

The Two Cultures Re-visited
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I thought I might begin by making mention of the ways in which science and the arts might seem to stand in opposition to one another. Very often, it seems that the intellectual and conceptual aspects of these two disciplines are utterly unlike one another and, for that reason perhaps, it might appear that science and art – in this case, drama – are unlikely to find common ground. The demonstrable nature of much scientific theory seems very different from the sustained act of the imagination upon which creative writing depends. Even speculation in science – perhaps *especially* speculation – often seems arcane or codified and far from ‘the common understanding’ on which artistic and literary issues are thought to depend.

In the late fifties, an English novelist, C.P. Snow, gave a lecture entitled ‘The Two Cultures and the Scientific Revolution’. It’s true to say that ‘The Two Cultures’ was a cause celebre: when published as a slender book it became a surprise bestseller. In brief, Snow’s contention was that the group he described as ‘literary intellectuals’ were wilfully, almost gleefully, ignorant of science and its role in the world. He described the literary and scientific disciplines as having between them ‘a gulf of mutual incomprehension’. He took both camps to task, suggesting that, just as those in the world of literature would be unlikely to have a clue about the Second Law of Thermodynamics, so scientists were an ill-read bunch who would be hard pressed to say much about Dickens or Shakespeare.

Pretty soon, though, it became evident that his sympathies lay principally with the scientists, since he seemed to reserve most of his criticism for smug literary types peering myopically out from the elitist seclusion of their book-lined studies. Scientists, he seemed to conclude, are optimists whose work is likely to improve what he called ‘the social condition’. Writers, on the other hand, do little but underline the tragedy of being human, which he called the ‘individual condition’. The clear implication of this was that science is, in

essence, life-affirming, while literature is introspective, gloomy and secretly in love with anomie.

This view was, famously, challenged by the literary critic F.R. Leavis. Leavis went for the jugular, accusing Snow of having a third-rate mind and of being a writer of such meagre talent that ‘novelist’ was altogether too grand a description. The effect of this – at the time – very public, much-discussed debate was to raise the issue of a culture apparently divided between (and this is my gloss) the pragmatists and the dreamers. It was, of course, a false distinction, not least because – in order to be a debate at all – it was obliged to ignore the unrelenting pragmatism of writing and the exotic dreamscapes of science. However, the commotion it caused – the divisions and vituperation – did serve to draw attention to something oddly adversarial in the cultural structures of the day. The assumption was, that science and the arts – in this case specifically literature – were not just alien, but inimical. And this is an idea that seems still to have some currency.

I suppose it’s this notion that we are here, today, to challenge. However, in order to write a workable drama in which science is a constant – indeed, a drama which has science as its theme – it will be necessary to admit to the difficulties before celebrating the opportunities. Where C.P. Snow was, of course, wrong was in suggesting that the uninformed mind could ever adapt to scientific matters in quite the same way that it might to a novel or a piece of music. Say what you like, the unique constituents of the sciences, their hermetic languages, their assumptions, their methods, their formulae, even, are definitely not part of a *lingua franca*.

So, in setting out to write a television series or a movie, where science is the engine of the piece, you might well find that your first problem is one of translation or exposition, and, therefore, a problem of method. In other words, you’re very likely to be faced with the question of whether science must yield to drama or drama to science.

Well, look – you’re writing a drama. Your purpose is to entertain, in the broadest sense: to excite your audience, to move them, to convince them, to involve and delight them, to inform them, to scare them, even to anger them. In pursuit of these aims, you’ll be building and developing characters who will carry the story; and you’ll be building and developing a story that will serve the characters.

It’s a commonplace that plot can determine character and character modify plot. There isn’t a strict order of precedence in this. It’s just as likely that a writer will have an idea that is prompted by character as by plot. For example, I had long had it at the back of my mind to write a piece based on the Orpheus myth. It wasn’t until a rash, but trusting, producer suggested I develop a project for a certain actress and set it in a certain location, that I found the characters and method I’d been waiting for.

In the case of a specific that isn’t either character or plot but *subject* – in this case, science – you’re dealing with a given: ‘a *set* subject’. Now, writers tend to develop their own subjects as a result of preoccupations that stem from influence, inclination, experience, and even the particular colour and texture of individual talent. So I guess that one of the questions you might ask yourselves – as writers thinking of tackling the set subject of science – is how do I engage with this? How do I find what’s in it for me?

Well, you might not find anything in it for you. And since no one can write cold, my best advice would be, ‘Don’t try: this isn’t for you.’ We all have pasts as writers, we all have a body of work, we all have writerly preoccupations. In order to take on the set-subject willingly and productively, it’s necessary to engage with that subject. In short, you’ll be looking for common ground. You’ll be looking for something you recognise – something that reminds you of yourself as a writer. And who knows, once you start to think about science as a subject and begin to check out the possibilities in science’s oddities and surprises, its revelations and mysteries, you might well find opportunities that are deeper and richer than you thought.

After that – if you find your subject and if ideas of how you might best tackle it start to occur, and if you feel that familiar sense of excitement that comes when ideas and lines and scenes are forming round the still vague notion of a new project – then you’ll also begin to see that research is going to be a significant part of achieving what you want. I’ve always believed – in general, I still do – that best researcher is the imagination. However, in the case of a science-based project, we’re talking about research of a different order. We’re talking about a pretty steep learning-curve.

