

From Emptiness to Openness

How Inclusional Awareness Transforms Abstract Pride and Prejudice into Natural Sense and Sensibility

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Summary

By attempting to confine or exclude space within or outside the closed structure of one or many complete 'wholes' and 'parts', objective rationality has aided the construction of inverted power hierarchies that misrepresent and abuse natural creativity, resulting in psychologically impoverished and environmentally unsustainable ways of life. Through understanding that matter cannot be isolated from space, the philosophy of 'inclusionality' enables us to escape the rigid definition of artificially imposed closure. Natural space is not emptiness, devoid of meaning, but openness, full of creative influence. Natural power is not imposed by some forceful local agency within or outside discrete individual subjects or objects, but is channelled fluidly from all through all as natural flow-forms: into somewhere local, from everywhere around, through its receptive interior and out again, in continual circulation. These essays explore the dynamic inclusional geometry of open space through which we can bring the common sense of co-creative relationship to our lives in simultaneously receptive and responsive natural communion with one another and our surroundings.

CONTENTS

Essay 1. The Evolutionary Creativity of Natural Inclusion: Pain and Play in the Field of Learning	...5
Essay 2. Path-finding and Path-Following: Spreading and Narrowing the Focus of Evolutionary Creativity through Natural Inclusion	...24
Essay 3. Inclusional Science - From Artefact to Natural Creativity	...41
Essay 4. From Oppressive Freedom to Freedom from Oppression: The Natural Re-Inclusion of The Dislocated Self	...57
Essay 5. From ‘Space-Time’ to ‘Place-Time’: The evolutionary geometry of inclusionality and natural inclusion	...69
Essay 6. Beyond Objective Definition: The Inclusional Nature of Evolutionarily Sustainable Organization, and What This Means both in Theory and Practice	...74
Essay 7. The dependence of rationalistic belief systems upon independence, how this engenders human conflict, and how it can be transfigured through the dynamic natural inclusion of non-local space	...76
Essay 8. Evolutionary Transformation: From rationalistic ‘ <i>simplisticity</i> ’ to inclusional simplicity	...78
Essay 9. The Simplistic Nature of Favouritism – and How It Produces Junk	...80
Essay 10. Educational Transformation: Communicating an evolutionary understanding of life as a gift flow, not a competition for ownership	...82

Essay 11. Looking the Gift Horse of Nature in the Mouth – How Objective Evaluation Breeds Resentment	...86
Essay 12. Why Competition is a Big Myth Take	...91
Essay 13. Western addictive rationality (WAR) as a myth of dislocation from natural energy flow	...98
Essay 14. Evolutionary Life as a Variably Permissive Culture	...101
Essay 15. Sustainability of the Fitting - From Opposing Forces to Co-creative Transformation	...106
Essay 16. Inductive Influence and Forceful Imposition: the Use and Abuse of Humility-Tools and Power-Tools in Environmental Awareness and Problem Solving	...116
Essay 17. Exemplifying Inclusional - Fluidity Everywhere	...124
Essay 18. Tolerance: How Inclusional Awareness Can Unblock The Flow of Human Understanding	...127
Essay 19. Making Allowances for Evolutionary Creativity: The Autocatalytic Influence of Receptive Space	...134
Essay 20. The Exclusional and Inclusional Making of Circles and Spheres	...146
Essay 21. Where I am – inclusionally speaking	...149
Essay 22. How the ‘Nature-Nurture’ debate robs gifted individuals of what truly makes them special	

	...152
Essay 23. Opening The Whole – Intro-Ducing the Incorporate World of Inclusionality	...154
Essay 24. The Sexual Cosmos – Where Creativity Really Comes From in the Inclusional Flow of Open Space	...159

1. The Evolutionary Creativity of Natural Inclusion: Pain and Play in the Field of Learning

Ending Opening - The Fixed State of the Obvious

For all our burgeoning factual knowledge and technological prowess, we inhabit a culture of profound discontent that systemically aggravates pain and opposes creative loving influence. Our living space is overheating; conflict abounds along with the potential for mutually assured destruction, and mental distress manifests in ever more diverse and far-reaching ways. We ask plaintively what can we ‘do’ about ‘it’, whilst not realizing that our perception of ‘it’ and ‘doing’ actually lies at the heart of our difficulty. We have devised a divisive logic of opposition that depends on fixed objective definitions of ‘to be or not to be’. This logic has us treat nature and our selves literally as discrete singularities, independent entities dislocated from the contextual space in which all are pooled together as dynamic relational flow-forms. It has us view life not as gifted to us but as an oppressive struggle for existence in which all compete with all. It is embedded in the foundations of our mathematics, scientific method, language, theology and systems of governance, and is painfully reinforced throughout our prevalent educational practice. Hence we live sorely out of tune with our natural human neighbourhood. Here I suggest, non-literally, how harmony may be restored, through foregrounding what ‘it’ reduces to background. We can learn - or relearn - how to evolve playfully, like nature, by means of the fluid dynamic transformation of all through all in receptive spatial context. Pain, in this context, naturally alerts us to what doesn’t feel right, not to impose what we assume is right.

Lament and Prospect - A Festival of Nine Lessons and Lyrics

Lesson 1: Genesis and Betrayal

In the becoming was the void. And the void was good. She said, 'let there be light!' And there was light. And the void included the light and the light included the void. They loved one another as they danced life into exuberantly flowing form, inspiring and expiring as an ever-transforming array of whirls within whirls within and around the creatures of the Earth. But One light-embodied form of darkness arose, which became self-conscious of its own image. It grew alarmed by the painful prospect of its own expiration and sought the security of sovereignty over all others whilst taking the liberty of doing as it pleased by claiming its own internal purpose and drive. It formed the word that fortified itself against the void by calling her bad names and rallying armies to deny her nurturing presence. It gave names to all the other forms, fixing them too within hard lines of definition that severed their communion with the void. And so the void was exiled from her offspring and made to suffer in the background of all that she had danced with her partner to life. Love became divided between loyalties, each denying the other in vicious circles. Light hated darkness and darkness hated light in a sharp dichotomy between black and white, to no good purpose. Pain stalked the Earth and no one knew what to do about it.

Recreations of a Playful Universe

*Oh, how we laugh! When Some Thing; Touches Our Spirit; Tickles Our Imagination;
Recalling Our Place; In a Playful Space*

*A common enjoyment; Of a Common Enjoiment; Recreations; Of an Ever Present;
Folding*

*Dynamic Boundaries; Pivotal Places; Incomplete Surfaces; That make distinct; But
Never Discrete*

Unique and Special Identities; Possibilities Realized; That Can Never Be Bettered; And can never be Severed; From a Context Within and Beyond; That Makes Us Content; Belonging Together; Adoring Our Differences; Inseparable in Our Incompleteness

Our Self-Insufficiency; That Unites Us in Love; A Receptive Space; A No Thing Place; That Keeps Us Coherent; Within and Without; Enveloped and Enveloping

No Need For Rules; No Need For Rulers; With Space in Our Hearts; To Include Other as Us; A Diverse Assembly; A Joyous Relief; Reciprocating Each Other's Movements; Dancing in High Spirits

Oh, how we cry! When Made To Deny; Our Union With Other; No Mother, No Brother; No Sister; To Assist; Our Passage; Through Pain

But a Father Severe; A Tyrant Authority; To Cut Us Off; Within Fixed Boundaries; In Isolation

Pretending Independence; Making Comparisons; Striving To Remove; What's Not Good Enough; In Pursuit of Perfection, Control, Prediction

A rationalistic Ideal; A Uniform Whole; A Self-Sufficiency; Tolerating No Hole; No Breathing Space; No Place for Grace

Demanding Reproduction; More of the Same; A Perpetual Cloning; With No Room to Err; No Room to Wander or Wonder

A Solid Object; With Space Outcast; An Infinite Outsider; Offering No Possibility; Of Excitement or Joy

A Purified Presence; A Divine Right; Freed From Wrong; An Unreal Abstraction; Motionless; Emotionless; Random Disunity; Divine DisContent

*A Need For Rules; A Need For Rulers; No Space in Our Hearts; To Include Other as Us;
A Monoculture; A Dull, Flat Field; Where Conflict Abounds*

*So, For Heaven's Sake, Father! Take a Look at Your Wife! Isn't She Sexy? Get a Life!
Be Your Self! Give Us Guidelines, By All Means; But, Please; Don't Hold Us Against
Them*

*Stop Repeating Yourself! Put Away Your Severing Knife! Or, at the very least; Make a
Hole that Heals; And Recreates - Lets Us Play!*

