

# **Natural Inclusional Streams**

## ***An Outline Description of the Meaning and Implications of Natural Inclusion***

By Alan Rayner

### **Meaning**

Natural inclusion is a fundamental principle of Nature, which I first explicitly recognised and began to try to bring to public attention in the year 2000. This principle enables us to understand all natural bodies, including our own human bodies, as dynamic inclusions and expressions of Nature, not exceptions from Nature. It can be understood in simple physical terms as *the receptive-responsive evolutionary relationship between intangible space and energy in all material form.*

To understand this principle requires a shift from abstract perceptions of space, time and material boundaries as sources of definitive separation between independent *objects*, to recognising them instead as *mutually inclusive* sources of natural continuity and dynamic distinction. In effect this represents a move from a static to a dynamic framing of reality: *from abstract rigidity to natural fluidity.*

### **Implications**

#### **Philosophy and Logic**

Awareness of natural inclusion gives rise to a philosophy and logic of natural energy flow in which receptive and informative presence include and influence each other. This differs radically from the abstract philosophy and logic of definitive separation (e.g. Aristotle's 'Law of the Excluded Middle'), which depends on the supposition that one thing cannot simultaneously be another thing, and is at the root of rationalistic and materialistic thought. Whereas natural space and boundaries are necessarily continuous, continuously in flux and mutually inclusive, abstract perceptions treat space and boundaries as sources of definitive discontinuity.

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## **Consciousness and Awareness**

'Consciousness' has always been difficult to explain or come to terms with for any kind of rationalism that definitively isolates material from immaterial presence. This difficulty has given rise to a long-running dispute between two schools of thought, focused around the question of whether 'mind' can be separated from 'matter' (as is supposed by what is known as 'Cartesian Dualism', after the French philosopher, Rene Descartes). For materialists, consciousness must be solely a product of tangible presence, because anything intangible cannot interact with material: 'nothing' cannot interact with 'something'. For anti-materialists, consciousness can only be explained by the existence of an independent, intangible, 'metaphysical' presence or 'spirit', which transcends 'physical' matter.

With awareness of the natural inclusion of intangible space and informative energy within each other, this difficulty does not arise. Space and energy are mutually inclusive, not mutually exclusive, and combine to co-create what we call 'matter' as bodily flow-forms – from sub-atomic to galactic in scale. It would make good sense to view consciousness – the awareness of being aware – as a co-creation of space and energy incorporated into sentient bodily flow-forms.

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## **Engineering and Architecture**

The way we understand the relationship between space, time, energy and matter has its most obvious practical application in engineering and architecture. Engineers and architects need to produce machines and structures that actually work in the real world. They may therefore be or become all too aware that what looks good in theory may not work out in practice, due to some oversight or unforeseen circumstance. They may learn through experience how to make allowances for unique local situations. They may come to recognise that the more fluid the situation they are working in, the less predictable in the long run will be the outcome of their interventions.

Nonetheless, the understandable tendency to stick with what has seemed successful previously, leads the vast majority of engineers and architects to continue to work in accordance with rationalistic assumptions, unaware of the limitations and inadequacies these assumptions impose on their designs. In particular, short-term expediency may be given precedence over what is truly beneficial and sustainable for life in the long run.

An example of someone who recognized and was inspired by innovative design possibilities inherent in diverse natural flow-form was Antoni Gaudi of Barcelona. Gaudi's creations may not have been straightforward or inexpensive to construct, but as designs suitable for comfortably *living in*, had aesthetic and ergonomic qualities very different from the dispiriting brutalism of rectangular construction. Moreover, Gaudi ingeniously used gravitational *influence* to *assist* the shaping of his constructions without recourse to conventional exact numerical calculation aimed at *forcefully opposing* gravity. He did this by making 'cat's cradles' of weights hanging from and interconnected by strings and inverting these into their 'mirror image' to form his designs. In effect, he worked from 'inside-out', with the grain of natural influence, not from 'outside-in', against the grain. His buildings flow and dance with life rather than confine life within cell blocks full of dead space where dust and moisture accumulate. They represent an extraordinary elaboration of the cave dwellings, tepees, mud-mouldings and round houses of human cultures uninfluenced by the strictures of Greco-Roman orthodoxy.

