In your own field, and in general, what do you consider to be the major limitations of science, as it is currently understood and practised?	How would you like to see these limitations addressed?	What new methodologies and ontology would you propose?		
A. MATTER AND MIND				
<i>A1.1</i> Matter regarded as dead with life and consciousness regarded as the product of material interactions.	Pointing out the psychological defences to the paradigm of materialism, e.g. the process of knowledge filtration whereby a new idea, discovery or anomalous evidence is not considered on its own merits but whether it is in agreement with the establishment viewpoint.	The Hermetic Axiom must be overtly enshrined in science.		
<i>A1.2</i> Thought and consciousness regarded as a material production function of the brain.	<ul> <li>Dictum of enlightened psychology, e.g., William James;</li> <li>Evidence from SPR on psi.</li> </ul>	Consider the releasing and transmissive function in addition to productive function of the brain. Ref: William James, 'Human Immortality (1898)', http://www.uky.edu/~eushe2/Pajares/jimmortal.html		
A2 Spirituality and religion are delusions and that the universe and Man are simply the complex, emergent properties of physical matter and nothing else.	Recognizing misuse of authority. E.g., someone who has spent his entire scientific life on molecular biology is not qualified to pronounce on religion and spirituality; an atheist physicist has no basis to provide an 'interpretation' of Newton's <i>General</i> <i>Scholium</i> .	<ul> <li>Acknowledge that legendary scientists like Newton,</li> <li>Schrödinger and Ramanujan derived their inspiration from spirituality and religion;</li> <li>Study the perennial philosophy to understand how spirituality and religion complement (not oppose) science;</li> <li>Pronounce only on that which you are qualified through theory, experience, and personal gnosis;</li> <li>always beware that 'empty vessels make the most noise'.</li> </ul>		
<i>A3.1</i> The entire public understanding of the universe, mankind and matter is predicated on Big bang and Darwinism as the virtually exclusive mechanisms to explain cosmogenesis and anthropogenesis, respectively. And the 1886 Michelson-Morley experiment has finally disposed of the idea of an ether.	<ul> <li>Cosmogenesis as espoused by literally all esoteric and mystery schools;</li> <li>Anthropogenesis as espoused by literally all esoteric and mystery schools where Man is seen as the mirror of Cosmos;</li> <li>Experiments by Dayton Miller and several others recorded in peer reviewed academic journals have not disproved the ether.</li> </ul>	<ul> <li>Platonic top-down approach;</li> <li>The primacy of consciousness;</li> <li>Must start asking profound questions about purpose, design and destiny and desist from explaining them away with clichés like 'design without a designer'.</li> </ul>		
<i>A3.2</i> Fatal limits and limitation of just the intellectual approach.	<ul> <li>Not placing excessive reliance on academia – which, as a large generalization with notable exceptions – prefers the playground of ideas to their practical import and implementation;</li> <li>Cross-disciplinary education and practical philosophy as the curriculum in schools, colleges and universities.</li> </ul>	More importance given to (a) qualities (b) subjectivity (c) inner experience (gnosis) not necessarily repeatable. (However, the science of qualities now slowly gaining acceptance.)		

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A3.3 Over-reliance on quantification and measurement.	Einstein: 'Not everything that counts can be counted, and not everything that can be counted counts'.	- Science of Qualities; - Goethean science.		
A4 Failure to distinguish knowledge <u>about</u> from knowledge <u>per se</u> . Preferring to argue about the merits of the sign above the door to heaven rather than walking through the door.	Wider exposure to mysticism.	<ul> <li>Meditation and contemplation to get into touch with things in themselves, not as they appear to be;</li> <li>Move from concept to percept: from 'with the mind' to 'through the mind';</li> <li>Distinguish the description from the described: the map from the territory.</li> </ul>		
B. PHILOSOPHICAL AND SOCIETAL				
<i>B1</i> Confuse and conflate different levels of activity (seeking a physical neural correlate of consciousness a prime example).	Highlighting what legendary scientists have said about confusing the 'active performer' with the 'passive instrument' and failing to appreciate that the 'music' depends on both, not either one or the other. See quotes: <u>Note 1</u>	Carefully distinguish, at any level, an active principle ('Spirit') with its medium, or form of expression ('Matter').		
<i>B2.1</i> Over-dependence on third person detached observation.	Observation that is observer-independent vitiates observation to the lowest common denominator. Jo Bloggs has to see exactly what Newton sees. The finer things about nature that the one Newton sees must be discounted because the many Jo Bloggses can't see them.	To realise that the quality of observation is critically dependent on the refinement of observer. Is he seeing through the eyes of flesh or spirit?		
<i>B2.2</i> Disregarding the observer in matters of proof.	Proof depends on 3 factors 1. The prover 2. The medium of proof (maths on experiment) 3. Someone who can understand the proof. The last is ignored.	Aligning the proof to the grade of the receiver. Even Pythagoras could not prove his famous Theorem to a dog. You cannot prove telepathy to one who worships at the feet of natural selection and nothing else.		
<i>B2.3</i> Over-dependence on repeatability especially in psi experiments.	With simple, physical experiments, the number of variables can be strictly controlled within a specified range; but with psi experiments, controlling the large number and range of variables in psi experiments is exceedingly difficult.	Placing the emphasis on accurate observation in the moment, not how often it can be repeated.		

