

Literature and the Sciences: Where do they meet?

Panel event hosted by *The London Magazine*, Sat. 13 Feb. 2010; Wolfson Theatre, London School of Economics.
With Michael Blackburn, Richard Tyrone Jones & Simon Jenner (chair). Edited transcript of contribution by **Mario Petrucci**.

Let them not make me a stone and let them not spill me.
Otherwise kill me.

from: *Prayer before Birth*
by Louis MacNeice (1944)

The question posed by the title is vast. I could explore the interaction between science fiction and science fact, or how a given technological Zeitgeist is formed, reflected and challenged by the literature of its time; I might probe literature's role in the social construction of the sciences. Each of these is a PhD project – minimum. Indeed, the whole of neurological activity (private and collective, spiritual and ideological, factual and fanciful) must impact on art at some level. So, let me take up a single arm of that complex embrace between literature and science: namely, the ways in which poetry (rather than literature in general) can inform and influence the social (as opposed to natural) sciences. I'll touch on economics, politics, psychology and linguistics. My thoughts may not be exhaustive or particularly original; but I hope they'll stimulate.

I must add that I see no point in revisiting, here, the various 'wars' that raged between science and the humanities, as exemplified by the Leavis-Snow 'two cultures' debacle or Alan Sokal's 1996 *Social Text* hoax. Thankfully, the need to explain those fronts (and affronts) between supposedly antagonistic camps is now largely a historical one: we enjoy the liberty of being able to move more purposefully, productively and imaginatively within the overlaps and interfaces between literature and science. If pollution and radioactive fall-out recognise no human borders, nor does creativity in its insistent seeping between the disciplines (a rare case of *desirable* contamination). To investigate the interdisciplinary, then, is to explore those ultimately borderless regimes of mind, self and society: there, the arts and the sciences constitute two interwoven, interdependent strands of DNA.

Having laid out the hand I'm playing, I'll lead with my ace – a card I'll use more than once. By refusing to confirm or conform, by heightening our awareness of the detailed texture of perception, of private and collective thinking – by making the habitual and familiar unfamiliar – poetry can dent the self-replicating units of culture (Dawkins' *memes*) many of us fail to see. This insight may build cumulatively, through habitual poetic immersion, or can strike via a single poem. In *Gorgo and Beau*, for example, Edwin Morgan permits dialogue with the cancer cell, giving voice – as well as a geological perspective – to the ultimate outsider. And yet, such problems as sexism and racism remain unvanquished, in spite of our political correctness (as fraught as it is acute). Many *isms* have gone underground, developing their own samizdat or evolving new or more subtle forms. Some prejudices and addictions don't even carry an *ism*-like tag. Is there a common term for the ubiquitous front-room presence of the TV, or the assumption (now wounded) that economic growth *per se* is always a good thing? In radical and authentic mood, poetry can deliver swingeing blows to these prevailing stereotypes and ideologies. Poetry, as ace of clubs, is still socially desirable.

Am I saying, then, that poetry's just a club to wake us up, with no other utility value? Well, no. Clearly, poetry is socially dynamic in personal and collective catharsis. The verse dedications to Princess Di/ Queen of Hearts ring, still, in our ears. Many individuals and institutions turn to poetry in moments of crisis or intensity, as our experience of weddings and funerals attests – few non-artists create sculptures or installations as vehicles for their feelings at such times. Thus, poetry offers an art-form suitable for widespread public participation and social reflection, one that helps to signpost and consolidate crucial political shifts. As Obama and Stalin respectively demonstrated, poetry can be wielded as much to signal the liberation of the proletariat as to quell it.

But this inherited public role for poetry, cemented in the UK via the laureateship, is problematic. State art is rarely great art; public catharsis often draws the banal and platitudinous to the surface –

the kitschy doggerel; the faddy, thin pastiche. That said, I mostly endorse poetry's role in therapy, healing and psychological/ psychic well-being. Today's practitioners are far from absent in prisons, hospitals and psychiatric wards, involving themselves in initiatives targeting such concerns as young offenders and urban regeneration. Moreover, poetry's current emphasis on the confessional provides a data base on the Zeitgeist, a window on artistic/ collective psychology – though it's arguable how transparent or representative that is. I should also mention poetry's many contributions to education and social values, to spirituality, metaphysics (though one must include the negatives as well as positives). When assessing the role of poetry in any particular case, then, we should consider whether its goals are principally artistic or utilitarian – a question that raises, by the way, complex issues concerning the public, accountable funding of artists and literary projects.