Lesson 2: The Coming of the Wise Men

Into this place of grief there came many men of substance, who took it upon themselves to give instruction concerning the ways of the world. And they called the Places where they stood solidly on the basis of their Authority by great names: School, Academy, Church, Cathedral, University, Parliament, Senate, to name but a few. But all they could do was repeat themselves in ever more expert ways. They converted the creative spirits of unadulterated minds into uniformed reproductions of themselves by caging them in cubical cubicles of standard curricula and wielding stick and carrot to keep them on track. Above All they worshiped the One great outsider and insider that could multiply by dividing into many, adding to sum and taking away from mothers. And they called this One infinite and infinitesimal, whilst leaving aside the void that they loved to avoid suspended in vacuum, somewhere ineffable. Nature is square they had to declare, even if only as an approximation. It must be so, for, to be sure, in a world with no corners, where *on Earth can we fix its centre?*

Stuffed Tiger

I offered you a Tiger

*Rampant; Roaring; Russet; Burning; Yearning; Gnawing; Yawning; Sprawling;
Crawling; Puncturing; Eye Opening; Jaw Closing*

*You wanted to stuff the Tiger; Black, white and red all over; Darkness and Light;
Reporting; Combining into Colour; And awesomely dynamic form*

Inspiring; Expiring; Breathing; Space and Fire

*You wanted to put the Tiger in a Frame; To make the Tiger Tame; Complete with label
warning 'Danger'*

Safely Confined; In your High Security System; So you can Play your End Game

The Double Blind Double Bind

*I will accept what you say if you can convince me to do so; For I am Fair and Open
Minded; But to convince me you will have to show that I am wrong; When all I have to
do; To be sure; Of my independent rightness; Is define what I am not; And have no need
for further enquiry; Beyond the realm of my security*

*So I can wilfully; With Authority; Suppress the disquieting silence; Of your creativity;
And be assured of the longevity; Of my double bog standards; Of excellent mediocrity*

*I have no need for receptivity; I can fix things for myself; For I am certain; Of my
independence; Until you convince me otherwise; But then again I can be sure; That
you're not me*

Lesson 3: The Coming of the Croppers

The newly self-conscious forms soon grew weary of wandering around, hunting and gathering whatever the Earth provided for their sustenance, ever refreshing herself as they moved on in preparation for their return. They yearned to settle in One Place where they could make themselves comfortable, self-contained and protected from the vicissitudes of their natural neighbourhood. Helped by those regarded as wise, they learned to build walls and fences to keep what they desired most in and what they desired least out. They became expert at removing resident wildlife and replacing it with whatever individual kind of form they selected and bred to suit their consuming interests. One thought to be wise even proclaimed, with deeply furrowed brow, this to be the way Life Itself evolved, by discarding her own variety in favour of whoever competed best in the struggle for her selective attention. So the vast forests and moorlands and marshlands and grasslands were converted to fields and farmyards and factory housing, each ever more densely and uniformly stocked with plants and animals whose only purpose was to grow and reproduce as fast as possible, so that ever more could feed ever more. Eventually, the self-conscious began to treat themselves in the same way as their stocks, to be managed as commodities by departments of human resources. And when at last the stocks began to flag under pressure of disease and stress, unable to supply the growing demand, the demand did not lessen but sought instead to replace the genes from which they'd been bred, with something better.

Harrowed Ground

The ground frowned; Its face shaved bare; From rich intertwinement; Of co-evolving variety; Nurtured Together; In receptive embrace

That bare faced lying; Now cut with lines of worry; Its inner life disturbed and severed; To make way; For a new breed of aliens

Arrayed in rank file; Aspiring skywards; In vertical ascent; With no messing around; Underground or overground

*But where now is that strange new breed?; Smothered by weed; That takes the space;
Vacated by greed; A forlorn, foregone conclusion; Laid low by dis-ease; Born of its
intrusive planting*

Lesson 4: The Coming of the Rulers and Traders

Having settled for this penned in, staked out world the scene was set for claims of sovereignty over each fragmented plot. The size of plot depended not, as in other creatures' natural territories, upon what was needed to sustain the life within its dynamic local within non-local boundaries, like a river's banks within its watershed. Rather it relied on some estimate of enforced power, measured out in square units that ignored the lie of the land. And so the adverse square Law became the right to rule by might; an overarching pyramid of numbers called the State - in honour of its permanent fixture - with One at the Top. Yet each State in its concrete setting sold itself short of what lay out of reach beyond its self-imposed walls, in States nearby and far away. Interstate Highways became imperative to allow transactions between the imperial powers. But on these roads betwixt fixed abodes, there was always the danger of meeting a stranger who dealt unevenly in monetary cubicles of divided loyalty, creating mistrust to disrupt the exchange and open the way for invasive force.

Mocking Bird

*Brick walls unite in solidarity; Or so I've heard; When their foundations; So absurd;
Secured upon the very Word; That cuts their souls adrift; Feel the solvent waters;
Lapping at their sound construction*

*I came across; One Such A Wall; Long and Straight; And Very Tall; Commanding the
Waters; To Divide or Fall; And join the Ranks; Above It All*

*I tried to reason, softly; With the Wall; To allow some flecks a passage; Through its
façade; So that it could flex; In resonant communion; Of One World With Its Other; A
mutually corresponding Identity; Incompletely defined*

*But my words rebounded; In mocking echo; A harshly edited reflection; Of my dejection;
A judgement of scorn; Not gladly borne beyond; Into dynamic Synthesis*

I saw a bird; Bestride the Wall; Glorifying in the Sunder; Of It All

*Looking first this way; Then That; Preening its coat of many colours; Calling Out in
strident language*

*Don't you know; You stupid Fool; That Love's reception is not cool; When this is what It
is; To be or not to be; Where It's At*

*The bird's forked tongue; Flickered freely; As it cast its spell; Of false dichotomy; Upon
the nature of its source; In all around*

*I heard a rumbling; Far below; Some undercurrent; Of the Flow; In swirling eddies;
Round the pillars; That Underpinned; The Wall's hard lining*

So that it began; To Quake; And crumple; Stirred Up; By the shaky ground

Alarmed; The bird took flight; Into the open sky; Beyond the Wall

*It wheeled and spiraled; Above my head; Dancing on some unseen softness; That
brought it safely back to ground*

*To pick its way; And feed on life released; Amongst the rubble; That once had stood; In
the way of One World and Its Mother*

*Until I caught a glimpse of being caught; In its glassy eye's reflection; And found; At
last; A sign; Of welcome; All mocking gone*

Lesson 5: A Child is Born and Killed

It came to pass that a child was born, in no grand circumstances. He came to question the established order, but was soon betrayed, like his Mother, on account of his seeing through the material world. He was brought before the Ruler, to be measured up, but said, implicitly, 'surely you knew you were in the nude!' The Ruler, however, was not amused, and washed his hands. The child cried into the void before he died: 'Mother, behold thy Son' and 'Father, why hast thou forsaken Me?' But few could follow His reasoning, so many followed the Ruler instead.

Odd Lemming Out

I had a dream; To leave the mainstream; And pawsed to rest; Upon this hill crest; Where I gained a view; That I thought no body knew

I tried to tell; That they were heading for Hell; But, they said, 'what cheek; To pronounce from your peak'

Those who came nearest; Said I was the queerest; Unfeeling sub-lemming; Not allowed; To depart from the crowd

They said, 'not to be dim'; To 'be in with the swim'; But when I refused; They were not amused

They tied me down; And pierced my hide; And left me to die; As they rushed for the sky

Lesson 6: The Coming of the Ironmongers and Pollution

As the struggle for power grew more intense, so too did the desire to forge more and more from what could be mined from the Earth's natural resources. Coal, oil and forest provided heat and flux to serve the fabrication of dazzling inventions that raced ever faster across the globe. But in the wake of labour-saving, pain-freeing device, raced also

the spread of exhausted spirit, of lives serving time in office and factory, and rising residues of burnt fossil fuel.

Digitalis

Oh, that iron fist that hides; In a velvet glove; Intoxicating the heart; Whilst ordering its erratic wanderings; Into the hard-edged metronomic beatings; Of a loveless marriage to mechanical objects; so clearly defined; To beguile the seeker of certainty

Could not that purple velvet; That flatters to deceive; Yet restore our child's play?