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### **Theology and Spirituality**

The philosophy of natural inclusion – which may be called 'natural inclusionality' – is concerned only with the reality of Nature as a continuum, everywhere, without definitive limit. It hence cannot affirm or negate the reality of a supernatural deity somewhere ineffable, *outside* Nature, although it does recognise and respect the reality of such a deity in the imaginations and belief systems of many people.

Nonetheless, in recognising the vitality of omnipresent space as an intangible, receptive presence throughout and all around natural flow-form, natural inclusionality accords with many kinds of spirituality that

view Nature itself as sacred and pervaded by Love, whether or not these are allied to any particular religious persuasion. Panentheism, the belief that everything is in God and God is in everything, corresponds especially closely with natural inclusionality in its recognition of an unknown and unknowable, infinite, intangible and transcendent realm that interplays with all that can be tangibly experienced, named and known. Mahayana Buddhism has this too, in the tradition of Nagarjuna, which recognises the mutuality of 'Thingness' and 'No-thingness' in 'Sunyata'. So too does the concept of the all-pervasive 'Tao' recognised by Lao Tzu, and the 'Logos' of Heraclitus.

There is also close correspondence with the recognition of the three aspects of Love as Agape (Receptive Presence of Space), Eros (Responsive Presence of Energy) and Philia (Reciprocation of Receptive and Responsive Presences in Bodily Form).

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### **Mathematics**

The foundations of conventional mathematics, both classical and modern, treat what can and can't be counted or measured as mutually exclusive, i.e. as 'something'(numerical or geometric presence) and 'nothing'(numerical or geometric absence). The mutual inclusion of tangible and intangible presence in natural flow-form is hence

precluded, *by definition*. Hence conventional mathematics is an irretrievably *abstract* idealization, which cannot and does not equate with reality, even as it is used as a tool to describe and predict natural structure and dynamics. At its root is the profound paradox that arises from treating 1 and 0 as static alternatives – as in the binary logic of digital computers.

What is truly needed for mathematics to correspond with reality is to recognise the natural inclusion of 0 as a local centre of intangible space *within* 1 as a dynamic inhabitant somewhere of *infinite*, intangible space everywhere. Only one serious attempt at such a formulation has been attempted, by Lere Shakunle in his development of 'transfigural mathematics'. Meanwhile, even within conventional mathematical formulations the relatively recent development of non-linear dynamical systems theories (including what are known as chaos theory, complexity theory and fractal geometry) implicitly signal the need for fluidity and incorporation of infinite space.

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### **Education and Learning**

Learning is an evolutionary process of cumulative acquisition of skills, knowledge and understanding, through discovery and instruction. Education, literally meaning 'leading' or 'bringing' out, facilitates learning. Educational practice that neglects either the 'discovery' or 'instruction' aspect can, however, impede learning. Neglect of instruction deprives learners of the *information* they need to be able to *explore* inquisitively. Neglect of discovery deprives learners of the imaginative open-mindedness they need to be *receptive* to new knowledge and understanding. Both forms of neglect are commonplace and often lead to polarization instead of recognition of the need for partnership between informative and receptive presence, as in natural flow-form.

Conservative educational praxis and standards are selective and based on the authority of the educator to know and judge what's best for and amongst learners. Learners are regularly tested for their ability to conform to prescriptive expectations, and those who do not match imposed criteria are excluded, in much the same way that 'natural selection theory' competitively tests and discards those 'unfit' to fill a pre-existing 'niche'. The potential for innovation and discovery is thereby suppressed. Radical educational theories that eschew the need to inform of what is already known or thought in favour of 'anything goes' experimentation, leave learners 'all at sea'.

Educational praxis based on awareness of natural inclusion seeks co-creatively to communicate previous learning and encourage imaginative inquiry in a way that brings out the talents of a diverse, mutually supportive and explorative community, not just a select few 'high fliers'. It entails an invitation to learners by learners to participate in and feel they can contribute to deeper enquiry. This enquiry is not boastful but honestly and challengingly reflects on the accomplishments and limitations of current understanding, and the opportunities that arise from these. There is both an acknowledgement of the status quo and a readiness to question the status quo, which enables learners to feel they can contribute both individually and collectively to the continual evolutionary transformation of our understanding relationship with the world about us. There is a sense of adventure, discovery, surprise and readiness to be surprised. Educational praxis becomes 'living', 'evolutionary' and lovingly and respectfully receptive and responsive to our diverse and complementary human qualities and needs.

