IN DIALOGUE WITH POETRY

Edited by Robyn Rowland

I find it exciting to read prose written by poets exploring their own processes in poetry, the value and purpose of poetry, its meaning - what poetry is to them, and sometimes what it should be to others! Often they creatively engage with issues of craft; sometimes with the mystery of the moments of creation. Understanding their own and the work of others is part of their exploration of the poetic life.

I am often struck by their sense of surety in this, a kind of fearlessness of opinion. In the established poets, there seems no anxiety about 'fitting in' or being in 'fashion'. They don't see this positioning of their opinion as something they need to be careful with. Debate is seen as important, useful and engaging.

Zest is keen to bring its members some of that lively engagement with poetry from our own Australian poets. Each month we'll be selecting a prose quotation from a poet and asking one of our own poets to respond. The selection will be eclectic and cover a range of approaches to poetry.
The brief is as follows:

'Please respond to the quotation in your own way. You are invited to agree or disagree with it, interpret it and explore. It can be an agreement/extension or a disagreement/argument or both. It can relate to your own work and processes or the work of others you admire in what they have said on poetry. But I don't want an essay on others, rather on what YOU think and believe about poetry in relation to the issues raised in the quotation given.'

The Poet: John Jenkins

John Jenkins lives in Kangaroo Ground, on the rural fringe of Melbourne, and began writing poetry in the late 1960s. The most recent of his eight poetry collections are *Dark River* (Five Island Press, 2003) and *A Break in the Weather* (Modern Writing Press, 2003). A new collection, *Growing Up With Mr Menzies*, will be published by John Leonard Press in August 2008. His poems and radio plays have been extensively broadcast and in 2004 he won the James Joyce Foundation Suspended Sentence Award, which took him on a reading tour of Ireland, Paris and Beijing. His poems have been widely anthologised in Australia, and in the UK, India, China and the US. In 2007 he was a co-judge of the Newcastle Poetry Prize (Australia) and co-editor of that year's prize anthology. He has also judged the Alan Marshall Short Story Award and other literary prizes.

In addition to his own poetry, he has co-written seven books of experimental work with the Adelaide-based poet Ken Bolton, and their verse novel *The Ferrara Poems* was made into a film of the same name in 1990.

John worked professionally as a print and radio journalist after 1977, including in the UK and Japan, and has been a staff member on a great many magazines and newspapers. He co-edited two anthologies of short fiction, *The Outback Reader* (1975) and *Soft Lounges* (1984), and edited a collection of travel stories, *Traveler's Tales of Old Cuba* (2002). He has also written two books on Australian music, *22 Contemporary Australian Composers* (1988) and *Arias: Recent Australian Music Theatre* (1997). Up until the early Nineties, he was intermittently an associate or co-editor of several literary journals, including *Etymspheres*, *Aspect*, *Helix* and *Overland*, and in the late Eighties publisher of Brunswick Hills Books. His poems have been set to music by Australian composers, and he wrote the libretto for an extended vocal piece with composer Richard Vella, Play for Voices. He has also written songs with various musicians and collaborated with visual artists, dancers and musicians - on gallery installations and various dance and theatre works. Since leaving journalism in the late Nineties, John has taught sessionally at La Trobe University. He is an amateur horse whisperer and takes a keen interest in wine making, local arts and nature conservation in his home shire on the edge of the Yarra Valley.

Poet in Prose: David Morley. 'Creative recognitions: science, writing and the creative academy'.

When it comes to atoms, language can be used only as in poetry. The poet, too, is not nearly so concerned with describing facts as with creating images'. - Neils Boh.

".....I began my working life as a scientist, one who also wrote creatively, and I would say that if what you do requires you at best to write clearly, then we are all writers. The Two Cultures, the division of knowledge systems into Arts and Science, was a splintering of the processes by which knowledge and language move and grow. There are no Two Cultures, and there never were. The debate between science and arts was based largely on prejudice, fear, and a kind of snobbery - a class war between disciplines, their teachers and their students. We might as well say there are a Million Cultures for all the illumination such a debate brings. Creative writing as a discipline may help to shift the debate into a more constructive set of engagements. Reading nonfiction is as vital as reading fiction or poetry. Popular science provides you with research material for creative nonfiction, fiction and poetry. Reading science, or biographies of scientists, will present you with ideas, characters, and situations. It will also give you new language: the terminology of science is gravid with metaphor, and is constantly inventing new usages.

http://www.poetryandscience.co.uk/essay.php
liverpool university centre for poetry and science.

Biographical Note

David Morley studied Zoology at Bristol University before going on to perform research on acid rain in The Lake District. He now develops and teaches new practices in scientific and creative writing at The University of Warwick. His poetry collections include *Scientific Papers* and *The Invisible Kings* (Carcanet, 2002; 2007). He was recently awarded a National Teaching Fellowship by the Higher Education Academy.