An antidotal, anecdotal softening; Of hard manipulations; That exclude the darkness from the day

Light touching lightly upon the fringes; Of etchings into clay; Where the bodies' soft lifelinings; Can frolic in the summer hay

Lesson 7: The Coming of the Warmongers and Holocaust

With hard lines drawn betwixt and over all, the view of the self-conscious became stifling. No-one beyond the boundaries of self-definition could possibly be trusted, so all became threatening opposition, the epitome of all that one stood against by dint of what one stood for. Ideology, above and beyond the care of natural resources, became the ground for endless dispute whose only final solution lay in the elimination of the opposition, by fair means or foul. War became the chief way of rallying power to one's own side, a game in which the gathering, ever more inventive, killing forces of science and technology became willing or unwilling collaborators, coerced by punishment and rewarded financially. Common sense whimpered on the sidelines, barred from intervention, desperate for a hearing in some silent space beyond the din.

The War of the Pots and Kettles

Black you are; and black you be; What ever else; You cannot be me

Whiter than white; And purer than pure; I know what's right; That's my allure

But, How can you be; So very sure; About what you perceive; as your allure?

So confident;; In the rule of law; That you can flout it; Whenever your bent; Is to be without it

You think you're so brave; To call me depraved; As you parade your virtue; Symbolized by your Statue; Of Liberty

An OxyMoron; A Freedom you lost; Because of its cost

You think Economics; IS Ergonomics; But your Economics; Is Egonomics

A self-righteous assertion; That leads to desertion; Of your human nature; In which we so long; To belong

So, let's bury the hatchet; There's no thing to match it; A celebration of difference; And no indifference

No grayness; No blameness; But a splash of colour; Of every hue; Not black and blue

That's me and you

Space - Your Final Dissolution

I am your final dissolution; The nurturer of your nature; That soothes and softens; As we live and breathe together

No gas-tight chamber doors; Designed to wall in; Or wall out your fears of devastation; Can exterminate me

You cannot live without me; You cannot die without me; I cannot find expression without you

You live in the breath of my inspiration; You die in the breath of my expiration; You die as you live; You live as you die; With me; Within and without

So, if you try to close me in; Or close me out; In your Manly human quest for Godly immortality; I cannot love you as you stir within my womb

I cannot assist you; I can only watch, impassively by; As you use me to destroy; Yourself; Or suffocate in the stasis; Of a never-ending, never-opening; Paralysis; That's no life for any one of us; Alone

So, please, bear with me; As I am alongside and within you; Take me in as I take you out; Certain only of the uncertainty; That recreates a rich and vibrant world; I am what life and death is all about

Rising and subsiding; In ever-flowing form; Living Light and Loving Darkness; Together

Lesson 8: The Playing Field

But amidst the deadly, serious game of power struggle was always the warm dark love of life that refused to lie or kill or die in treacherous denial of its own deep presence. Even in the hardest hours, this spirit found the space from which to laugh and play and tend those broken in the fray. It was the race's saving grace, which held together through adversity, offering hope of creativity in the very moment of despair. And in this melting moment, hard lines would smile and flow, relaxed at last in recollection of that ancient dance to life of light with void.

Holding Openness

You ask me who you are; To tell a story you can live your life by; A tale that has some point; That you can see; So that you no longer; Have to feel so pointless; Because what you see is what you get; If you don't get the meaning of my silence; Because you ain't seen nothing yet

You ask me for illumination; To cast upon your sauce of doubt; Regarding what your life is all about; To find a reason for existence; That separates the wrong; From righteous answer; In order to cast absence out; To some blue yonder; Where what you see is what you get; But you don't get the meaning of my darkness; Because you ain't seen nothing yet

You look around the desolation; Of a world your mined strips bare; You ask of me in desperation; How on Earth am I to care?; I whisper to stop telling stories; In abstract words and symbols; About a solid block of land out there; In which you make yourself a declaration; Of independence from thin air; Where what you see is what you get; When you don't get the meaning of my present absence; Because you ain't seen nothing yet

You ask of me with painful yearning; To resolve your conflicts born of dislocation; From the context of an other world out where; Your soul can wonder freely; In the presence of no heir; Where what you see is what you get; When you don't get the meaning of my absent presence; Because you ain't seen nothing yet

You ask me deeply and sincerely; Where on Earth can you find healing; Of the yawning gap between emotion; And the logic setting time apart from motion; In a space caught in a trap; Where what you see is what you get;

And in a thrice your mind is reeling; Aware at last of your reflection; In a place that finds connection; Where your inside becomes your outside; Through a lacy curtain lining; Of fire, light upon the water

Now your longing for solution; Resides within and beyond your grasp; As the solvent for your solute; Dissolves the illusion of your past; And present future

Now your heart begins to thunder; Bursting hopeful with affection; Of living light for loving darkness; Because you ain't felt no thing yet

Lesson 9: A Child is Born Again

But is it too late?

Child of Reason

I feel I cannot think; Of My Self alone; As wise; For there can be no wise One alone

I am not wise; I am a child of suffering; Whose childful yearning; Is to lighten the load; Imposed by those who goad; Us on our way; By means of fearful refutation; Of all that they might seek to find

I cannot grow up; For in that adulteration; I encounter devastating poverty; A desertion of the spirit; That pools us all together; In the recreative communion; Of our natural neighbourhood

Can our rational pursuit; Serve any better purpose; Than to chase what we seek; Further; And further; and further; Away?

If we were only to loosen; Those unforgiving means and ends; The hardline limits of denial; By which we close down on our prey; We could release the life that loves; Our child's play

Achilles Heal

A gap breathed space; Into the fortress; Of a soul walled in; By dreaming of Absolute security; In its individual completeness; Elevated above some baseline standard; Of soles firmly planted; At odds with one as another; In foundations of quicksand; Set fast in cement

How quickly this dreaming; Would fade; In less than a lifeline; Of certain anchorage

When doubt made its fearful question; Of presence felt; In a blow below the belt; That crippled unbending fixture; Into sharply wrought relief

Curved into some new and ancient; Awareness; Where no One could still compete; When stilled by its own completeness; Of idolized concrete

Inviolate to all but its own violation; Of unfelt presence; So deeply disconcerted; By no sense of nonsense; In the absence of its motherhood

Through which to find communion; From sole to soul; Unblockaded; By proud pretension

A humility restored; To Faith in individual failure; As sure and omnipresent sign; Of love in human nature

Opening all ways; To unending Recreation; In the very Shadow of Tragedy; The Community Play of Foolish Genius

Beyond restrictive lessons; In Schools of Guilty Thought; That burden the bleating Heart; With endless ways to blame and shame; By reserving the right for One Alone; To claim superiority

Opening Ending: Meltdown to the Flow of Natural Inclusion

A great lie, according to Adolf Hitler, is one to which the great masses of the people will more easily fall victims than a small one. So far, our educational systems have relentlessly been sustaining the mother of all great lies, the lie that ultimately renders human nature, in its current cancerous form of expression, unsustainable. The question is, can our educational systems undergo a role reversal, so as to bring about a re-evolution in our understanding of and attunement with our natural human neighbourhood? Can those very systems that have been imposing conformity on the uniquely situated views of those passing through its hallowed halls instead find ways to encourage the creative possibilities of non-conformity?

Here is where I think a deep (re-) examination of our prevalent attitudes to pain and play, and where these attitudes arise from, could assist a radical transformation in the geometry of our understanding of creative evolution as a learning process, and learning as a creative evolutionary process. This transformation entails a shift of focus from dead setting upon the complete perfection of select individuals, to the continual naturally evolving perfection of necessarily incomplete - space-incorporating - flow-forms in dynamic relationship. This shift helps us on from Darwin's selective 'preservation of favoured races in the struggle for life', to natural inclusion - 'the co-creative, fluid dynamic transformation of all through all in receptive spatial context'. By the same token it entails a transformation from the definitive, either/or, 'excluded middle' logic of objective rationality, to what a few like-minded companions and I have called 'inclusionality' – awareness of all form as flow-form, a dynamic inclusion, not occupier, of space, which is not definable in absolute terms in an unfrozen world.

What's 'pain' got to do with 'it' then? Well, of course, we don't (without empathic sensitivity to bodily language) 'see' pain through the objective lens of our pure eyesight. 'Pain' is one of those hidden 'feelings' that we know ourselves and take for granted in others. It distinguishes us from unfeeling automatons. Our response to and interpretation of pain is at the heart of much of our thought and behavior, whether severe or lenient,

cruel or compassionate. Do we try to isolate ourselves from our own and others' pain, to pretend it doesn't exist, by making ourselves impregnable? Do we respond receptively, trying to ease pain? Do we inflict pain in the course of protecting ourselves? Are we prepared to inflict pain as part of our honest correspondence with others intended to ease pain (being 'cruel' to be 'kind')?