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## **Health and Flourishing**

On his death bed, Louis Pasteur, founding father of 'germ theory', the notion that microorganisms are causal agencies of many 'diseases', is said to have confided to his friend, Dr Renon, that '*Bernard avait raison; le microbe n'est rien, c'est le terrain qui est tout*'. ['Bernard was right; the microbe is nothing, it is the terrain that is all'].

What Pasteur was acknowledging is that 'disease' - and correspondingly 'health' - cannot be understood more than very superficially in terms of the one-sided action of one 'body', the 'pathogen', upon another 'body', its 'host' or 'victim'. Deep understanding of disease can only come through appreciation of the context or 'terrain' that both 'bodies' inhabit. What manifests locally as what we call disease is situation-dependent and what we call disease is dependent upon which of innumerable nested organisational scales from microcosm to macrocosm our situational view is based upon. Since death and degeneration are inescapably vital to a dynamic evolutionary life, we can only make carefully balanced judgements in sensitive relation to contextual setting.

Nonetheless, our cultural habit continues to be to try to single out and blame something or someone solely responsible for whatever we may deem to be 'unhealthy' or 'dysfunctional'. We then attempt to target this agency, only to discover that our action can have all sorts of 'side-effects'.

This habit applies to all sources of human distress, whether we attempt to define these narrowly as psychological, cultural,

environmental or physiological. If we wish to alleviate such distress, not aggravate it through our very efforts to 'cure' or 'eliminate' what we perceive as its source, we need to remember Pasteur's dying words and appreciate our human condition as dynamic inclusions, not over-rulers of Nature. We need find ways to attend receptively, responsively and hence compassionately to the *needs* of our human situation within, not out of this world.

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### **Management and Leadership**

In planning for 'the future', much of our human focus continues to be on prescriptive 'forward-thinking' or 'strategic thinking', which relies heavily upon projecting an historical record of the past into a trajectory that extends beyond the here and now. Trends are identified and short- and long-term objectives are set. These 'targets' and 'best practices' are aimed for to set in motion a linear progression along chains of cause and effect. This progression is always viewed in a fixed, 3-dimensional framework that treats space and time as independent background constants.

Based on such objective rationality a form of management and leadership arises based on imposing hierarchical power as 'command and control'. Collectively or individually, 'Man' assumes dominion over his fellows and Nature, only to succumb when what is inescapably beyond 'His' local vision and influence 'rebels'.

This is a style all too common in human organisations and communities that does not call for a careful, creative and reflective consideration of possibilities viewed from all angles by all concerned. Rather, it demands conformity with its own detached vision and specification of destination. In the absence of others' agreement, this style carries on regardless with whatever action it has planned, convinced in its own mindset that this is the 'right thing to do'. Whether democratically elected or not, any leader of this kind considers him or herself to have a prerogative to do what they know to be best, regardless of context.

By contrast, management based on awareness of natural inclusion is *participatory, facilitative, invitational* and *non-proprietary*. It arises from learning through experience how to attune with our natural neighbourhood in a way that all can learn from and to which we can each contribute.

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## **Commerce and Industry**

In many ways, the development of modern commerce and industry has epitomised the neglect and exploitation of our natural neighbourhood that comes with abstract economic and power-seeking value systems. Market and political 'forces' become 'drivers' of the economic globalisation of consumerism, unfair trade and voyeuristic tourism that focus on egotistic desire and status. Awareness of natural inclusion encourages a shift in focus to what is truly needed.

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## **Physical and Environmental Sciences**

Modern understanding of dynamic processes of all kinds, from subatomic to universal scales and encompassing the evolution of living systems, continues to be restricted by the rationalistic treatment of informational boundaries as discrete limits and space as fixed, empty distance between material objects. Such treatment is founded mathematically in the abstract geometry of Euclid and arithmetic of discrete numerical units, which formed the basis for Newtonian mechanics and the development of objective, quantitative science aimed at prediction and control. It is, however, profoundly unrealistic in being based on the illusion that matter ultimately consists of solid, massy particles *surrounded* by (and hence *excluding*) non-interactive space. This illusion leads to the dualistic 'paradoxes of completeness' that underlie the interpretation of change as the consequence of imposing purely *external* force upon *discrete* (isolated) and hence independent *bodies*. It leads damagingly to the mental exclusion and objectification of 'environment' as 'external surrounding' that the 'self' both exploits and struggles against, not the natural neighbourhood of which 'self-identity' is inescapably an inclusion.

