

What, Most Fundamentally, Are We Made Of?

The Revitalising Science, Art and Spirituality of Natural Inclusion

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What, most fundamentally, are we made of?

The way we as human beings address and answer this question – and indeed whether we address and answer it at all – fundamentally affects the way we think and relate to one another and our natural surroundings.

For myself, as a life scientist, this question has always been at the back – and quite often at the forefront – of my mind. It has greatly influenced both my own perception, and my view of others' perceptions of the natural world.

The most realistic and personally satisfying scientific answer that I have as yet been able to find is simply this: *Most fundamentally we are made of space and circulating energy in mutually inclusive, receptive-responsive relationship.* And this answer doesn't just apply to us human beings, but to all natural forms, from sub-atomic to galactic in scale. It can hence be thought of as a fundamental evolutionary principle of Nature. For the sake of giving it a recognizable name, I have called this principle 'natural inclusion' and described it as 'the process through which all natural form comes into being and diversifies as a mutual inclusion of space and energy in receptive-responsive relationship'. By 'space' I am simply referring to the 'intangible void stillness' of Nature, which exists everywhere, without limit. By 'energy' I am referring to the source of all natural movement within space and around local centres of space. Such movement cannot occur without space or without the passage of what we call 'time'.

This answer can be arrived at without any special sensory ability, technical knowledge or equipment, simply through contemplating and reasoning *consistently* and *imaginatively* from such everyday experiences as the difference between walking through an open doorway or into a brick wall. Rather than just hearing me talk about it, though, see if you can fathom it out for yourself, or have already done so in some way.

Imagine yourself as if newly born into this world, with no prior knowledge or schooling. You become aware, by moving around, of two distinctive kinds of natural presence, one of which resists and the other of which permits your bodily movement: 'substance' and 'space'. You might also become aware, for example when exposed to sunlight, of yet a third kind of presence, both within your body and outside it, which can illuminate, colour, warm and enliven you but is in itself invisible and not graspable in the same way that substance is: 'energy'. Now try to imagine the existence of any one of these presences alone.

What would space alone, without substance or energy be like? Where would it end? How could we sense its presence? Wouldn't it be endless, frictionless, invisible, formless, motionless *void* – an intangible (i.e. not graspable) presence of material absence?

What would substance or energy be like in the absence of space? To put it another way, where would your body be without space? Wouldn't it be utterly without volume (i.e. dimensionless) and hence *nowhere discernible*? You'd have to recognise, wouldn't you, that your body, like all

material bodies, both includes and is included in space: i.e. substance and space are *distinct* from one another, yet *mutually inclusive*. How could that possibly be so? That question might tax your imagination a bit.

As a tangible aid to visualisation, you might take a piece of paper to represent 'space' and a pencil to represent what is needed to produce any kind of shape or form. Notice that *only if you move the pencil around* is it possible to generate a shape *that both includes and is included in space*. Try using a compass to circulate a pencil around a centre-point of space. How does it feel inwardly as you go through this creative process? Do you feel yourself focusing your attention around some receptive point in your body at the same time as you focus your attention around the receptive point (the 'hole' made by the needle-point) in the paper? Do you suddenly realize that this is how tangible material form can only come into being *dynamically*, through some kind of *movement* around an intangible receptive still-point that attracts but cannot persistently be reached by the movement. Maybe you might recall whirling a weight on a string around your hand or watching water swirl around a plug-hole? How does this realization affect you?

I still remember the extraordinary mixed feelings of exhilaration, bemusement and fear I had as an adult, professional life scientist when I imaginatively went this way 'back to basic principles' that I had years ago readily understood as a young child. Could it really be this simple? Was I being naive? Had I made some elementary mistake in my reasoning? Why hadn't I been taught or read all about this somewhere along the line of my education? How could it relate to all the sophisticated atomic physics, chemical reactivity and mathematical rigour that I *had* been taught, learned and read all about?

I started to try to talk to people about what I had realised and to ask them if it made sense to them and whether they had thought or learned about it. Few showed any interest at all, of which most expressed incomprehension or hostility and a very small number expressed any true recognition or understanding. That very small number were and are, however, very enthusiastic and supportive, sensing the deep significance of this realisation for human understanding and flourishing. Several of them pointed me to the ancient past for examples of similar kinds of awareness.

Given that this realization can be reached through pure contemplation of what is familiar to us experientially, it's not surprising to find it implicitly – if not explicitly – at the root of many examples of ancient and indigenous wisdom, for example in Taoism, Paganism, Gnostic Christianity and the fluid Logos of Heraclitus. What should perhaps be much more surprising is to find this understanding explicitly excluded from consideration by the definitive logic of orthodox scientific, mathematical and religious philosophy. This logic paradoxically treats material form and immaterial space as either mutually exclusive or co-extensive.