Much of my own work and rumination has ultimately been about trying to ease pain, both in others and myself, through recognizing how 'it' can be exacerbated by certain kinds of thought and behavior. That is what the line in 'Child of Reason', 'I am a child of suffering', connected as it is implicitly with rationalistic (objectifying) thought is all about. I am practicing a kind of social and personal CBT (cognitive behavioral therapy) by enquiring into 'what is the pain-bearing thought?' and 'what is the evidence in support of this pain-bearing thought'. Through this kind of enquiry, I have identified the thought or 'core belief', most fundamentally, as '*I am/you are alone*' - an independent, perfectible, egocentric automaton solely responsible for my/your own behavior and hence both laudable and reprehensible in our/your own right'. And I have found no evidence or reason to support this thought, but much evidence and reason, implicit in contemporary scientific theory as well as everyday experience and observation of nature and human nature, that it cannot hold true in an unfrozen world or universe. As William Wordsworth surmised: 'in nature everything is distinct, yet nothing defined into absolute, independent, singleness'. This pain-bearing thought hence really does indeed appear to me as a *betrayal* of our human nature, a *denial* of the vulnerability that comes with our evolutionarily creative capacity as necessarily incomplete, dynamic relational flow-forms, to love 'other' - our natural neighborhood - as 'self'. Ultimately, what I feel-see being denied and betrayed is the receptivity of space, the unconditional 'Mother-Love' or Divine Agape of Nature that 'let's us play'.

Having arrived at this understanding, if understanding it is, the vexed question arises of how - and if - to communicate 'it' in a culture that appears to be dominated by the core belief that precipitates betrayal and denial. Here I immediately run into all the difficulties of trying to communicate within a logical framework and language that is itself

predicated on the assumed 'correctness' of this very core belief that I am questioning. When I appear to be trying to 'correct' this assumed 'correctness', there is understandable resentment, a sense that I am trying to impose my 'will' on the assumed 'free will' of others. What in Heaven's name gives 'me alone' the 'right' to 'do' such a 'thing'? I have to take great care to avoid getting caught up in a game of reciprocal denial leading nowhere fast.

'Correction', in the minds of those most attached to the core belief of individual sovereignty (independence/free agency), is inescapably linked to notions of 'being wrong', 'failure' and 'punishment' - no wonder it is not taken or given kindly! For those not so attached to this core belief (very difficult in our present culture) it is understood more in terms of dynamical attunement with context, a vital aspect of our skillful navigation of ever-transforming seas.

So, who is correcting who, and what? And what does 'correction' mean? Here the one-way filter between objective 'rationality' and fluid dynamic 'inclusionality' is very significant. Inclusionality can 'see the point' of 'objective rationality' but cannot incorporate the latter *entirely* (i.e. completely 'untransformed'). But objective rationality - based as it is on the logic of opposition - cannot 'see the point' of 'inclusionality', other than as 'some alternative to set itself against'. As soon as the boundaries that absolutely define objective rationality are fluidized (through the incorporation of spatial presence), rationality becomes inclusionality, and our worldview somersaults, allowing us to prioritize our natural neighbourhood that includes our individual (local) identities. We ask not so much 'what is rightful?' as if this is some moral imperative, but what 'feels right' or 'natural' as dynamic relational inclusions of the flow. 'Pain' informs us of 'what doesn't feel right'. Play enables to explore possibility happily together, adoring our differences, helping one another in and out of holes.

How, then, may our educational practice transform so as to include the playful possibilities that are so vital to the evolutionary creativity of nature, including human nature? My hope is that this piece may be a non-object lesson.

References

Who needs them? And why?

2. Path-finding and Path-Following: Spreading and Narrowing the Focus of Evolutionary Creativity through Natural Inclusion

Summary

In planning for ‘the future’, much of our human focus continues to be on ‘forward-thinking’, which essentially relies 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 prescriptive ‘targets’ and ‘best practices’ are aimed for in an essentially linear progression along chains of cause and effect in a fixed, 3-dimensional framework that treats space and time as independent background constants. Biological evolution has been depicted in much the same way, as a process of progressive adaptation involving the preferential selection of those forms that have a competitive advantage in a defined set of circumstances or ‘niche’.

Here I show how the rigid selectivity of this approach, whilst *simulating* one aspect of natural evolutionary processes disregards another. It obstructs our ability to attune with an ever-changing context, such as that currently referred to as ‘climate change’. For such attunement, a natural, evolutionarily open, process is necessary to enable a creatively receptive response in a space-including geometry that is fundamentally fluid, not fixed. This process of ‘natural inclusion’ involves the non-linear integration, differentiation and complementation of *both* radially symmetrical (all round) *and* polarized (channelled) non-local and local spatial information. Here, the latter is a dynamic inclusion - necessarily both including and included in the former, like a weathervane signifying airflow or fish attuning with streambed. It cannot operate as an independent executive object, isolated from what includes itself.

Fixing the Future: Goal-Oriented Rationality in a Euclidean Frame

Imagine you are one of a party of survivors of a plane crash in the middle of a desert. Somewhere, beyond your immediate view, there *may* be an oasis. How might you find refreshment? In this essay, I show why, in such a situation, a single-minded, Darwinian, ‘survival of the fittest’ mentality would be disastrous, and how a fungus, or any similar fluid dynamic natural organization could do better with no evident selective consciousness or central executive leadership. I go on to explore how, notwithstanding our self-awareness, our human ability to love our neighborhood as our ‘self’, may make us more creatively like a fungus than we might *think* we are!

A singular characteristic of human perception appears to be the widespread idea that somehow some ‘thing’ objectively called ‘the future’ exists, which can be approached along a predetermined path that leads predictably to either a ‘good’ or a ‘bad’ end. Those elite few empowered through this perception to be ‘decision-makers’ on behalf of the populace hence stake their claims to authority upon their ability to select which path will have a good outcome and ensure that it is followed by means of suitable legislation and enforcement. What counts as ‘good’ depends, however, on making a ‘value-judgement’, a matter of opinion concerning relative desirability that may or may not be shared by all concerned. Even where some kind of electorate is consulted, the outcome may not be ‘democratic’ in the sense of governance for all by all, but rather the imposition of rule by a majority, whose favour is curried by rhetorical debate. A sharp dividing line develops between ‘them’ and ‘us’, those empowered or oppressed by the system. Conflict and tension become inevitable, especially where what are judged by those with power to be desirable ends are used to justify undesirable means applied to those oppressed.

The pursuit of desirable objectives itself depends upon a system of objective logic, perhaps unique to human beings, whereby ‘good’ or ‘bad’ are defined in absolute moral terms, regardless of natural situation. Indeed this logic has the effect of placing a hard

dividing line between ‘human being’ and ‘other nature’. The latter then becomes what externally threatens or serves human interest, not what human interest inextricably both includes and is included by as natural neighborhood. For at the heart of this logic is the strict definition of ‘what is’ *or* ‘is not’ a particular object. Any ‘middle ground’ between what *is* and *is not* is thereby explicitly excluded - the so-called ‘law of the excluded middle’. Ultimately, this law depends on the exclusion of ‘space’ - as constant empty background or ‘void’ - from ‘matter’ - as condensed electromagnetic information or ‘energy’.

The exclusion of immaterial from material presence - rather than dynamic mutual inclusion of each in and by the other - leads to a de-spirited, static, purely materialistic view of natural form shaped by ‘structure’ alone. Here, ‘space’, is paradoxically regarded both as ‘absence of quantifiable material presence’ and as ‘distance’ between material entities, which is measured in terms of structural units of length, area and volume. In other words space is measured in units of structure, whilst counting as nothing in itself, a nonentity and non-participant in the dynamics of independent form, contained in a box of x , y and z co-ordinates extending from zero through infinitesimal to infinite. Within this box, movement can only be brought about through the imposition of ‘force’, ultimately derived from somewhere ineffable, rather than being implicitly included in a continual natural process of contextual transformation (see Rayner 2004).

This is the cubical cubicle world of 3-dimensional Euclidean geometry, where points are dimensionless, lines are widthless, planes are depthless and solids are pure magic! The great arithmetical convenience of this world is that both space and time can be abstracted as constants, divisible into discrete equal units to form an independent reference frame in which to fix and quantify the movements, mass and numbers of pure material objects. Curvature is not treated as natural or primary, but constructed secondarily by calculus, in infinitesimal steps from discrete point masses or singularities. Acceleration is derived from velocity, not vice versa.

Only in this back-projected, atomized world of alienation of material from immaterial presence can any kind of fixed independent form exist, for any natural curvature implies a dynamic spatial asymmetry (inequality) between interdependent concave and convex domains. These domains are reciprocally coupled and distinguished through the transition zone or ‘boundary’ that simultaneously outlines one and inlines the other. Try to blow a cubical bubble and you’ll gather what I mean!