Poet in Dialogue: John Jenkins. Science and poetry.

Like most poets, I write of many things, "of shoes and ships and ceiling wax", as the Walrus said in Lewis Carroll's famous poem. Frequently, I have been fascinated by scientific subject matter, writing on topics as diverse as global warming, fractals and zooplankton. I believe science offers extraordinary insights to poets, so these reflections by David Morley, on the relationship between science and creative writing, provide an excellent springboard for discussion.

Morely, a man of many parts, has written two collections of poems [1]. He is also an acid rain researcher and zoologist, now teaching 'new practices in scientific and creative writing' at The University of Warwick.

Our discussion begins with a quote by Danish physicist and 1922 Nobel Laureate Neils Bohr, who was the first to picture atoms as tiny solar systems, with electrons orbiting the nucleus. It happened like this. The physicist had been puzzling all day over various theoretical models. That evening, he dreamed of sitting atop the sun, with all the planets hurtling around him on cords. The vision demonstrated to him, in a highly theatrical way, "the superhuman showmanship of elementary particles!"

This revolutionary insight was born in a genuine eureka moment: sparked suddenly into being, like a leap of creative electricity. Its conception was anything but dry, or Bohr-ing!

The ability to visualise, to make leaps of imagination or inference, and to fashion coherent and aesthetically pleasing images, are shared by poet and scientist alike. And it seems that creativity has a common mental and emotional dynamic, at least for many people. First, there is a period of strenuous work, followed by a sense of being slightly lost, with no immediate solution. Then comes a period of relaxed contemplation, before something finally jells.

The chemist Frederick Kekule (1829-1896) saw the shape of the benzine molecule while dozing in "half-sleep" in an armchair. He had been agonizing over his notes, before seeing with "my mental eyes... Long rows, tightly knit, all in motion like a snake, turning and twisting and, Lo! One of the snakes got hold of its own tail and scornfully rolled about in front of my eyes. The benzene ring!"

The famed 'inspiration' of poets, though a romantic (and sometimes, romanticised) claim, still holds some resonance, if we see it as a sudden drawing together of scattered but related connections within the human brain.

As UK science writer Tony Buzan points out: "We can show that each of the 10 billion neurones in the brain has a possibility of connections of one with 28 zeros after it. If a single neurone has this possibility of potential, the total number of possible combinations and permutations in the brain, if written out in 9-point characters, would be 1 followed by 10.5 million noughts."[2].

Leonardo da Vinci, who remains the iconic bridge between the arts and sciences, gives this advice in his Principles for the Development of a Complete Mind: "1. Study the science of art. 2. Study the art of science. 3. Develop your senses – especially learn how to see. 4. Realise that everything connects to everything else."

Back to Morley, who mentions in his ruminations the notion of 'The Two Cultures', originally defined by author C.P. Snow in his 1959 book of the same name [3]. According to Snow, our age of increasing specialisation has produced two mutually hostile cultures; alienated from each other, and speaking languages as dissimilar as Finnish and Urdu. On the one hand, there are the literary intellectuals and creative artists; on the other, the scientists. Snow thought such a divided culture was deeply unhealthy.

We still sometimes confront stereotypes from the ramparts of this 'cultural divide'. The cliché that scientists are emotionally retarded geeks, in strange love with their test tubes; empty lab coats in ivory towers: ignoramuses outside their narrow fields. And the counter-claim, that literary intellectuals are woolly-minded, self-indulgent, self-serving peddlers of mumbo jumbo; arty-farties endlessly talking hot air, ungoverned by the rigour of testable evidence or scientific relevance.

Even a poet of Whitman's stature had doubts about science: "When I heard the learn'd astronomer; / When the proofs, the figures, were ranged in columns before me; / When I was shown the charts and the diagrams, to add, divide, and measure them; / How soon, unaccountable, I became tired and sick; / ...I wander'd off by myself, / ... and... / Look'd up in perfect silence at the stars." ('When I Heard the Learn'd Astronomer'.)[4]. Whitman's charge is

a familiar one: that dissection, charting and reduction to abstraction robs nature of its grandeur. But this view also ignores the deeper connections. As Albert Einstein remarked: “Pure mathematics is, in its way, the poetry of logical ideas.”

Perhaps the learned astronomer and poet were both right. Both were answering, in their own terms, questions Aristotle posed in his Poetics and Aesthetics. Is beauty an attribute of matter? Does it inhere in objects? Is it a cultural artefact, a matter of perception, or something else? “To be beautiful,” the philosopher reflects, “a living creature and every whole made up of parts, must not only present a certain order in its arrangements of parts, but also be able to be apprehended in its unity and wholeness” [5].