Natural inclusionality opens up a radically more creative, realistic and ultimately less environmentally adverse understanding through acknowledging the mutual inclusion of space everywhere as receptive influence and informational boundaries as dynamic interfacing throughout Nature. With this understanding new insights of the fundamental nature of gravity, heat, electromagnetic radiation and energy flow become possible, along with a new mathematical basis for their natural representation. Correspondingly:-

In Nature, space and form are *distinct yet mutually inclusive* presences! Space without movement would be void, lifeless stillness. Form devoid of space would be dimensionless. Material bodies are *flow-forms*, the co-creation of a *relationship* between space as a presence of receptive, inviting stillness and energetic movement as responsive circulation around a local, intangible *cavity*. *We are dynamically embodied receptive holes, not isolated wholes*. All natural bodily forms, from sub-atomic to galactic in scale, are intrinsically dynamic – mutually inclusive combinations of SPATIAL STILLNESS and ENERGETIC FLUX.

Notice how far this simple account of the dynamic natural origin of bodily form has departed from objectivistic perceptions of measurable distance, duration and definitive limits! As my friend, Phil Innes has put it, 'time doesn't stop to have an 'event' and space doesn't stop to have an 'object'.

*Space is what makes natural forms possible, not what isolates them*

*Boundaries are what make natural forms distinguishable, not what define them*

Space is hence understood *in essence* as a truly infinite, continuous, intangible presence. Time *in essence* is understood as intangible energetic flux or *current*. Bodily boundaries are understood to be formed, from subatomic scale upwards, from current circulating around unique localities of space, not rigid demarcation.

'Clock-time' and 'ruler-distance', on the other hand, are scale-independent, abstract quantitative derivations from natural space and time as continuous qualities of Nature. Useful as these measurements may be for mapping reality, they are NOT the reality itself, as is evident, for example, from the findings underlying quantum and relativity theory.

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## **Sociology and Social Governance**

Embedded deep in the human psyche as a product of our biological ancestry are two superficially irreconcilable needs and desires for (1) individual freedom and (2) group belonging.

These distinctive needs give rise to alternative ideologies of 'individualism' and 'collectivism' that manifest in 'right-wing' and 'left-wing' political stances and dualistic and monistic philosophies.

What the comprehensive, all-round awareness of natural inclusion reveals is that BOTH individual freedom AND group-belonging are essential for the viability of all life forms because individualism alone brings over-exposure while collectivistic 'connection' alone suffocates enterprise.

What is therefore needed both biologically and socio-politically is a capacity to combine individual distinctiveness with group-belonging in such a way that they complement rather than contradict each other. This capacity comes ultimately from the reciprocal relationship between 'space' as a continuously receptive source of freedom for movement and 'boundaries' as sources of dynamic distinction and constraint.

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### **Conflict Dissolution**

The false dichotomy that definitively makes us believe in the absolute separation of 'something' from 'nothing', and hence of 'one' from

'other', engenders deep human conflict within our selves, between our selves and with the natural neighbourhood that includes our selves. The 'other' that we are led to believe is not 'us', and who may in turn make believe that 'we' are not 'them', acquires the potential to become our 'opposition' and even our 'enemy'. We begin to draw border and battle lines in order to protect and expand our realm of power, and project onto others, including non-human life, the expectation that they will do likewise. We become deeply addicted to conflict and view this state of perpetual opposition to other as an inevitable and even desirable 'fact of life'. We accept conflict as necessary to the assertion of our independent individual and corporate 'identity', while conforming with labels that belie our intrinsic uniqueness and commonality as inclusions of a diverse community where we find our complex, dynamic relational place with other. We embed this make believe in our social, academic, commercial, professional, legalistic, political and sporting rivalries, and take it to extremes in our declarations and practice of 'War' upon 'Other'.

Essential to the propaganda of conflict is the depiction of enemies as 'bad' for the interests of or by comparison with our 'good' selves. This justifies whatever nasty 'means' can procure the good 'end' that we call 'victory'. Correspondingly, the desire to define 'Good' and 'Evil' in terms of Absolute Knowledge and Moral Choice has always been a powerful ally of conflict. Inwardly, it can lead us to demonise and seek to eliminate or subjugate 'impure' natural impulses, which have been called 'id' and 'Shadow'. Outwardly, we may psychologically project our own despised attributes onto 'scapegoats' that carry the weight of our collective and individual guilt, shame and blame.