As was recognised by Henri Poincaré (1905), it takes only a few moments’ real-world consideration to appreciate that this *primarily* linear world of Euclidean geometry is inconsistent with our living experience of nature as inhabitants of the varied dynamic surface of a space-including sphere with no fixed centre or corners. It is both an abstraction from and an inverted supra-natural imposition upon real-world dynamic geometry. Yet it lies deep in the heart of the fallacious and ultimately adversarial, distressing and addictive logic that we apply so rigorously to our understanding of life on Earth. What is it about human beings, which makes us so susceptible to becoming entrapped by this pure materialistic logic?

Abstract Sovereignty: The Unnatural Selectivity of Hierarchical Governance

Imagine for a moment that you are not a member of a party, but a sole survivor of that plane crash in the desert. Your only hope, quite literally, is to set as straight a course as you can for the horizon. You proceed with grim determination, looking forward all the way, as we humans are predisposed to do through eyes set on the front of our faces and powerful frontal lobes in our brains, which repress any sideways distraction of conscious attention from our fixed objective. You are further aided by your own footprints, which help you to avoid departing from or backtracking along your initially set trajectory, and any set reference points like a distant hilltop or the trajectory and angle of elevation of the sun. At last, water appears in the distance. You thank God and/or congratulate your own single-mindedness for your deliverance. Of course, for all you know, you *could* have set off in exactly the wrong direction, but then you wouldn’t have lived to tell the tale. So you prepare to repeat this successful strategy, thinking that what’s served you so well in ‘the past’ will serve you equally well in ‘the future’.

It's easy in this context to understand how the human tendency to fixate upon desirable objectives can be developed and reinforced by any sense of individual isolation in a desolate, unyielding landscape. Here, the only immediate sign of 'life' or 'movement' is within one self and all else appears to be fixed structure and empty space. The doublethink begins to emerge of the individual as a 'free agency' - a local, self-centred automaton paradoxically driven *either* by internal purpose *or* external force and free to do whatever it thinks fit in order to stay alive and well. This is the thought that appears to have become deeply entrenched in modern human culture, reinforced along its way by philosophical, religious, mathematical, scientific, educational, political and economic orthodoxy ('right-mindedness'). Moreover, there is strong anthropological evidence that this thought began its ascent to prominence with 'The Fall', during a period around 6000 years ago, when large areas of the Middle East and North Africa became desert (Taylor, 2005).

Our dislocated sense of self-centredness as ghost-in-the-machine prisoners of our skin severed from and hence in rivalry with the world of other(s) outside, has us seek to impose our will upon this world in a superhuman effort to avoid being overwhelmed by it. We struggle for our existence through seeking sovereignty over other(s).

We begin to divide the world and ourselves up into opposing factions and fractions, which can only be overruled by the power of 'higher authority'. We seek the rich rewards this power brings, for ourselves. We gain this power by winning competitive games of one against another. But as we do so, the possibility of loving 'other' as a vital aspect of our 'self' recedes further and further and further away, behind the barricade that we have ourselves set against it.

Our creative lives become diminished, fearful and ultimately as desolate as the desert mind set that drove us to such abstraction. The most help we can expect from others in our human neighborhood is to co-preserve an uneasy balance of power. We survive but don't thrive, armed to the teeth with weapons of mutually assured destruction and certain

of our mutual selfishness and mistrust worthiness, in accordance with John Nash's 'Game Theory' and Richard Dawkins' 'Selfish Genes'. Many of us may try to escape this unforgiving world through various forms of addiction and expressions of mental distress. Meanwhile we let our living space go to pot, until, as recently, we suddenly notice that it's overheating, and frantically set about trying to rectify it using the same sovereign logic that got us into trouble in the first place. Over thirty years ago, when I was depressed following a year of postgraduate research in which I had been fully exposed for the first time in my life to the real implications of 'objective scientific method', I portrayed this desolation in the painting shown in Figure 1.



Figure 1. 'Arid Confrontation' (Oil painting on board, by Alan Rayner, 1973). *This painting depicts the limitations of the detached view of the observer excommunicated from nature. After a long pilgrimage, access to life is barred from the objective stare by the rigidity of artificial boundaries. A sun composed of semicircle and triangles is caught between straight lines and weeps sundrops into a canalized watercourse. Moonlight, transformed into penetrating shafts of fear encroaches across the night sky above a plain of desolation. Life is withdrawn behind closed doors.*

No Fixed Limits: Fluid Dynamic Patterns of Natural Exploration

How very different it could all be if instead of being a sole survivor in the desert, we were members of a party who could radiate in all directions, whilst remaining in touch with one another visually, acoustically and/or via our paths in the sand. When any one or a few of us came within range of an oasis, we could immediately communicate this to our nearest neighbors. Our neighbors would relay the message to their neighbors, and all would quickly converge upon and reinforce our initial path, some crossing over from, others retracing their original footsteps. We'd all arrive at the oasis more or less together and splash ourselves all over in delight. We might chatter excitedly and praise our human cleverness for devising such a successful survival strategy. But then we'd be wrong. For such spreading and narrowing of focus in dynamic attunement with spatial context is characteristic of all kinds of living flow-forms, including fungi, as shown in Figure 2. In fact it's characteristic of flow forms generally, not just those we have become accustomed to classify as 'life as we know it' on Earth.

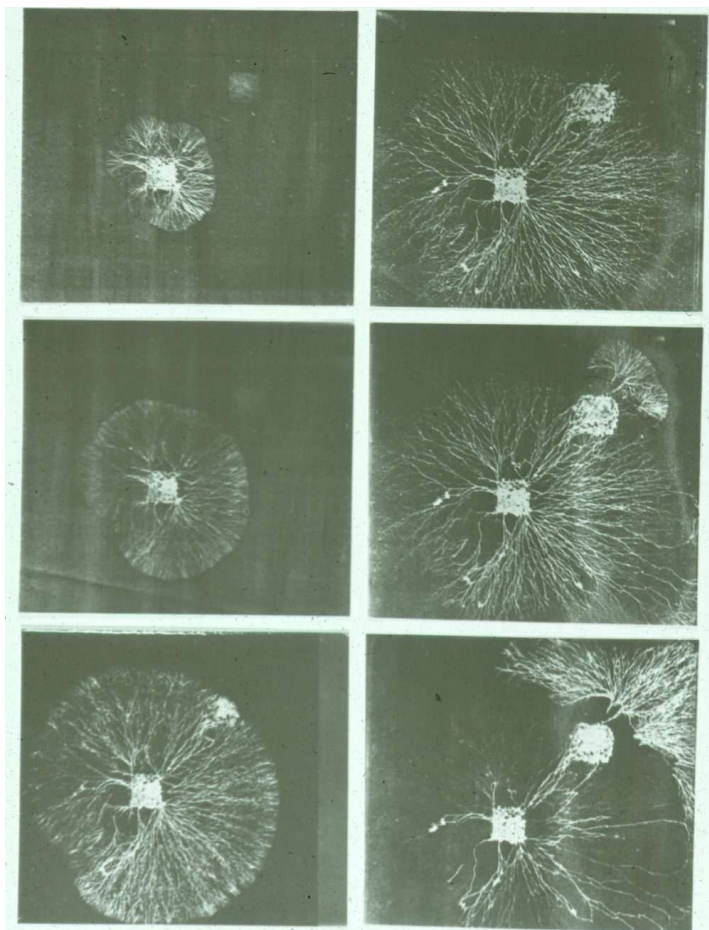


Figure 2. *A fungus finds an oasis in a desert, by fluid-dynamically spreading and narrowing its energetic focus. The wood-decaying fungus, *Hypholoma fasciculare*, has been inoculated into a tray full of soil on a block of wood ('starter' food source), with an uncolonized wood block ('bait' food source) placed some distance away from it. Distinct stages are shown in the radial spreading of the fungal colony from the inoculated wood block, followed by the redistribution and focusing of its energy in one direction following upon contact with the bait. Similar fluid dynamic patterns of gathering in, conservation of, exploration for and redistribution of energy supplies are found throughout the living world, from subcellular to ecosystem scales of organization (From Dowson et al., 1986; see also Rayner, 1997).*

Now just imagine that when the first of the party of plane crash survivors to locate an oasis refused to communicate with his or her neighbors but instead rushed headlong to take sole advantage. Alternatively, imagine that the leader of the advance party claimed

ownership over the find, saying that it was down to their superiority over their neighbors, and formed a posse to defend and perhaps charge an entrance fee to the facility. What kind of betrayal would that be? How much betrayal of that kind is evident in modern human culture and survival of the fittest mentality?