It follows that society contains overlapping 'poetries' enacted by various persons/ interest groups for different reasons that bear along with them a diversity of social and psychological (as well as artistic) utilities and disutilities. Just as science is no monolithic entity, so poetry is mistakenly bandied about as a singular term: far better to be clear what kind of poetry, and which protagonists, we're talking about. And here, in its very plurality, lies one of poetry's greatest uncertainties. To some, poetry is thriving, vibrant, evolutionary; to others, it's an etiolated, increasingly centralised and commercialised ghost of its former table-turning self. My jury is out – but there are those who conclude that poetry's most incisive and challenging forms have become the most marginalised; that the gains of modernism and the avant-garde have been largely squandered or abandoned; that the subversive qualities of literature have been silenced, the poets' incisors collectively pulled. Are poets, then, more interested in cadres than change? Are our writers increasingly *selling* – rather than telling – stories? If so, poetry may yet offer the culture a sideline in entertainment, social utility and catharsis, but very little by way of dissent. Why 'sideline'? Because, even in its more popular and utilitarian guises, poetry is still far from central to our culture, in spite of National Poetry Day and the recent surge of poetry residencies in business, education and public locations.

Assuming that poetry has any cultural potency left, where might it be applied? I've already touched upon its role in public memorial; but to *re-member*, as poetry does – that is, to piece back together in the imagination – is so much more than simply not forgetting. Language can re-form memory-and-thought as well as preserve it; it can shift and re-align a worldview, sometimes quite deeply. "But what is this universe the porch of...?" asks the poet John Ashbery (*Self-Portrait in a Convex Mirror*). And here are a few lines of Rumi, in my own, rough translation:

Someone who walks with a half-loaf of bread
to a hovel that's snug as a nest about him –
who desires nothing more, who is not himself
yearned for by anyone else...

He is a letter to the world. Open it –
It tells you, *Live*.

Of course, the sciences renew our worldview too, providing streams of knowledge society must assimilate. This is another area in which literature/ poetry have a valuable function. Metaphor can swing both ways, not only generating defamiliarisation but also helping to make the unfamiliar familiar. In fact, whenever humanity encounters or creates phenomena for which it has no precedent or (for that matter) genetic instinct, poetry is often quick to create fresh language and metaphor to help us express and process them, whether it's the metaphysical poets deploying the novelties of science, or (today) Daljit Nagra voicing a new strand of immigrant experience or Michael Symmons Roberts probing the human genome project. Topical, language-engendering issues for me have included the environment and radioactivity. The very scale of the socio-psychological impacts of Three Mile Island, Windscale and Chernobyl have compelled me to struggle with words and forms that can convey meanings beyond mere resignation or memorial:

So. What will it be? Picture it on that reel
inside your head. Do you see purple-red bluffs

of flame? What do you hide there? Incandescence
pushing unstoppably through troposphere? Bodies
making causeways for survivors? Who slipped those
pixels in?

Excerpt from *Exposures*, in:
Heavy Water: a poem for Chernobyl
by Mario Petrucci (Enitharmon Press, 2004)

But memorials aren't only to do with the past. Art can enliven issues by helping us to 'image' (as well as imagine) the *future* consequences of current (in)action. In a sense, then, society's possible trajectories can be 'memorialised' too, as they frequently are in futuristic (usually apocalyptic) films. As illustration, here are the opening stanzas of an Ecopoem I set in a globally-warmed Britain characterised by immense rainfall and a post-oil, de-urbanised, crop-centred culture:

in hay waist-deep was

uncle who said he saw
lash of rain snap
upward viper-

sharp to bite
the coming-down
tail – another tending

eaves from top-notch ladder
felt on his back
drops

worse than
wasps to a sack
while wife with foot

hard on bottom rung
kept her face of
tinder – yet

another
watched brown
slick of cloud a few

metres up suck back its
centre like a seam
in the roasted

bean – till it
split with blue &
for an hour all air smelt

of coffee...