Viewed with awareness of natural inclusion, however, conflict is not a necessary feature of human or non-human expressions of Nature, but an artefact of definitive make-believe. Natural aggression need not be viewed as an expression of enmity, but as vital to the sustainability of local identity.

So, to resolve human conflict it is not necessary to remove rivals but only to remove the philosophical grounds for objectifying rivals as enemies.

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## **Biological Science and Ecology**

When biological evolution is understood as a process of natural inclusion, all organic (carbon-based) life on Earth can be appreciated as an embodied water flow within dynamic bodily boundaries. Notions of competition, co-operation, individual and group selection are recognised to be artefacts of predefinition – the assumption that ecosystems, organisms and genes can be abstracted as discrete entities out of their spatial context.

Ecologically, the inhabitant is a dynamic inclusion of the habitat, not an exception from it, as objective rationality presupposes. Local life forms simultaneously emerge from and express the mutual inclusion of receptive space and informative energy. The inhabitant transforms the habitat and *vice versa* as inseparable but distinguishable aspects of one within the other, nested over all scales from microcosm to macrocosm.

Natural biological diversity is hence understood in terms of the co-evolving informational content and context of living systems as dynamically bounded flow forms nested from subcellular to global scales of organisation. Variability in the deformability, permeability and connectivity of living system boundaries is influenced and sustained genetically to yield a diverse natural communion which distinctive individuals, populations and communities continually open up and

constrain opportunities for one another. There is no separation of 'Nature' from 'Nurture' because 'organisms' and 'environment' inescapably include each other. In this light, there is a need for radical re-interpretation of many of the most widely accepted but simplistic models of biological structure, function and evolution. These models demean rather than enrich our understanding of life in all its depth, complexity and diversity.

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## **Organisational Structure and Dynamics**

Patterns of relationship and communication in natural ecosystems evolve naturally through the dynamic balancing and channelling of energy flows. By contrast, human organisations based on objective rationality are ordered in accord with abstract prescriptive rules, regulations and economic principles that support the imposition of hierarchical power. They may hence generally be or become environmentally unsustainable and creatively stultified.

Comparison between the structure and dynamics of human and non-human organisations may hence show up similarities and differences that offer helpful insights into possibilities for transforming our collective enterprises into more ergonomic and creative formations. As a general principle, non-human organisations tend to have fluid dynamic boundaries, open internal communication space, a capacity for degeneration and regeneration, an absence of central executive agency and a high degree of receptivity and responsiveness to their neighbourhood. Rationalistic human organisations commonly have complicated and restrictive internal communication channels and hierarchies, inflexible boundaries, inequitable distribution of work load and resources, and conflict between specialists and generalists, management and workers, supply and demand. Whereas non-human organisations form dynamic, labyrinthine networks of flow, rationalistic systems form webs of attachment that trap and dissipate rather than release and distribute creative potential.

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## **Language and Linguistics**

Definitive language reinforces definitive theory and practice in ever more intractable cycles. Hence whenever language is regarded as more than an *aid* to communicating our meanings and experiences, and acquires some kind of life of its own as our sole *means* of expression, it is a trap. We become entangled in a web of misunderstandings and arguments over *exact* meanings, where we desperately seek uniformity of usage to avoid ambiguity. But such uniformity runs counter to the rich variety and evolutionary possibility of life. We can gain such uniformity only through not being able to express our appreciation of what *living* really means in all its dynamic depth and complexity. By restricting our communications to what can be articulated explicitly, we leave aside, out of sight and out of mind, the enormity of implicit experience.

Through natural inclusion awareness it may not only be possible to recognise this language trap but also to find ways of avoiding it. Firstly, we can use language and metaphors that tend to sustain fluid possibility and don't reinforce concepts of definitive closure. Secondly, through appreciating how the meaning of words is influenced, sometimes radically, by the context in which they are being used, we can make clear when that the context is natural. The meaning of 'information', for example, is definitive when used in a rationalistic context, but dynamically relational in a natural context.

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## **Psychology**

Deep in the heart of much human psychological distress is an oppressively *singular* rationalization of the individual 'self', analogous to a cardboard cutout model. This 'free agency' is a paradoxical *artefact* of the objective abstraction of the material 'content' of nature out of spatial context. It is dislocated from the receptive space of its natural neighbourhood, and so held to be 'independent' and fully responsible and culpable for its own behaviour. But at the same time it is confined within an imaginary 3-dimensional structural frame, where it is embroiled in a relentless 'struggle for existence'. This artefact is sustained in human cultures by the desire for power over sources of fear, which leads to the imposition of definitive 'barriers to love' that provide a false sense of security and control.