The relationship between spread-focus and narrow-focus exploration is also evident in two distinctive patterns of human brain activity, closely associated with creativity. These are called the Inspiration and Elaboration phase (e.g. see Claxton, 2006).

In the Inspiration phase, there is openness to all kinds of possibility via an unconditional panoramic perceptive process associated with ‘alpha waves’ in the brain. For many people this process may be taken for granted or unconscious - indeed associated with dreaming or daydreaming. Personally, however, I am very aware of consciously allowing myself to become receptive to whatever comes, by relaxing both my body and frame of mind as I give free reign to my imagination prior to setting to work on a piece of writing or painting or problem or opportunity. As inspiration is gained, particular possibilities are developed and refined into explicit form through the Elaboration phase, a process characterized by ‘beta waves’ associated with strong activity of the frontal lobes of the brain, which concentrate attention along a particular avenue.

These phases may also be related to distinctive forms of sensory perception, musculature and emotions. The Elaboration phase of unidirectional thought, would correspond with attraction or repulsion responses to or from sources of fear and satiation, detected through our explicit senses of sight, sound, taste, smell and touch, and mediated through ‘tonic’ or ‘fast action’ muscle fibers. The Inspiration phase of omni-directional thought would correspond with feelings of comfort and discomfort, derived from implicit all-round bodily ‘proprioception’ or ‘situational awareness’ of gravitational and thermal fields, and mediated through ‘phasic’ or ‘slow action’ muscle fibers. Whereas Inspiration provides an awareness of inclusion in ‘everywhere’ (non-local), Elaboration directs attention to ‘somewhere’ (local).

Clearly, these phases of inspiration and elaboration are complementary and interdependent, not mutually incompatible. Neither alone can amount to much: inspiration without elaboration is incoherent; elaboration without inspiration is restrictive. Moreover, the linear – directional - view can be derived from the non-linear – panoramic - by closing down spatial possibility, but not vice versa. The linear has to open up to the inclusion of space everywhere - all in all - to melt into non-linear.

What a travesty it is, then, if the linear view becomes regarded as somehow superior to and given inverted precedence over the non-linear! Yet just such favoritism is evident in an immense variety of hierarchically structured human walks of life, as well as in our selective interpretation of history and evolutionary process through post-hoc ‘hindsight’. A linear path is back-projected from present into past, and only those events or characters that occur sequentially along this path are acknowledged to have contributed to the historical lineage of cause and effect. The path becomes a regression ‘line of best fit’, selected through the exclusion of other possibilities, which become regarded as ‘peripheral’, ‘vulgar’, ‘non-mainstream’ or even as wasteful ‘failures’. Correspondingly, conventional neo-Darwinian evolutionary theory describes a process of ‘preserving the best and discarding the rest’ of a randomly generated set of variations, as if ‘success’ were a prescriptively fixed target that could only be attained in one way.

From such thinking emerges the idea that ‘if only I/we could predict with foresight the path to success that is evident from hindsight, how much better off I/we would be’. This is the idea that leads us to impose prescriptive closure upon our objectives and hence narrow down our creative options when trying to plan ahead, ever fearful of succumbing to competition with our rivals as the penalty for ‘error’ or ‘failure’. We become path-followers, not pathfinders: tunnel vision begets tunnel vision in an ever-deepening rut.

Close inspection of Figure 2 reveals, however, that this selective understanding of evolutionary process literally presents a very partial, elitist and wasteful view of what really happens, even where there is a fixed ‘target’, let alone when opportunity is continually shifting via the transformation of the contextual landscape. Far from being

excluded as ‘failures’ from the path of discovery, the energetic resources initially spread out along other paths are gathered back into it, enabling considerable amplification. Simplification is achieved not by eliminative selection, but by integrative inclusion, involving the co-creative, fluid dynamic transformation of all by all in the receptive spatial context of labyrinthine pathways that become less resistive to current as current flows along them, enabling autocatalytic flow. Herein lies the fundamental difference between evolution by (un)natural selection – as an essentially degenerative process of ever-diminishing competitive options in a restrictive domain – and evolution by natural inclusion, as a creative process of ever-opening possibilities in a transforming spatial context.

Whirls, Curls, Nests and Labyrinths: The Dynamic, Space-including Geometry of Natural Inclusion

Geometrically, then, what makes the difference between a generative and degenerative evolutionary process is the dynamic inclusion, in the former, of space as ‘omnipresence of structural absence’. This inclusion is vital in the formation of a variable viscosity, variable permeability field of dynamic relational curvature in which every concavity simultaneously and reciprocally implies a convexity over nested scales from subatomic to universal. In this field any displacement of ‘somewhere’ local *simultaneously* and *reciprocally* implies a transformation in the configuration (i.e. a ‘transfiguration’) of ‘everywhere’ non-local, and vice versa. ‘Content’ cannot change or move independently of the spatial context of which it is a dynamic inclusion. Evolution involves the continual harmonizing (‘dynamic balancing’, ‘attunement’ or ‘resonance’) of local with non-local, not the perfection of individual fixed entities through one-way ‘adaptation’ to a fixed ‘other’.

The mutual correspondence of ever transforming convex and concave via necessarily incomplete and hence ‘holey’ or permeable, intermediary domains, implies a fundamental dynamic geometry of Nature. This geometry extends from microcosm to macrocosm and

differs radically from the hard-line abstractions of Euclid. It is *primarily* non-linear or curved, due to the inductive receptivity of spatial attraction, giving rise to spheres, ellipsoids, spirals and tubes.

Linear structure emerges *secondarily* from this geometry, as in the cylinders formed by trees or the hexagonal arrays formed in honeycombs and the regular surfaces of crystals. This natural geometry is also ‘nested’, with smaller domains contained within and communicating with larger domains. The simplest form of expression of this geometry would be a set of concentric perforated spheres, but has the potential to become extremely ‘involved’ or ‘complex’.

The nearest approach that conventionally fixed-framed mathematics has made to this natural fluid dynamic geometry of ‘nested holeyness’ or ‘holey communion’ is known as ‘fractal geometry’. This was made famous by Benoit Mandelbrot (1977), as a way to describe structures whose boundaries, unlike Euclidean surfaces, appear progressively more complex/irregular, in ‘self-similar’ patterns, the closer they are observed. Almost anything we look at in nature from clouds, to snowflakes, to river valleys, to ferns, to trees, to lungs has this property, which makes them immeasurable in terms of discrete units of length, area and volume, because how much you see depends on how close you are. For example, the length of the coastline of Madagascar seems much less to an astronaut orbiting the Earth than it does to a mite crawling around its many indentations. At infinitesimal scales of closeness, the length is infinite.

The problem of quantifying fractal structures can be solved by relinquishing the Euclidean idealization that dimensions can have only integral values of 0, 1, 2, 3, 4 etc, and allowing them also to have fractional (hence ‘fractal’) values. The fractal dimension of a structure can be calculated from the equation:

$$M = kN^D$$

where M is the material ‘content’ of a portion of the structure, r is the radius of the field in which this portion of content is contained, and D is the dimension. D can readily be found from the relationship between the logarithms of M and r for different fields of view. If the structure is homogeneous, then D will have an integral value. If it is heterogeneous, D will be fractional.

Fractal patterns can be simulated mathematically by iterating non-linear equations. A famous example is the ‘Mandelbrot set’ itself, which appeared in many guises as a colourful modern mathematical art form in the late twentieth century. This set is made by mapping the distribution of points in the ‘complex plane’ that do not result in infinity when iterated according to the rule, $z \rightarrow z^2 + c$, where z begins at zero and c is the complex number corresponding to the point being tested. Here, a ‘complex number’ is a number that consists of a combination of a ‘real’ and ‘imaginary’ component, the latter being a derivation of, ‘ i ’, the square root of -1. The complex plane is formed in the space defined by placing all ‘real’ numbers, from $-\infty$, through 0, to $+\infty$ along a horizontal line, and all ‘imaginary’ numbers, from $-\infty i$, through 0, to $+\infty i$, along a vertical line, and using these Euclidean lines as co-ordinates. In effect, it represents a way of increasing the ‘possibility space’ for numbers as discrete entities to inhabit, from one to two dimensions.

The remarkable feature of the Mandelbrot set is the extraordinarily complex boundary that occurs between points within and points outside the set, in effect between an inner attractive space of zero and an outer attractive space of infinity. Such complex boundaries formed between neighbouring attractive spaces or ‘attractors’ have more generally been referred to as ‘fractal basin boundaries’, and are clearly at least analogous to the complex boundaries of natural process geometry. The conventional abstract mathematical representation of such complexity, however, *begins* prescriptively with the implicit or explicit Euclidean or numerical *definition* of contents and containers as complete *wholes*, hence retaining paradoxical singularity and replacing their *simultaneous* reciprocal relationship with *sequential* ‘feedback’. Natural geometry, by contrast, implies intermediary, incompletely definable realms (dynamic boundaries) through which convex

and concave spatial possibilities are coupled and transformed by one another. Endless creative possibility emerges.

