

# SCIENCE AND CULTURE

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For those of us who think about things, there is a consciousness that a radical change in our perceptions of reality is under way. This is perhaps most obvious in our perceptions of the phenomenon of science.

The Enlightenment model of science, which morphed into nineteenth century positivism, is the model on which most of our vintage have been raised.

Stemming from the atomism of ancient Greece, it is a world-view based on materialism and mechanicism. Consequently it can say nothing about spiritual or transcendent experience which is rapidly becoming a commonplace in the current Zeitgeist. It claims to be concerned solely with the phenomena of nature, but the most intriguing phenomena of nature completely escapes it. Or rather its leading proponents ask us to believe them when they try to explain it all away.

The philosophy of scientism, which holds that natural truth is only revealed by positivistic experimental verification dies hard among professional exponents of it.

Even when the positivistic evidence goes against them, as happened in the most recent meeting of the British Association of Science, the diehards response was typically, "Why waste time on something that cannot possibly happen" , viz. telepathy.

The report of Rupert Sheldrake's research into phone telepathy created a furore. The hardline gurus of scientism rose to the occasion.

Professor Peter Atkins: ... "work in this field is a complete waste of time.. There is absolutely no reason to suppose that telepathy is anything more than a charlatan's fantasy"

Professor Lord Winston, whom Sydney University used recently to shore up their resolve for mechanistic purity remarked: ..."I know of no serious properly done studies which make me feel that this is anything other than nonsense". There seems to be a conscious refusal to even entertain a look at the evidence.

On Rupert Sheldrake's website one can hear the debate which Rupert had with Professor Louis Wolpert. Wolpert refused to even look at the evidence Rupert was presenting to the audience and the audience were overwhelmingly behind Rupert. The Wolpert's of this world are completely ignoring phenomena which is part of most peoples' ordinary experience eg. experiences of synchronicity, deja vue, answers to prayer, etc. It seems now to be generally conceded by the hardliners that they are now reluctant to debate with exponents of the issues which

members of SMN bring up. They are aware that the audiences will be against them. Their worldview would completely exclude phenomena like near death experiences, OBE's, poltergeist activity, familial spirits or as some would say reincarnation, possession states, psychic surgery, quantum mysticism, spiritual healing and spiritualities, participatory spiritual phenomena, precognition, clairvoyance, psychokinesis, apparitions, miracles and so on. Goodness knows what they would make of the Scoble Report.

After the British Association meeting the SMN participants had the support of the organiser of the meeting who was attacked for 'letting the heretics in'. She simply pointed out that there were many other phenomena which were originally kept out of the science area but are now in the mainstream, eg. continental drift, stones falling from the sky etc.

In a recent letter to *Quadrant* (1) a Professor of Chemistry had this to say:

".. I am talking here about Chemistry, a subject without any literary, emotional or political pretensions or undertones"

In the same journal (2) a science teacher, in arguing for educational standards in science teaching, has a head firmly planted in the sand. He says, *inter alia* :

"Science's natural objectivity is one of the best places to start. This objectivity in the face of political, religious and cultural intrusiveness is the cornerstone of science,..."

"If we wish to rightly portray science as the universal and objective technique for investigating the natural world then....."

"That is after all, what science covers ideally, the natural world"

"Science is not only cross-cultural by nature; it is culturally independent and should be taught that way"

"In order to ensure the integrity of science education, the discipline-based bodies must lay down their own educational standards- then build a firewall around them".

Both the Professor and the Teacher are reacting to the emergence in educational circles of postmodernism and 'weak thought' generally. As laudable as this objective may seem, I would like to point out, with respect, that retreat into a ghetto is not the way to go. I am reminded of the joke at the expense of the former actor and President of the United States, Ronald Reagan, when told that nuclear war had broken out. He replied, "Then let's put the wagons in a circle".

One does not need to be a deconstructionist to see that the equivalent of nuclear

war has broken out against simplistic scientism. If the Professor and the Teacher had read a previous issue of *Quadrant*, it would have given them pause for thought as to what they were really doing as professionals.

In an article on Cervantes, Iain Bamforth (3) writes”

“With the import of that dangerous cipher zero out of the east came the discovery in Florence of perspective in art and architecture. Zero has no referent in nature: it exists only in the mind. The Renaissance was therefore built on the perplexing discovery that the origin is the product of what it originates, a notion which explodes all crudely naturalistic links between systems of representation and the reality they purportedly represent”.