Excerpt from *in hay waist-deep was*, in: ***i tulips***
by Mario Petrucci (Enitharmon Press, 2010)

It's interesting how some apocalyptic futures are now so familiar from films that they've begun to condition and (de)mobilise the present. Indeed, any kind of memorial – past or future – is political. It can either endorse or undermine poetry's traditional role in satire and political subversion, which debunk an ideology and its protagonists, unsettling and agitating the masses (or centres of influence) towards opposition – a role Stalin understood all too well. Niels Bohr noted "We are suspended in language", and subversion and oppression both need their forms of words.

But, for me, poetry's radicalism – and its language – are generally at their best and most potent when neither rhetorical nor party political. Here, where politics becomes that marrow of individual and social self-awareness, poetry can challenge and augment perception. It reminds us that observation is more than measurement; valuation more than pricing; understanding greater than a statistic or the detection of a trend; response more complex and multilayered than a policy. It can lead the individual into a realisation of the unique, active and self-responsible self. As Rilke asks:

“What is your most pressing injunction, if not for transformation?” (*The Ninth Elegy*; my translation). Poetry can thus reach where measurement, categorisation and linear logic can’t. It admits of mystery and the unknowable. My perception of death was altered forever when I first read Emily Dickinson’s *I died for beauty*, a transformation spurred as much by the irresistible rhyme and rhythm of the piece as anything else. I’m reminded, too, of Ezra Pound’s notion of the ideogram – a group of images and ideas juxtaposed so as to achieve a higher intent – whereby a greater penetration of meaning can be achieved. This penetration of poetry, its ability to drive its idea deeply home, may be essential to our times: in an age of signs, we remain slow to see or act.

Perhaps, then, poetry can act as litmus to the social sciences, helping them to better see and comprehend their state of play? We know, for instance, that a site of natural beauty or a local species of inedible fish resists that tendency in economics to reduce all objects of concern to a single variable: currency. Environmental Impact Assessments have long struggled to deal with such items, termed *intangibles*. See how the very term implies that something difficult to price is somehow unreal, impossible even to touch. Poetry exploring the eternal or symbolic values of a landscape, or of a fish, can redress (by implication if nothing else) all of that. Then there’s the fundamental incommensurability of reality to contend with. In MacNeice’s poem *Snow*, “World is crazier and more of it than we think,/ Incurably plural...”, and “There is more than glass between the snow and the huge roses”. Yes, you can *price* roses and tangerines, and claim the market has established their relative values; but you can’t pretend they’re the same thing just because you have a vehicle and methodology of exchange. From what I can make out, the current practice of social science – with its theorists and empiricists, positivists and antipositivists, its hardliners, hermeneuticists and eclecticists – has itself become rather a broad church, one that may be able to accommodate, at least in some quarters, the symbols, metaphors and immeasurables of poetry.

This wryness in art is vital: you can never quite paraphrase or pin down what it’s saying. In great art, this is often true even when the message appears unambiguous. When Yeats acidly observes (in *September 1913*) those who “fumble in a greasy till/ And add the halfpence to the pence/ And prayer to shivering prayer”, his lines still leave room (in what might seem a fairly straightforward condemnation of pettiness) for a glint of pity; moreover, they manage to suggest kinship between the cynicisms and fears of bald economics and those of religion. In terms of illumination, then, poetry offers complex natural light rather than uniform fluorescence; in telling us about human and inanimate matters, it presents the broad and shifting shade of an oak rather than the scalpel of a sundial. In that shade, the apparent certainties (or, sometimes, pre-programmed outcomes) of science often dissolve. The worlds of poetry are more metaphorical than accountable.

After Copenhagen, with the ecological crisis still an urgency, we must learn to accommodate the ‘Anti-Cartesian’, where much great poetry already is. We need, more than ever, a branch of economics that deals with metaphor – ‘Metaphorical Economics’? Perhaps poetry, through simile and metaphor, might someday suggest to economics a better way of handling intangibles and incommensurables? I believe it’s the inability of economics to cope with metaphorical and symbolic values that leads to many of its problems. And yet, when it comes to education and the popularisation of ideas, most social sciences – economics and politics included – do realise, keenly, the significance of metaphor: financial *crash*; economic *meltdown*; *landslide* victory.