Simplifying Agenda: Removing the Complication from Complexity Theory

The *complex involvement* of ‘all in the fluid dynamic field of all’ may appear quite off-putting to those of us who yearn for a ‘simple life’, as well as impossible to analyse or study comprehensively by those striving for the clarity of rationalistic objectivity. Yet at the heart of this involvement is an underlying simplicity of dynamic local/non-local relationship, which has not been accounted for explicitly in modern Complexity Theory based on the ‘self-organization’ of many-bodied systems (e.g. Goodwin, 1994). This simplicity is actually obscured by efforts to simplify Nature via the imposition of a fixed reference frame or boundary limit around discrete objects or groups of objects. For in a real-world geometry where no such frame or discrete boundary is known to exist, to impose it can only ultimately add in redundant complication, distortion and misunderstanding. In much the same way, the complicated ‘epicycles’ used to explain ‘erratic’ planetary movements in the Ptolemaic, geocentric model of the solar system made life Hell for students and scholars of astronomy prior to the Copernican Revolution. Perhaps it is opportune now to remove this frame, or at least use it wisely, purely as a tool of enquiry rather than as an end in itself. Maybe we should focus instead on real-world dynamic boundaries as our source of reference to where we are in the scheme of everywhere, integral as these boundaries are in the fluid pooling together of all in all, microcosm in macrocosm and vice versa.

Dynamic Balancing: The Non-Executive Management of Natural Neighbourhood

There is a form of leadership 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 vision and specification of destination. In the absence of others’

agreement, it carries on regardless with whatever *action* it has planned, convinced in its own mindset that this is the 'right *thing to do*'. Any leader of this ilk, whether elected by a supposedly democratic majority or not, considers him or herself to have a prerogative to do what they *know* to be best for the world, regardless of context. Moreover, by exercising their moral imperialism in the face of opposition they demonstrate the strength of their authority, a resolve that historical narrative will, they imagine, in due course affirm and celebrate. But events often don't exactly turn out as predicted. The real life and death situation on the ground is far more complex and non-linear than envisaged. The effects of intervention in complex - highly involved - situations aren't so certain in the long run. The ensuing tragedies are never more heart-rending than when a leader decides to declare war upon his neighborhood.

This is a style that I think is all too commonly the *sole* form of leadership recognized in human organizations: a product of prescriptively definitive (rationalistic) thinking and action that places deterministic power at control centres or hubs. It amounts to what might be called *authoritarian, dictatorial, proprietorial* or, as my correspondent Ted Lumley puts it, *powerboat* leadership. It entails leadership towards a set destination of a fleet of individuals that have declared themselves independent of their natural situation by dint of strapping an outboard motor of technology on their backsides. It creates one Hell of a wash of collateral damage for those caught up in its turbulence. It is the kind of leadership provided by *some* so-called experts, gurus, presidents and ministers whose actions primarily serve individual self-interest, whereby an individual or elite lays down the law or 'codes of conduct' for others to follow, regardless of circumstances.

There is, however, another style of leadership, or perhaps more aptly, *craftsmanship*, that seeks to cultivate creative space for all to air their views and benefit from shared experience. This is what might be called *Arthurian* (after King Arthur and the Knights of the Round Table), *co-educational, non-proprietorial* or, as Ted Lumley puts it, *sailboat* leadership. Such craftsmanship is based on learning through experience how to attune with natural processes, in a way that all can learn from.

Now, as the supposedly 'United Nations' of humanity contemplates its 'next steps', in the face of seemingly global environmental, psychological and social crisis, the question of which, if either, of these forms of leadership is wiser seems very important. Here, it is not a question necessarily of 'which is better?' in an 'either/or' sense, but how can these styles best be balanced? How does anyone in this situation who seeks leadership or has leadership thrust upon them, see their role? Do they see themselves as co-cultivators of creative space for wise enquiry? Does they see themselves as Directors and Proprietors of organizations? Is wise leadership something definable that we can be *instructed* about via the 'right kind of training' in a real or virtual Institution? Is wise leadership perhaps identifiable with *love*, some indefinable presence that we can open ourselves to and co-cultivate?

Beneath all, I am suggesting that we need to learn or re-learn how to live and love a little more, and conflict a lot less, if we are to attune co-creatively with our ever-transforming natural neighbourhood. But I can no more tell you prescriptively how to 'do' this than I can tell you how to ride a bicycle along a bumpy road. I can only show and encourage you in a non-executive way that it's possible, by relaxing your self-definition and *using your feeling*. In much the same way, with no need for an onboard computer or set of gradient-detecting instruments, a weathervane aligns through its *bodily* relationship with airflow, and a trout orients with streambed. It's easy if you don't try too hard.

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3. Inclusional Science - From Artefact to Natural Creativity

Summary

Science, as it has come to be practised most widely, has been immensely successful in the invention and production of artefacts, whether these are in the form of conceptual frameworks within which to define, predict and constrain natural processes, or material technologies. This success has largely been based on an absolutely definitive logic that abstracts material ‘content’ from spatial ‘context’. Such abstraction greatly diminishes the dimensionality of natural, non-Euclidean, dynamic geometry by fixing reality within rectilinear structural limits of length, breadth and depth. It may therefore come at the expense of deeper understanding of natural dynamic processes, which is needed to address currently emerging environmental, social and psychological concerns bearing upon human well being.

Meanwhile, scientific research has itself provided evidence, implicit in relativity, quantum mechanics and non-linear theory, which undermines the logical foundations for definitive methods of enquiry and explanation. ‘Hard science’ is being revealed as inappropriately premised and simplistic, capable of complicating and obscuring rather than simplifying our understanding of natural creativity, through presenting a very *partial* (one-sided) worldview. Here I explore how science theory and practice may be made more comprehensive, so as to correspond in a truly more simple way with natural process, and hence enhance - not abandon - its successful application. Primarily, I suggest this is possible through a form of enquiry that transforms - but does not replace - objective rationality, by spatially fluidising - not absolutely removing - its boundary definitions.

Definitive Science and the Construction of Artefacts

At its simplest, Science may be described as a human endeavour to comprehend the nature of physical reality by means of unbiased observation and enquiry, which avoids distortion, misrepresentation and fantasy. This is, however, easier said than done. Bias is hard to avoid for three main reasons. Firstly, the practice of science cannot readily be isolated from its cultural context - the dynamic set of customs, expectations, aspirations and values that evolves in any human community. This community will only reward those scientists who conform to its demands, and may ignore or even punish those who don't. In such circumstances, both intellectual honesty and the potential scope of enquiry are liable to be compromised, especially in a competitive community. Secondly, the community of practising scientists will impose its own demands, for example through the process of 'peer review', based on its current knowledge and paradigms. Thirdly, and perhaps most insidiously, any attempt to avoid bias itself depends upon making assumptions about the nature of bias and hence about the nature of 'reality'. If these assumptions are inapt, then bias will be introduced by the very effort to avoid it.

So it can be that the mainstream of Science becomes diverted from the very course that it most honourably seeks to follow. Far from faithfully representing natural creativity, its products may be artefacts, man-made constructions incongruent with the world in and from which they are forged. Moreover, the more *useful* and *convenient* these artefacts may seem, the more *powerfully* will the stream be diverted until ultimately it proves to be unsustainable in the natural world of its origins that it sought to comprehend.

The most tangible artefacts of Science are those demanded by its ravenous sister, technology, in order to *ease* our human way of life. Some, not necessarily all, of these artefacts may, however, all too readily engender *dis-ease*. Many a technological 'silver lining' brings with it a 'dark cloud' that compromises human and environmental well being in one way or another, whether it be gunpowder, nuclear energy, cars, planes, wind-turbines, genetically modified crops, nitrogenous fertilisers, drugs, computers or whatever. Somehow, however, the 'dark cloud' always seems to take many of us by surprise, looming from some neglected quarter of nature or human nature that wasn't accounted for in the initial research and development. Maybe there's something about our

current accounting methods, which is intrinsically neglectful and therefore biased in its expectations. If so, what is being neglected? Could there be a form of enquiry and accounting that enables us to be more circumspect, more aware of and able to navigate unpredictable possibilities?