For example: one of my several lives as a writer is as a crime novelist. Everyone, I guess, has read enough crime fiction, or seen enough cop shows on TV, to know the basics of police work. We know a bit about investigation procedures or, at least, could fabricate them convincingly. Of course, I have a police contact to whom I can turn for information about procedure. In one of my books there’s an account of an SO19 gun squad raid on a house and, without some fairly precise research, this would have been un-writeable except in the broadest possible terms. Generally speaking, though, research in matters that are not so much arcane as simply specialised is easily done and, for the most part, easily incorporated.

Research for a drama in which narrative development depends on science is a different matter. You might have already found some aspect of the specific scientific area you’ve chosen that has definite dramatic potential. And in crude terms, you’re likely to find yourself saying to your research contact: ‘OK, my subject is genetics,’ (which, in my case, it is); ‘I think I’ve found a circumstance where genetics and human drama connect. What I need now is to know how to develop it.’ At that point, you’ll probably start to discover just how big a can of worms you’ve opened!

Research is just as likely to reveal the difficulties you face as the opportunities you can exploit. And this brings us back to my earlier question: will science have to yield to drama? The short answer is yes. Science does, of course, take precedence in the sense that it’s your default topic.

But in framing storylines, character-development and narrative movement, science will have to adapt a little; it will have to make allowances. It will have to be prepared to have its corners cut. I don't mean to suggest that you should deliberately misrepresent facts for narrative convenience; but narrative convenience is likely to demand some short-cuts and fast answers; some glosses and the occasional small leap of faith.

So, your job, as a dramatist, will be to find ways in which aspects of the scientific discipline you've chosen will allow you to develop a strong narrative progression; and the purpose of your research – extensive thought it might be, and complex – is to enable you to be convincing without being over-informative. Given the dangers inherent in deep research into a subject that's new to you, this can scarcely be emphasised enough. There's no sight more wearying in drama than research swaggering about the place looking pleased with itself – and given that many of us will start from positions of relative ignorance, one of the toughest tasks you'll face will be to make research indistinguishable from dramatic invention.

So some areas of what we might call 'your science' will be opportunities for drama, others simply won't. I suppose I'm drawing a distinction, here, between what we might call the scientists' science and the dramatists' science. The scientists' science might be cutting-edge and wholly absorbing to the scientist; the first purpose of the dramatists' science will be to assist in developing a show that no viewer will want to switch off.

To find an example of a show that has done this with resounding success, we need only think of CSI. Sure, it's trading off what is, perhaps, the most accommodating – and definitely the sexiest – branch of science (that is, forensics); and it's capitalising on science that leads effortlessly to some of the staples of TV or movie drama – violent crime, dark motives, conflicted characters, detection, suspense, high-stakes in all respects. And, indeed, those are the virtues that make it one of the most effective marriages of science and drama to date.

When you see that CGI version of a bullet travelling through flesh, and hear some scientific take on how, when, where and why, you're being simultaneously informed, intrigued and convinced; and think of this – it's science that has your attention.

The notion of the satisfied viewer – the notion, that is, of an audience – raises, I suppose, a fundamental question about why we should want to think of writing movies or television dramas which specifically feature the sciences. In short – why are we all here?

I can speak only for myself. When PAWS first asked me whether I would be interested in developing a TV drama that featured science, I had just returned from a Tipping Point conference. Tipping Point is an organisation whose sole concern is (unsurprisingly) global warming. The idea of the conference was to put scientists together with artists and writers in an attempt to find ways of getting across to the public at large the extreme dangers of climate change.

It was an exhilarating three days – the kind of meeting of minds and shared purpose that neither C.P. Snow nor F.R. Leavis could have imagined. So when, almost immediately afterwards, PAWS contacted me, science and writing, writers and scientists, seemed a wholly natural pairing. It wasn't out of a desire to proselytize, to be an apologist for science or to promote the sciences as cultural hotspots, that made me take up the offer. It was because I had begun to see science as less than alien. And, more than that, could see opportunities for myself as a dramatist in taking science as a subject.

The mysteries that lie beneath the surface of our quotidian existence are limitless and profound, and scientific mysteries must be no less profound than the domestic, religious, or philosophical. The practical, provable aspects of science might be the engine of your drama – the practical, the provable, the alarming, the thrilling, the innovative, the startling, the amazing, the barely credible. But its mysteries might also offer fine opportunities for dramatic development.

A theory in physics, for example, states that there are limitless, parallel realities – multiverses rather than universes – only one of which we inhabit, though, in some sense, we feature in all of them. (At least, that's how I understand it). The notion of parallel lives where, perhaps, the merest convergence might make a vast difference to some future, or past, action, some thought, or sequence of events, has the potential for a fascinating dramatic payoff.

When I heard about this theory, I thought of Ray Bradbury's story of the time-traveller who inadvertently steps off a protective conveyor-belt and into the past and treads on a butterfly. When he returns to his own time, his tiny accident has changed the future and with tragic consequences. So a conflation of chaos theory and multiple realities that, just now and then converge and intrude, occurred to me as a powerful framing device for a drama that starts with a fascinating scientific theory and then gives over to an act of the imagination, each trading off the other to good effect. And the last thing I would say to you on this subject is that it might well be my next project – so hands off. But I mention it at all in order to provide a notion of just how various the opportunities are to find dramatic subjects in science.

Finally, given the close involvement of Femtec in this conference, all I have to say about the business of casting a woman in a lead role in a science-based drama or, indeed in any other drama, is that I have four projects in various stages of development – including the series generated by PAWS – and each has a female lead. There might be personal-historical reasons why I often prefer to write for women but, my own predilections aside, I can think of no reason why women wouldn't be – shouldn't be – as often cast in lead roles as men. After all, if the lead role is written for a woman, then a woman will be cast. So – writers take note!

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