Speaking of meltdowns and crashes, significant areas of social activity are founded on (or continue to be laden with) the axioms and associated values of free market dynamics and ‘neoclassical economics’, along with Keynesian approaches to the public sector. We (the supposed agents and protagonists of these axioms) are a little like those “ideal” or “implied” readers sometimes assumed to exist in literature. Poetry, along with the rest of art, carries the potential to examine such assumptions from unexpected angles, to go way beyond standard analysis, and (on occasion) to expose values so long buried that it becomes an agent of what I call “normative archaeology” – that is, poetry enacts an unearthing of the origins and underlying characteristics of pivotal aspects of the human condition, finding forms that can make intensely real and *personal* its insights regarding the

foundations of social and psychological constructs such as normalcy, ethics, identity and time. One need look no further than Shakespeare or Dante for examples, or Shelley's *Ozymandias*.

Furthermore, poetry's ability to walk with uncertainties (something Keats felt so positively about he called it 'negative capability'!) is shared by science, which must constantly handle partial and dubious data. However, society often misreads science as establishing a series of absolutes, tempting policy-makers and investors to wait for the science to consolidate a situation before they commit. Poetry could thus be crucial in such issues as Climate Change, helping us to see the need to immerse ourselves (where appropriate, and in good time) in important matters clouded by complexity, difficulty and risk. With our fossil-fuel civilisation now a middle-aged junkie chasing the next fix, the question of what the hell to do next has never been so stark. Do our citizens – our artists, scientists, politicians, journalists, bankers – really *feel* the quicksand? Who is lifting eyes to horizons, encouraging us to work responsibly, imaginatively, communally towards that sea-change in us that might pre-empt the sea-rise? And, where we *can* see, how on earth do we overhaul those institutions and systemic behaviours we seem unable to shake? By embracing ambiguity and incertitude, by allowing plurality of voice and perspective, poetry brings a lot to that table – and can enrich not only the context of any event, situation or idea it turns its gaze on, but also itself. For those who insist that poetry, as currently expressed at its centre, is – like society – in desperate need of challenge, we can hope that the poetries at its margins are (at least in principle) equal to that task. Any orthodoxy in science can learn from that, as well as from the history of scientific progress!

I'm not trying here to demonise science, nor to present poetry (or literature more generally) as redeemer. Actually, the few public rods poetry currently manages to construct seem usually for its own back. Also, with the likes of Mao and the young Stalin having written more than competently in the form, serious (and seriously fascinating) questions arise over the mismatches between the qualities and insights of authors and those of their verse. Infamously, neither dictator was brought by poetry to the kinds of tolerance, empathy or plurality of perspective I suggest. Dictator-poets aside, poetry at its worst is simply coarse and reductive in its own way, what MacNeice called (in, significantly, 1944) "a thing with/ one face, a thing". Clearly, as well as expose memes, poetry can help fossilise them – as we saw with much of pro-war Georgian verse. But, at its best, poetry transcends political and psychological coarseness, materialism and reductionism. It allows for movement and flux; it favours revelation in the problematics of growth. Great poetry reboots consciousness. Most importantly, it celebrates the world (including the world of possibility) *as it is*. And imbedded in the processes of poetry – even in the darkest elegy – is a celebration of language itself, one of the major means by which we know ourselves. If a physicist is the atom's way of thinking about atoms, then the poet must be language's way of thinking about words.

For the disciplines to converse, I conclude, involves much more than polite, academic debate. The word 'verse' has its origins in the turn of the plough, the drawing of furrows. The making of conversation – as with verse – can be hard work, involving not a little upheaval at times; but the reward for enduring any initial awkwardness or discomfort is usually fecundity. These are tough times for technology and the sciences, in spite of our dependence on them. Given the pullulation of Ecodoom scenarios, that old contention by the cubist Georges Braque – that art troubles while science reassures – has, for many, been turned on its head. So, any exchange between literature and science can't be merely utilitarian, pragmatic or economic: it must have a personality; it needs to discover elements of sacredness and of intimacy. The etymology of 'conversation' involves a turning to face the other. As the best war poetry attests, armed conflict is far more of a predicament for those whose perception is habitually so turned. "I am the enemy you killed, my friend" says the trench poet Wilfred Owen. Dialogue needs imagination; killing feeds on a lack of it. The origins of conversation also suggest an entering into communion with, an enjoying of intercourse. When it comes to intellectual intercourse, if our world is to go on, we cannot play it entirely safe. There must be, to stretch a point, a joyous but respectful exchange of fluids. There must be babies.