Aristotle’s notion is brought up to date in systems theory, where systematic or ‘emergent’ properties – ‘synergies’, or sums greater than their parts – result from relations of the elements of a system; all to one another, and to the system as a whole. Poets understand this, intuitively perhaps, when re-drafting and getting the fine balances and shading of a poem just right. Such sensitive work plunges you immediately into a sort of multi-nested complexity: because every word, line and image lends colour and change to every other. Only when the parts work together, finely ‘tuned’ to the whole, does the poem ‘click’.

Such artful calculus is like the formal beauty of geometry, expressed in a poem by the American Rita Dove (b.1952): “I prove a theorem and the house expands: / the windows jerk free to hover near the ceiling, / the ceiling floats away with a sigh. // As the walls clear themselves of everything / but transparency, the scent of carnations / leaves with them. I am out in the open // and, above, the windows have hinged into butterflies, / sunlight glinting where they’ve intersected. / They are going to some point true and unproven.” (‘Geometry’) [6].

Dove’s butterfly also makes me think of UK biologist Brian Goodwin’s words, in a book appropriately titled *The Third Culture* [7], which seeks to bridge the science/arts divide. Goodwin sees all biology as a sort of giant essay in creativity, art for art’s sake, an endless dance: “...what you get in evolution is a dance. It has no goal... it has no purpose, no progress, no sense of direction. It is a dance through ‘morphospace’, the space of the forms of organisms... This dance of creation is a never-ending dance that goes nowhere but simply expressing itself. In the post-modern age, we can let progress go and talk about the process as a creative dance. That’s what evolution is about... It’s just itself.”

Much artistic practice, of course, has been directly inspired by science. The study of fractals, to take just one example, began as an obscure branch of mathematics, investigated for its own sake. It was then found to underpin many natural forms, from the clustering of galaxies to the crystal structure of

snowflakes. Fractals quickly influenced the electronic and visual arts: their evolution of striking patterns having an immediate aesthetic appeal. That alluring fractal world, and the strange mathematics of infinity, both figure in my poem 'The Library in the Snow': "as you enter, blue lightning seeps in the intricate sleep / of white trillions, turning sills to ice / chill filigrees of chance, weightless galaxies ..." [8].

Some branches of contemporary physics take us to anti-intuitive and downright strange places; to challenging theories and concepts, such as relativity, space-time, parallel universes, antimatter, black holes, string theory, quantum mechanics.... Here, we must pass beyond 'common sense' observation and into realms that can seem magical, quirky, incongruous, even whimsical.

In Russian director Andrei Tarkovsky's 1979 film, Stalker, there is a special place, called The Zone, in which miracles take place. In the film, a scientist smuggles a small atomic bomb into The Zone, because he fears it will fall under control of demagogues. Ultimately, however, he must remain a man of science, and abandons this destructive plan: "Even if this place is miraculous, it is still part of nature; a part we don't yet understand." The attitude is scrupulously scientific, yet shows a mind open to the limits of human knowledge.

Poetry and science have equal claims to what we know, and to what we don't know: they share a sense of wonder, and capacity for close observation of the natural world. And both like to experiment. And then there's that restless curiosity, which seems a hallmark of mammals, and particularly primates, reaching its zenith in humans: a need to pose answers to those oldest of questions, 'why' and 'how', optimally couched in some elegant and startling expression.

Poetry, like the theorems of science, and particularly of mathematics, has an aesthetic dimension, which might itself be an attribute of nature, a formal beauty and elegance; a just-rightness of expression. If only we can seize it!

Happily, throughout the centuries, there have been many poets who have worked to bring the worlds of science and art into dialogue. In that most erudite of science journals, Nature [9], the writer Peter Forbes cites some of the most scientifically prescient and accurate, including the Roman poet Titus Lucretius, whose first century BC *De Rerum Natura* (*On the Nature of Things*) [10] is a joyful 8000-line epic of poetic/scientific observation. When Lucretius looks at colour, he reflects: "(from shape) ... Arise effects of colour variation ... / Hues change as light-fall is direct or slanting ... / A peacock's tail, in the full blaze of light, / changes in colour as he moves and turns."

Lucretius also makes the stunning observation that "The world is too full of flaws to be divinely created." This is an idea I also find compelling, but with an

extra twist, rejecting anthropomorphism altogether: "...no mind more unlikely could imagine the twin / moustaches churning water, deft cilia / sifting oceans below too-quick bubble / eyes that pop and leer from stalks. // No primate god constructed / such ... / sunken moonscapes, where worm heads / peep and weave from silt-edged cones." ('Zooplankton') [8].

The great Scottish poet and physicist James Clerk Maxwell (1831-1879) certainly refused to conform to the "emotionally empty" stereotype. Renowned for his kindness, humour and warmth, he loved family, friends, writing poetry, animals and the outdoors. He was charismatic, witty and sociable, but also a genius – in the same league as Newton and Einstein. (The only fight I would possibly like to pick with him is over his – and his Victorian era's – mildly patronising view of the role of women in science.)