The New Renaissance is going to be built on similarly perplexing paradoxes. Meanwhile, mathematics, since Descartes, is a very subversive discipline in that it deals in entities which are produced by the mind and exist only there. As everyone knows, parallel lines meet at infinity. For Descartes, the origin can be represented by a dot on a piece of paper. And so, everything under the aegis of science is reduced; reductionism is the name of the game. Representations are always something other than what they represent. Even those neuroscientists who reduce cognitive activity by eliminating the role of mind altogether, or attempt to explain it as mere epiphenomena of brain activity, would be hard pressed to work without an origin dot on a piece of paper or a computer screen. A scientist deals in models of reality. To equate the model to the real is what A.N. Whitehead called the “error of misplaced concreteness”. This error has led many of our contemporaries ‘up the garden path’. If scientists stuck to their claim that only the observable and measurable is real, they would have very little to talk about, But they are always talking about things that are not observable. Take Darwin for instance, He writes books about entities which can never be observed—species. Only individuals can be observed. A species is a mental concept, The Chilean neuropsychologist Francisco Varela (4) points out that a species only exists in consciousness; and this means that the observer is an intimate part of the system he observes. This leads to an important non-rational indicator of success in the scientific enterprise—connaturality. This is something like a mystic identification with the context of observation- like Adam naming the animals or St. Francis talking to the wolf or the birds; like a genius in

symptomology 'smelling' a disease or a mariner 'smelling a storm' in broad daylight.

The man who gave us Heisenberg's Uncertainty Principle, Werner Heisenberg (5), pointed out that we can have no such thing as a 'science of nature'; we can only have a science of man's knowledge of nature. Such knowledge is subject to development and geared to historical process. We can never be finished with it. There is always a better account of it; a better theory in the offing. Even Heisenberg's claim that his mathematical formalism is 'knowledge of nature' cannot be sustained.

Chemistry is a construct of consciousness. Chemists do not study chemistry. Abstract concepts are best studied by historians, philosophers, sociologists and even the *literati*. Chemists study the entities gathered under the concept of chemistry. Even these entities are not free of cultural vibes and historical resonances. Take for example the entity "2-4-6- trinitrotertiarychlorometazyeline". The naming of this entity has huge cultural underpinnings. It seems to be definite and precise, but on close examination it is redolent with history, previous development, language and even metaphor. Scientific narrative cannot escape the role of consciousness and culture. A great antidote to the notion of the stand-alone hubris of science free from political pretensions, literary or emotional undertones is Walter Gratzer's (6) "Literary Companion to Science" Perceptively, the last section of the book is devoted to "The Pathology of Science".

It is not hard to find pathological science. The socio-biology of E.O. Wilson, claimed to be a Darwinian development, does away with the mind, the culture and even the individual. All vestiges of the origin of viable science in the implications of a created universe have been completely eclipsed. I like to read William Irwin Thompson who writes about the evolution of culture, even though he is a bit extreme at times. But his turn of phrase is sometimes very catching.. For example he writes off the reductionism of Dawkins, Dennett, the Churchlands and all of that ilk by comparing their ideas to a "Kansas monocrop of sameness, held in place by the machines and chemicals of agribusiness". (I've driven through Kansas and Oklahoma). Edward O Wilson comes in for similar treatment. His work is criticised as "scientific ideology that irons out the complexity of space, time, and mind onto a flat surface that becomes the political base for the ambitions of a new scientific elite; a new kind of

scientific Taliban that would create a new scientific Sharia law for the technological society”.

. Creation is a Christian mystery. Whereas, despite promising beginnings, science was eclipsed in every other civilisation on account of the prevailing ideological context, only in the Christian West did science find a congenial context for life. This thesis has been thoroughly argued by historian Stanley Jaki (7) in his book “Science and Creation”. He has been supported by many others as well as two authors recently reviewed in Quadrant (8)..

To ignore the origin of life is the recipe for death. To ignore the definitive literature of the West means a shift from the already debased nineteenth century positivism to ‘weak thought’ and utter meaninglessness. Any scientific narrative depends on language and this involves the whole history of culture development. Scientific discourse involves models, metaphors, poetry, mythic structures, surrealist ‘connections’, world-views and *et cetera*. Take , for example, the following excerpt from the evolutionists Roger Lewin and Richard Leakey, recorded by W.I Thompson (9):

“ One of the crucial refinements in brain circuitry was the evolution of the ability to speak a complex language. The explosion of new cultural patterns and the acceleration of material advance during the past fifty thousand years, which are sometimes cited as evidence of a very recent invention of language, are much more likely to stem from a more effective exploitation of what was already wired into the brain from an improvement of the wiring itself. The biological machinery for the advance was well established fifty thousand years ago, and its speed was fired by the steady accumulation of knowledge which finally hit a critical mass”. Thompson counted twenty two metaphors in the above. I doubt whether any of these metaphors could be counted as being properly proportional to the real. The passage is a work of that aspect of literature called fiction.