In other words, the orthodox answer to the question, 'what, most fundamentally, are we made of?' is either 'something purely material' or 'nothing distinguishable'. This has resulted, for millennia, in a schism between 'materialistic' and 'spiritual' traditions, neither of which can make consistent natural sense of what, most fundamentally, we are made of. These traditions instead focus solely *either* on tangible, measurable phenomena *or* on an intangible reality that cannot be grasped, instead of appreciating the mutual inclusion of each in the other.

Why should this matter?

Just consider for a moment how the idea that your body consists solely of tangible matter will influence the way you relate to other bodies and your natural surroundings. Will you imagine yourself to be entirely separate from your neighbours and neighbourhood – an independent, self-contained individual entity? How then will you be prone to treat these 'others' that you perceive as

being quite apart from yourself? Will you treat them as 'objects' to be pushed or pulled around by purely mechanical forces? Can you see in this the root of selfish, exploitative, competitive behaviour?

Now consider how the idea that you are indistinguishable from your neighbours and neighbourhood will influence your behaviour. What special individual contribution can you now make to the life of the community in which you belong? Can you see in this the root of unquestioning passivity and inability to respond effectually to the real problems of life?

Now consider the consequences of actually being taught by your 'superiors' to think and behave in these divergent ways, and not to question their authority?

Do you not see the evolution of a culture of bullies and victims entrapped in a habitual mental pattern that neither can free themselves from, no matter how much they might feel the desperate need to do so for the sake of life, love and happiness? Do you not see how this culture imposes these same patterns on its interpretation of natural reality as a 'Law of the Jungle' overruled by a tyrannical or benevolent 'Lion King'? Do you not see a culture divided between 'Objective Science' and 'Subjective Art', neither of which has a fully true basis in reality? Do you not see a culture of needless ideological conflict between 'me' and 'you', 'us' and 'them', 'this and 'that'?

Do you not see in this culture the story of modern human life and historical record as no less than a tragedy of epic proportions? If not, then you will not feel that anything has to change.

If you do, then you will recognise that a radical shift from our definitive 'Whole Way of Thinking' to a comprehensive awareness of natural inclusion as a source of wisdom is desperately overdue. You will recognise that a Science that excludes or conflates intangible from or with tangible reality is a lifeless, soulless science that definitively objectifies itself by definitively objectifying Nature:

"A scientific man ought to have no wishes, no affections, - a mere heart of stone." Charles Darwin

"For once men have been made to realize the crippling mutilations imposed by an objectivist framework – once the veil of ambiguities covering up these mutilations has been definitely dissolved – many fresh minds will turn to the task of reinterpreting the world as it is, and as it then once more will be seen to be." Michael Polyani

Such abstract, objectifying science is actually a science for nobody, which cuts itself apart from everyday life experience and speaks in technical and mathematical language that only its 'initiates' can decipher. It is most definitively *not* a realistic science for everybody, and yet it is just this kind of science that has come increasingly to be 'popularised' and to dominate thinking in our increasingly secular modern human life.

You will also recognise that the kind of abstract Art and Spirituality that takes total leave of absence from our material bodies is equally unrealistic and liable to lack empathy for how we *living* creatures truly are in the world as it truly is.

Now consider how awareness of natural inclusion as a fundamental evolutionary principle will influence your thought and behaviour. You perceive yourself as a dynamically included *participant* in and unique individual expression of the natural world in which you dwell. You appreciate what you and all other natural forms have in common, yet also how and why you differ from one another. You have an individual identity that is neither independent from nor indistinguishable from others, but lives in receptive-responsive relationship with them. You begin to understand the fundamental

nature of Love as receptive-responsive relationship and to recognise in that sense that you and all other natural forms are ‘made, most fundamentally, of Love’.

Now you can begin to sense how intellectual scientific and emotional understandings of life can be reconciled. The wisdom of the ‘Golden Rule’ to ‘love others as you love your self’ and also to ‘love your natural neighbourhood as you love your parents’ becomes all too apparent. You recognise yourself and all other life forms as beings in need of love and sustenance, without which you suffer and perish. All the paradoxical contradictions of purely objective or subjective worldviews fade away. Profound scientific conundrums, such as ‘wave-particle duality’, the true nature of consciousness and the relationship between gravity and electromagnetism begin to make natural sense. The socially, psychologically and environmentally damaging Darwinian misinterpretation of evolution by ‘natural selection, or the preservation of favoured races in the struggle for life’ is seen to be what it is – the product of a false premise that objectively isolates an organism from its neighbourhood instead of recognising it as an expression of its neighbourhood.

So, why would anyone want to ignore or disparage this natural principle – and those who, like myself, are prepared to heed and give voice to it? The reason is quite clear, but not good: the lust for and submissiveness to abusive power that arises when we disregard or misconceive what, most fundamentally, we are made of and teach future generations of adults to do the same. Greed and passivity then become our primary sources of motivation and demotivation, in place of the need and vitality to care for and sustain our own and others’ diverse lives in natural, receptive-responsive communion.

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