Maxwell made the world's first true colour photograph, but the world owes him a greater legacy. His mathematical synthesis of electromagnetism, his concept of self-propagating waves, makes him the scion of wireless transmission: radio, TV, mobile phones, computers, satellite navigation... As mathematician Robyn Arianhood noted in *The Age* newspaper [11], Maxwell's concept of radio waves first emerged out of "the patterns and symmetries" of speculative mathematics. Almost literally, he used symbols and concepts to imagine our modern communications era into being. In his own poetry, Maxwell was boldly unapologetic of his fascination with science: "Every atom of Creation is fathomless in its perfection / And the wave-length are the same in each direction / Of the Cosmos..." ('Essay') [12].

In 2006, I completed a long dramatic poem, 'Maxwell's Field' for the Australian Newcastle Poetry prize. It was published in that year's anthology and I have since re-written it as a radio play, for possible production on ABC Radio National. "... For an amusement, / (he) set up a colour box, near eight foot long and painted black. / He invited neighbours to view the light dissected so prettily, / into chromatic bands, in this odd coffin. Wee pet rainbows! Look!" ('Maxwell's Field'.) [8].

Another poet to bridge the 'Two Culture' worlds and wars was noted Czech immunologist Miroslav Holub (1923 – 1988), whose poetry is marked by a wry, deadpan drollness; by wire-tough, sparse lines and raw-boned starkness of tone. His poems often suddenly amplify into larger metaphors concerning humanity: "Here too are dreaming landscapes, / lunar, derelict. / Here too are the masses / tillers of the soil. / And cells, fighters / who lay down their lives / for a song. // Here too are cemeteries, / fame and snow. / And I hear murmuring, / the revolt of immense estates." ('In the microscope') [13].

Holub's poems show that the eye of the scientist and the eye of the poet can be the same eye, and how an awesome, self-contained world can be found in tiny traces on a microscope slide. The only test is if it works as a poem: if a

poem is able to grow, in Holub's words, "like stem cells from the bone marrow / of the idea".

In my verse novel, *A Break in the Weather*, I wanted to work over a larger trajectory than the conventional lyric, bringing the two sides of my imagination and intellectual life – poetry and science – much closer together. The main characters are all weather scientists, who do field research into global warming and its impact on some of Australia's most iconic places, including the Great Barrier Reef. I hope readers agree that it's not a dry study, but a quirky scientific adventure story, full of dramatically presented information. It tells of bitter scientific rivalry; and an erotic cross-cultural love story! There's even a bushfire, which threatens to engulf my two lovers, Bruce and Miko: "... a molten ribbon crawled / across the hills and blasting gusts of air united / to whip up behind it and everything ignited // Into a sort of dancing and liquid tissue of / continuous heat and flame..." [8].

I researched some interesting topics for my scientist characters to think about – chaos theory, climate modelling, complex weather systems, symbiosis, reef ecology, Gaia, and so on. I found all these areas challenging and exciting.

Finally, as David Morley says, the debate has certainly shifted from the old cultural divide. Now, at the start of the 21st Century, the frontiers of science are presenting us with new creative paradigms: a grand cultural vision of natural complexity, and of our place in the biosphere and cosmos.

Poetry shares in this extraordinary shift.

REFERENCES

1. David Morley, *Scientific Papers* and *The Invisible Kings* (Carcanet, 2002; 2003).
2. T. and B. Buzan, *The Mind Map Book* (BBC Books, 2003).
3. C. P. Snow, *The Two Cultures* (Cambridge University Press, 1993 edn.)
4. Walt Whitman, *The Complete Poems* (ed. F. Murphy, Penguin, 1986).
5. Aristotle, *Poetics and Aesthetics*.
6. Rita Dove, *Selected Poems* (Pantheon/Vintage, 1993).
7. Brian Goodman, in *The Third Culture* (ed. J. Brockman, Simon & Schuster, 1995).
8. John Jenkins, 'The Library in the Snow' in *The Best Australian Poems 2006* (Black Inc, ed. D. Porter); 'Zooplankton' in *Dark River* (Five Island Press, 2003); 'Maxwell's Field', in *The Honey Fills the Cone* (Hunter Writers Centre, eds. Beveridge, Harrison, Talbot, 2006); *A Break in the Weather* (Modern Writing Press, 2003).
9. *Nature* (Vol. 434, 2005).
10. Titus Lucretius, *De Rerum Natura* (trans. R. Latham, Penguin, 1994).
11. Robyn Arianhood, in *The Age* newspaper (July 15, 2006).

12. James Clerk Maxwell, *44 Poems*, poemhunter.com.
13. Miroslav Holub, 'In the microscope', in *Collected English Translations* (Bloodaxe, 2006).