To grasp some idea of the calamity that has befallen modern science, I like to refer to pre-Enlightenment science, which presented a unified picture of the world and the place of humans within it. This unified picture was based on two sets of literature, the Judeo-Christian Scriptures and the traditions of the School of Athens, particularly Plato and Aristotle. The medieval synthesis of these strands stood in the work of St. Thomas Aquinas, St. Bonaventure, etc. and a

towering genius like Thomas de Vio (the Cajetan) and of course Dante. The common core of metaphysics enabled both science and ethics to be mutually supportive. Metaphysics is the fruit of intelligence, and it led to the flowering of the Renaissance.

The effect of the Reformation was to produce the infamous split. Science took the Greek path and ethics took the biblical path. Science became value free.

Descartes attempted to re-establish a criterion of truth with his 'cogito', only to introduce a further bifurcation. Eventually the role of mind became weakened and science became modernism and meaninglessness. The next step has been quite obvious, and science must now face it—postmodernism, deconstruction and weak thought. This is the extent of the Fall.

There are, in fact, many scientists world-wide who have set out to counter the current situation and they have been helped by many new visions in the mathematics of phenomena. Groups like the Scientific and Medical Network, U.K. are multiplying rapidly.

Before entering this field, it is important to note the mysterious quality of the relationship between mathematics and physics on the one hand and between mathematics and the real world on the other.

In 1960, Eugene Wigner (10) published a paper called "The Unreasonable Effectiveness of Mathematics in the Natural Sciences", which begins with a quotation from the philosopher of science C.S. Pearce, to the effect that it is probable that there is some secret here which remains to be discovered. Wigner pointed out, as I do, that the enormous usefulness of mathematics in the natural sciences is something bordering on the mysterious. There is no rational explanation for it. Mathematical concepts spring from an abstract realm. They are imaginary or "thoughty" beings, an invention of the human intellect and as such do not really exist apart from the human intellect. In Aristotle's understanding, they can be applied to phenomena as 'formal causes' but can never take the place of efficient causes. Physical theories are embedded in greatly diverse mathematical concepts. Some of these concepts resonate with the action or manifest play of the phenomena but others do not. Where they do seem to fit, they are great for predicting measurable outcomes. However this free-soaring mathematical creativity can only be accepted provisionally as knowledge when

experimental verification gives some form of emotional reassurance. This is clearly a non-rational element and it raises a host of considerations as to the relationship between theory and experiment. It seems indeed paradoxical that the imaginative development of pure mathematical structure, which seems to skate around unreality in such an amazing manner should resonate in the world of phenomena. I cannot accept that such activity can be explained on the basis of natural selection and survival of the fittest in the species *homo sapiens*.

As if responding to the immensity of her Fall, the muse of science has come up with a vast array of new scientific concepts and mathematical models, geared, it seems, to the recovery of her soul. Many of these insights spring from the initiative of the famous French physicist Henri Poincaré, eg. chaos theory, fractal geometry, catastrophe theory, topological dynamics, knot theory etc. Poincaré is famous for seeing more clearly than most the nature of the scientific enterprise:

” The facts of science and *a fortiori*, its laws are the artificial work of the scientist; science therefore can teach us nothing of the truth, it can only serve as a rule of action” (11).

Others have been equally creative; complexity theory, information theory, dissipative structures, anthropic principles, experiments in non-locality arising from various attempts to interpret quantum mechanics, *et cetera*. Many of these in their mathematical formalisms are attempting to reach upwards into the metaphysics which was lost in the Fall. Non-locality tries to speak of the interconnectivity of all things – an idea which was lost when the implications of a created universe were abandoned. Einstein’s disciple David Bohm extrapolates from his hidden variable theory to the notion of an implicit and explicit reality. He sees the universe as part of something much more comprehensive, essentially conscious and ineffable. This is Hindu metaphysics; matter arising from a “thickening” of consciousness. The difficulty is that there appears to be as many interpretations of the modern equations of mathematical physics as there are mathematical physicists. There is a consequent hunger for the next ‘paradigm shift’. Those who think this way are aware of the emergent mode of consciousness; that something is happening of which one is not fully aware. Mathematics cannot apply upwards any more than it can apply downwards, even

though such applications are far from being insignificant.

The answer to the relativist challenge is not to retreat into the fortress position of Stephen Weinberg (12) , in his attempt to capitalise on Sokal's Hoax, and claim an unfathomable gap between science and culture, a position of science extremism and possible totalitarianism.

There are many who can see that relativism has already been transcended by developments in Literature and Anthropology.. The French Academician René Girard has published a book entitled (not yet in English) "Truth or Weak Faith: Dialogue on Christianity and Relativism" In previous work it is clear that Girard has closed the gap between the Two Cultures. The latest book is in prophetic mode. A coming Christian cultural revolution will make the Renaissance "seem like nothing". " We will live in a world that will seem and be as Christian as today it seems scientific"

It seems clear that the scientific Fall is already being replaced by Resurrection.

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