All movement is thereby reduced to the translocation of independent bodies in discrete numerical intervals of distance and time, as a *reaction* to or *effect* of the imposition of *causal* force or *action*. In life forms, this causal force must be situated on one side or other of a fixed bodily boundary, *either within* some internal executive control centre *or* in the *external* environment: the so-called 'nature or nurture' dichotomy.

In natural *fluid flow*, however, boundaries are transitional, ever-forming and reforming places of dynamically coupled relationship and distinction - not places of severance, which isolate subject from object. Here, self-identity naturally includes neighbourhood.

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## **Information Technology**

The operational logic of modern computers is binary and hence inescapably rationalistic, working upon definitive bytes of information that exclude receptive space. There is no way, based on this logic, that 'artificial intelligence' can ever more than superficially and partially simulate 'natural intelligence'. This is an important distinction to be aware of when taking into account both the limitations and possibilities of artificial intelligence and recognising how this cannot and must not supersede what comes naturally if we are not to become 'cybermen'. The speed and precision of operation of artificial intelligence may be a useful *aid* to natural intelligence in the short term, but cannot cater for evolutionary possibility in the long run.

Whereas computer logic is binary, *computing* logic need not be. Notwithstanding its abuses, the development of the Internet is in many ways a very remarkable example of natural inclusional logic in practice, enabling the bringing into communion of a vast variety of people and their diverse experiences and understandings in a way that can bring about rapid and radical cultural transformation.

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## Art and Creativity

Artistic approaches can both be inspired by and help to develop and communicate natural inclusional perceptions of receptive space and dynamic informational boundaries, which can transform our understanding of evolutionary processes in biological, ecological, geological, cosmic and social systems. Lyrical writing, visual and performance art are very effective means of exploring these perceptions in an invitational and immediate way that can, without imposition, engage peoples' imagination and go beyond the restrictions of definitive language.

Natural inclusional creativity dynamically mixes informational rigidity (discipline) with spatial relaxation (letting go) so as to generate and explore an infinite array of possible forms of expression ('flow-forms'). Any meaningful work of art hence depends upon being both relaxed enough and disciplined enough to allow expression to flow into form. This is when the Muse works her magic in the liminal zone between conscious and unconscious realms in a way that can seem little short of miraculous when we become 'stuck' between periods of creativity. The inhibition felt when the 'blank canvas', 'blank page', 'block of wood, stone, metal or clay, and 'pregnant silence' freezes us into non-expression is like what happens when trying to swallow at will. As soon as we concentrate on the *action or intention itself*, our throat locks up - *analysis becomes paralysis*. To proceed at all, it is necessary to have the *courage* to 'let go' in an act of *faith* that all will or at least can be well. But the letting go has to be *constrained* if it is not simply to *splurge*.

Ultimately the combined sense of having the courage to relax and allow whatever comes to mind or hand to emerge and surprise, along with the determination to maintain influence over what issues forth can fill with deep excitement, pleasure and awe - just as Nature does. On a day and in a place where those defensive 'blocks' that paralyse so much of modern culture don't get in the way of our joyful expression. When we have the sense of being lovingly receptive-responsive *channels*, not grudgingly possessive, active-reactive *authors* demanding our intellectual property rights.

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## **Economics**

The way organisms relate energetically to changing circumstances in their natural neighbourhood differs fundamentally from human behaviour induced by economic incentives and controls. Much current economic practice arises from singling out human identity from the wider context of natural identity, resulting in an inversion of priorities from seeking sustainable, co-creative evolutionary relationship to striving for supremacy. A more natural inclusional form of reasoning, based on energy flow, could help us to develop systems of economic governance that encourage rather than impede sustainable human-environmental relationships. The underlying principles of these systems align with those of traditional gift flow and the dynamics of heterogeneous natural ecosystems. Here, energy is relayed continuously and reciprocally between sites of supply and sites of receipt, hence sustaining diverse, complementary functionality and avoiding cancerous monopolization. According to these principles, notions of exclusive ownership and competition or cooperation

amongst independent individuals or groups are logically and ecologically unsustainable as well as a source of profound human conflict.

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