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<i>B3</i> Despising scripture by taking words in their dead- letter meaning, e.g. the 7 Days of Creation means 7x24x3600 = 604800 seconds in which 'creation' took place, which is obviously a scientific absurdity.	By way of examples showing the elasticity of meaning pertaining to abstract words and phrases, e.g. 7 Days could also mean 7 Cycles, 7 Epochs, 7 Periods.	Education in general semantics to understand the allegorical and symbolical meaning of words used in sacred literature.
<i>B4</i> Confusing levels of meaning.	Through examples of different levels of meaning pertaining to the same thing e.g. a candle is a chemical compound of hydrocarbons at the scientific level; but it is also a source of light to illuminate darkness; and a metaphor for enlightenment to illuminate the darkness of ignorance.	<ul> <li>Exposure to symbolism, myth and mythos;</li> <li>Different levels of truth from symbolism, allegory, mythologies, epic, art, not restricted to mathematical theory and quantitative measurement.</li> </ul>
<i>B5</i> Category errors, e.g. attempting to describe non- physical phenomena in terms of the known physical laws of nature (physical realism).	A clear understanding of the operating envelope of physical science.	Study of esoteric science to understand the hidden laws of nature that transcend the physical.
<i>B6</i> Excessive focus on narrow specialism at the expense of the overall picture.	Greater context-dependent awareness of top-down and bottom-up: holistic and reductionist methodologies.	<ul><li>Invoke the Hermetic Axiom;</li><li>Complement the Platonic with the Aristotelian methodologies.</li></ul>
<i>B7</i> Lack of awareness of the consequences of what science thinks about, researches, and produces.	Law of karma.	Karmic law takes no hostages. It operates irrespective of whether science acknowledges it and works with it, or is ignorant of it and flouts it.
<i>B8</i> Equating scientific advancement with the latest utilitarian technology.	Distinguish science from applied science.	<ul> <li>Discern between technology – working within the confines of the known, with science – extending the frontiers of the known;</li> <li>Distinguish the practical from the utilitarian.</li> </ul>
<i>B9</i> Truth about everything will eventually be fully explained by physical science (promissory materialism).	<ul> <li>Clearly understand the operating limits of the mechanistic paradigm;</li> <li>Recall how quantum science has cracked the backbone of classical science, which is still the dominant paradigm;</li> <li>Substitute arrogance for true humility. There is no shortage of curiosity and wonder; but a massive dearth of reverence.</li> </ul>	<ul> <li>Blend physics with metaphysics;</li> <li>Having studied in detail the human body and the physical cosmos, now direct attention to their noumenal principles;</li> <li>More emphasis on quantum science as a stepping stone towards understanding paranormal phenomena like telepathy.</li> </ul>

#### <u>Note 1</u>

Sir Francis Walshe: 'From sheer psychological and philosophical necessity.. [there is the] existence in man of an essential immaterial element...psyche, entelechy, anima or soul...setting him above the merely animal. It has also to be recognized that for the soul's functioning as an essential element in the hylomorphic human person, it needs some data, of which the brain is the collecting, integrating and distributing mechanism. Yet it would be quite childish to identify the instrument with its user, even though the user be dependent upon the instrument for operating'.<sup>1</sup>

Peter Leggett: 'By analogy with a pianist and a piano, the mind corresponds to the pianist and the brain to the piano. If either pianist or piano is inadequate, so will be the music. If either mind or brain is inadequate, so will be the person'.<sup>2</sup>

## What differences do you think an extended science would make to your own field, and in general?

- Harmony (not universal agreement or conformity) across the scientific disciplines engendered through
  - Better dialogue; and therefore
  - Fewer debates with polarised outcomes to achieve a 'winning' argument with attendant acrimony
- More meaningful engagement with the public
- Universal outlook lessening the antagonism towards religion, spirituality and complementary medicine
- Reverence and compassion for all life animate and inanimate: especially the earth no longer regarding as a commodity to be pillaged, and animals not regarded as mere playthings to gratify the intellectual greed of scientific curiosity.

## Any other observations you may have

## Our Gratitude to Science

Before criticizing science, we need to acknowledge the precious gems that it has bequeathed humanity. Science, and not religion or spirituality has alleviated untold suffering and poverty and has given us living conditions, medicines, hygiene and transport undreamt of a few centuries ago. Anyone who visits his dentist for a tooth extraction – let alone undergoes major surgery – should fall on his knees in gratitude for the discovery and skilful use of anaesthetics.

