those soaring quests among the stars for the Mind of God, in reality the highest ambition of the scientist is a set of procedures (in technical jargon, “algorithms”) so banal and repeatable that anyone pos-

sessing the appropriate trained skills can obtain reliable results by joining the dotted lines.

Happily for fans of science, there is another way of regarding the scientist seethed in her own juices, one recalling the romantic image of an artist at work. What we as witnesses create (re-create) in a canvas has only a tendentious intersection with the sweating impulse which laid down its shaped edges, its fields of colour. Art-as-consumable-object is a piece of social technology, twin to the physical technology that’s at once the motivating spur and the merest by-product of the working scientist’s excitement.

Ever since the sixties, while the art market boomed and interviews with artists and writers were everywhere published, we’ve seen a strenuous and principled repudiation of the consumer aesthetic. The artist might not be dead in fact but there are sound reasons for acting *as if* death separates us from his or her authoritative hand. Strikingly, this is the tack we *automatically* take with science and its works. It’s the air we breathe (or choke on).

Technological cultures are simply too diverse to sustain any wistful return to the often-mooted Australian Aboriginal or Balinese equation of Social-Life-as-Art. The major obstacle in the way of any non-alienated dream is precisely this: that much of the creative thrust of a high-energy, high-information culture is expressed in scientific research, usually founded in daunting mathematics, of a thousand different and baffling varieties.

What we lack is a conveyable poetics of science by which the non-specialist, the non-scientist, might grasp the fierce excitement of which advocates such as Steven Rose, immunologist Lewis Thomas or physicist Richard Feynman sing. Here’s Feynman, whose Nobel Prize was for theoretical work in quantum electrodynamics, that ultimate abstraction:

Sometimes I feel like an ape, trying to figure out how nature’s going to behave, fooling around with all those symbols ... You get so excited you can’t calculate, you can’t think any more. It isn’t just that nature’s wonderful,

because if someone tells me the answer to a problem I’m working on, it’s nowhere near as exciting as if I work it out myself.

Dr Damien Broderick’s latest book is *The Lotto Effect*, from Hudson.

To adapt a celebrated line from Susan Sontag: perhaps we need an erotics of science.

A grimmer, more pragmatic response has become fashionable among non-scientific intellectuals, blending clear-eyed cynicism toward the actual practice of science in centralised technocracies, and (all too often) considerable ignorance of the result and procedures of science.

It's instructive to see the way many feminist women have responded to new reproductive technologies. Overcoming their aversion to the cold Frankenstein patriarchal horror of it all, they swot up their recombinant genetics and molecular biology, the better to arm for combat. As Judy Wajcman puts it in *Feminism Confronts Technology*, both science proper and the manipulative technologies associated with it have come to be seen "as deeply implicated in the masculine project of the domination and control of women and nature".

The sentiment is often backed by gruesome example. Yet because it proceeds from a fundamental mistrust of what impels scientists, male and female, in their efforts, this view reinforces (as it seems to me) a basic misunderstanding. Anxious and revolted spectators will never apprehend the joyful delirium Feynman and Rose express, because most of the time we non-scientists simply have no idea what a given research issue actually is. We must wrestle second-hand with a variety of tentative answers offered by working scientists. Here in awful earnest are C.P. Snow's disjointed "two cultures".

STILL, IT'S POSSIBLE to begin by seeking out that peculiar kind of elevated pleasure, described in a wonderful essay by Dr Thomas, gained in simply listening to confluent human voices *explaining* things. Is this a regressive and dangerous pleasure? Perhaps: but it is also an aspect of maturity to rejoice in the activity of complex discourse.

"For as long as I can remember," an unconventional philosopher of science, Nicholas Maxwell, tells us,

I have had the passionate desire to get to the bottom of things, to understand ... To begin with this took the form of the desire to understand the ultimate structure of the physical universe. As a twelve-year-old, I read with fascinated incomprehension accounts of nuclear physics ... relativity and quantum theory. It was above all the mystery, the incomprehensibility, of this strange world that appealed to my imagination ... With the customary unselfconscious audacity of the young, I decided that I would discover the secret of all this mystery, and thus reveal to the world the true meaning of existence.

In his *From Knowledge to Wisdom*, Maxwell usefully reminds us that the first lure of science is not its instrumental power, its brutal force, but its magic, its capacity to kindle awe, wonder, and the desire for knowledge, for

explanation.

With adolescence, richer varieties of knowledge came within his ken. Maxwell awoke to the other culture, to literature, to the inner world of human life:

Here, I began to feel was reality ... I would discover the innermost secret of this mysterious and passionate world of human experience by writing novels. I would create a living and breathing universe, so real in its dramatic intensity that it would all but engulf the real world.

Alas, he proved no more successful in this ambition than he had as a theoretical physicist or a mathematician. Luckily, after a year at philosophy, he stumbled on the sudden moment of illumination that the proper goal of knowledge

is to help us resolve the riddle of our desires ... I had sought the answer to the riddle of life in the ultimate nature of the physical universe, and in the ultimate nature of our inner world. Actually the answer to the riddle of my life lay around me all the time, in the experience of living my life.

Science, for Maxwell, is doubly valuable. It aids the achievement of human goals "via technological applications of knowledge" and is, itself, a form of pure culture. Might one therefore employ science as art, "to extend and enrich his personal experience"? Not easily, but yes:

Ruthlessly, greedily, mercilessly, I personally exploit all the labour of scientists to explore and enrich my world ... From the intricate mathematical formulae of modern physics I have learned how, to some extent, to pluck out *the ideas*. From the jargon of biology, and amongst the unvoiced, foolish assumptions (as they seem to me) I plunder what is for me precious and valuable ... And gradually it has begun to dawn on me; what I do is the real thing. This is what science is *for*, from a cultural standpoint.

I can't disguise the romantic cast of this view of science. But finally it seems to me that a sceptical spectator's appreciation of current scientific knowledge, conjectures and practice might be less fruitfully grounded in suspicious rancour than in recognition of the joyous intoxication which makes hairs lift off one's neck.

"This passion of our kind/ For the process of finding out," declared W.H. Auden, "Is a fact one can hardly doubt/ But I would rejoice in it more/ If I knew more clearly what/ we wanted the knowledge for." Richard Feynman was furious when he read Auden's lofty sarcasm. Here was one of the premier poets of the age of science, he raged, "directly confessing not understanding the emotional value of knowledge of nature". James Gleick, in his splendid biography *Genius*, offers the great vulgarian scientist's necessary and sufficient retort: "We want it," Feynman wrote, "so we can love Nature more."