## The Big Question for Science Now

But science needs to address this question: However clever science and technology have been at making supercomputers, precision, laser-guided bombs and going to the moon, etc., the brain that is used to develop these technological marvels has spectacularly failed to solve the problem of peace. Why is this? What kind of brain/use of brain is needed - epitomized by the rare example of sages and saints of all cultures and epochs - to solve the problem of peace as opposed to putting wonderful inventions to destructive use? Do intellectual brain processes play any part at all in solving the problem of peace?

<sup>&</sup>lt;sup>1</sup> Sir Francis Walshe, 'Thoughts Upon the Equation of Mind with Brain', Brain – A Journal of Neurology, March 1953.

<sup>&</sup>lt;sup>2</sup> D. M. A. Leggett, *The Implications of the Paranormal*, First 'Leggett' lecture, University of Surrey, April 1977; reproduced in D. M. A. Leggett, *The Sacred Quest: By Experiment and Experience* – The Next Step, Pilgrim Books, 1987, p. 51.

#### The Business of Science Now

Science neither creates nor explains anything: it discovers, then describes the handiwork of divinity and nature.

Science is not the invention or creation of scientists and as Schrödinger points out, we do not live in the world that science constructs for us. Truly staggering as are its discoveries, they are just that – discoveries, and their applications. Scientists have neither designed, nor created, nor produced anything original in the universe – definitely not the human body, the elements, or the stars – and not even the universe. Nor have they invented or created or explained the laws of physics and chemistry – only discovered them and applied them in what is known as applied science or technology. For example, the Swiss mathematician and physicist Daniel Bernoulli FRS (1700-1782) discovered that the pressure of a fluid (liquid or gas) decreases at those locations where the speed of the fluid increases. This discovery was applied by future scientists to glorious effect as in aerofoil design to provide lift to the wings of an aeroplane. The fluid law was not created or even explained, only formulated by Bernoulli in 1738 (Bernoulli's equation<sup>3</sup>), notwithstanding the marvellous technological applications of the *discovery* of the law and its formulation. Likewise, neither did Darwin create his much-vaunted natural selection; nor Newton create the laws of gravity whose cause he openly and humbly professed not to know in these words:

# You sometimes speak of gravity as essential and inherent to matter. Pray do not ascribe that notion to me, for the cause of gravity is what I do not pretend to know, and therefore would take more time to consider of it.<sup>4</sup>

In *Introduction to Science*, Sir John Arthur Thomson (1861-1933), the Scottish naturalist who sought to reconcile science and religion does not mince his words. He says: 'The vulgar belief that Science has "explained everything" is a hopeless misunderstanding', and that 'it would be nearer the truth to say that Science has explained nothing'. Nearly a century after Thomson penned those words in an age of extreme materialism, we could rephrase his observations less forcefully by remarking that in a limited sense, science explains things by reducing complex systems to simpler units and by relating the observed facts to a general formula or equation, but as Thomson again observes, 'in this sense only does science explain things, and it does not really get beyond a description'.<sup>5</sup> In his Gifford lectures and a number of books written with his friend Patrick Geddes *he argued for a form of holistic biology in which the activity of the living organism could transcend the physical laws governing its component parts*.<sup>6</sup> The same could be said of the activity of the living universe.

## The Role of Extended Science for the Future

Therefore, if science wishes to move towards an explanation of things the best way to use the principle of the Trojan Horse: for esotericism and spirituality to enter the scientific camp, not to denigrate science, but to open wide the portcullis of the materialistic fortress as the Greeks did the gates of the Troy, hence to raise science to a higher metaphysic, a loftier vantage, thus blending physics with metaphysics to ensure that the marvellous discoveries of science will not, like so many of them, be in the nature of headless bodies goaded by brute commercialism, but guided with wisdom, love and intelligence for all humanity.

<sup>&</sup>lt;sup>3</sup> Daniel Bernoulli, *Hydrodynamics & Hydraulics*, Dover Publications, 1968.

<sup>&</sup>lt;sup>4</sup> Four Letter from Sir Isaac Newton to Doctor Bentley Containing Some Arguments in Proof of a DEITY, London: Printed for R. and J. Dodsley, 1756. See also < https://www.sophiararebooks.com/pages/books/3537/sir-isaac-newton/four-letters-to-doctor-bentley>

<sup>&</sup>lt;sup>5</sup> J. Arthur Thomson, *Introduction to Science*. Leopold Classic Library, 2016.

<sup>&</sup>lt;sup>6</sup> Peter J. Bowler, *Reconciling Science and Religion: The Debate in Early-Twentieth-Century Britain*, The University of Chicago Press Books, 2001.