Less tangible, but ultimately far more profound and intractable artefacts of science lie deep in its mathematical and logical foundations. These were laid during a phase of human cultural evolution when our technologies had developed insufficiently to enable us to see much beyond or within what could be revealed by our naked eye. Ironically, we appear to have remained more attached to the definitive worldview arising from this restrictive vision, than what new technologies have actually revealed about the microscopic and macroscopic character of the cosmos and our own human physiology, biochemistry and anatomy.

To cut a long story short, current scientific orthodoxy continues to hold unswervingly to faith in objective rationality as the basis for unbiased enquiry, but in doing so produces artefacts in the form of abstract logical frameworks and explanatory concepts. This is because objective rationality depends on the supposition that nature can be defined absolutely into independent, singular 'forms', 'bodies' or 'objects'. These objects obey the logic of the 'excluded middle' in that they cannot be other than themselves; everything, according to this logic, which originated with Aristotle and Parmenides and persists in various forms to this day, *must* be *either A or not A*. For this logic to hold true an absolute demarcation must exist between 'something' and 'nothing' - 'solid' matter and 'empty' space. Space must, in other words, be discounted as 'immaterial', an absence of physical presence', which cannot be included in matter. For if space is counted as a physical presence, no thing can be truly isolated from any other thing - all inescapably co-exist in a common, fluid dynamic pool, like fish in an ocean and solutes in a solution, distinct and distinguishable but not discrete and definable.

Correspondingly, by treating space as 'nothing', an absence that nonetheless puts distance between (i.e. isolates) one thing and another, objective rationality mentally

subdivides nature into discrete and therefore independent factions and fractions. These may be atomic particles, genes, human bodies, plots of land, nation states, natural ecosystems, planets, galaxies or whatever. They are studied in objective isolation from one another by a distant observer, supposedly without bias, who does not allow his or her own feelings to affect interpretation or analysis of whatever presents itself to view. They are categorised, measured, counted, manipulated and analysed within a discrete, three-dimensional, Euclidean structural framework, with space and time abstracted as background and subdivided into identical units. They are added, subtracted, multiplied and divided according to the rules of elementary arithmetic.

All interpretation of natural form and process in terms of objective rationality, whether ‘deterministic’ or ‘stochastic’ (fate or chance-based) is therefore ‘*definition-driven*’. It is dependent upon the tacit assumption that material content can be fully separated from spatial context, and hence that nature is definable into entirely discrete entities. There is, however, no contemporary scientific evidence to support this premise, and much evidence and reason to suggest that it cannot possibly apply to any kind of natural evolutionary process because ‘space’ - as an omnipresence of structural absence - cannot be excluded from natural dynamic geometry at any scale (Rayner 2004). In short, without the physical presence of space, no movement or distinction of form would be possible. ‘All’ would be a self-referential ‘concrete point’ of the kind envisaged by ‘big bang’ cosmology and exposed mathematically by Gödel’s theorem to be a paradoxical axiom (definition) - an *extrapolation* or *reductio ad absurdum* (cf. Hofstadter, 1980).

Objectivity is therefore liable to introduce profound *bias*, the very thing it claims to avoid, whilst also greatly restricting the scope of scientific enquiry and interpretation. It does so by presenting an ineluctably *partial* (one-sided and self-referential) view of reality, ironically through its very insistence on material *completeness*. Note, however, that this view is not *entirely wrong*, because it *is partially* based in reality! But it is utterly inadequate to account for natural creative possibility.

Since the vast majority of scientific concepts and mathematical procedures and proofs are artefacts of objective definition (what Poincaré, 1905, referred to as ‘hidden axioms’), serious reservations must attach to their application to real-world dynamics. They may well provide excellent tools of enquiry, if used wisely, with full awareness of their partiality, but they cannot substitute nature. In particular, they re-present, and hence to varying degrees misrepresent, fluid dynamic natural process in much the same way that a cine film does.

In effect, independent snapshots of natural flow are abstracted and frozen within a fixed, rectilinear spatial frame at discrete time intervals. These snapshots are then run together, leaving our imagination magically to restore the spatial continuity in the gaps between frames. Trouble begins when the re-animated sequence is considered equivalent to the original undisrupted animation, with the isolated frames treated as if they were its fundamental, independent, particulate ingredients.

In the resulting back-projection, the frames become regarded as the *determinants* rather than as isolated fragments or ‘fixed precipitate’ of the flow. We become prone, with hindsight, to interpret history back-to-front, as a regression line of best fit to present *status quo*, with most of the original ‘co-incidental’ behaviour off this line edited out. We then proceed to use this regression to forward-project or ‘predict’ an abstract future or ‘end’, and contrive ‘means’ to serve whatever we perceive to be desirable outcomes. Moreover, having dislocated each frame from the flow, we require some *forceful agency* or *actor* to re-animate the flow. We begin to ask paradoxically ‘what do we *do* to bring about our desired fate? In so doing, we imagine that our bodies are inhabited by some internal driver or ‘ghost in the machine’ decision-maker, notwithstanding that they are in the meantime being pushed and pulled about from outside. Our resulting actions may correspondingly prove fatally out of attunement with the flow in which they are inextricably immersed, engendering profound psychological, social and environmental distress and damage.

Such prescriptive, definition-driven enquiry and interpretation is evident in a very wide variety of positivistic scientific endeavours and their simplistic popularisation. Egged on all the more by research funding agencies, assessment exercises and pressures to publish or perish, scientific enquiry becomes ‘self-fulfilling prophecy’. We set out to concoct and test ‘falsifiable’ and thereby axiomatic hypotheses, with minds so closed off from indefinable possibilities that we can and do ignore observations that ‘don’t fit’ with our presuppositions. Meanwhile we pay little or no attention to where and how these hypotheses and presuppositions arise in the first place.

Potent examples are to be found in the fields of Sociobiology and Game Theory, where the mathematical convenience of defining individuals as discrete numerical entities has led to inapt depictions of ‘selfishness’ and ‘altruism’. These depictions unjustifiably attribute the *association* of particular behaviours with genetic relatedness directly to genetic motivation (cf. Wilson, 1998). They have in turn been incorporated into damaging socio-political models, which reinforce the Darwinian axiom of ‘survival of the fittest’ (Rayner 2006). With such models holding sway in the public imagination it is difficult to imagine how human conflict can be minimised and environmental sustainability encouraged. Somehow, they need to be transformed into a more comprehensive understanding, by including the receptive space that they ignore by imposing prescriptive definitions.

Fluidising Science - the Natural Inclusion of Receptive Space

No sooner are the definitions relaxed that scientists supra-naturally impose for the sake of theoretical and methodological convenience, than Science may transform from the study and generation of artefacts into a more naturally attuned endeavour. The underlying logic for scientific enquiry and explanation can hence transform from the opposition of fixed alternatives assumed to be exclusively right or wrong, to the complementarity of inner and outer possibilities both distinguished and pooled together through their dynamic interfacial boundaries in common space. This transformed reasoning can be thought of as

the logic of the ‘included middle’ or ‘mutual inclusion of *one within other*’. It accords with a kind of awareness that Ted Lumley and I have called ‘inclusionality’ to highlight its distinction from divisive forms of ‘rationality’ (Rayner 2003, 2004). Here, all form is regarded as ‘flow-form’, a dynamic inclusion - not an occupier - *of space in space*, which cannot be defined absolutely in an unfrozen world.

With inclusionality, the freeze-framed geometry of isolated form melts into a fluid dynamic geometry or ‘transformational topology’ where space pervades everywhere, throughout an electromagnetically informed thermal and gravitational field. This dynamic geometry extends from microcosm to macrocosm and differs radically from the hard-line abstractions of Euclid. Its *primary* character is non-linear, twisting and curving, due to the inductive receptivity of spatial attraction, giving rise to bubbling spheres, ellipsoids, spirals and tubes in which *all are simultaneously* included in and reciprocally shaping *all*. It includes the human observer who may vainly attempt to detach from the scene by dislocating inner feeling experience (‘proprioception’) from his or her outward gaze.

Linear structure emerges *secondarily* from this geometry, as in the cylinders formed by trees or the hexagonal arrays formed in honeycombs and the regular surfaces of crystals. This natural geometry is also ‘nested’, with smaller domains contained within and communicating with larger domains. The simplest form of expression of this geometry would be a set of concentric perforated spheres, but has the potential to become extremely ‘involved’ or ‘complex’.

The nearest approach that conventionally fixed-framed mathematics has made to this natural fluid dynamic geometry of ‘nested holeyness’ or ‘holey communion’ is known as ‘fractal geometry’ (Rayner 2004). This idea is closely linked with the development of non-linear dynamical systems theory, versions of which have been popularised as Chaos and Complexity theories (e.g. Gleick, 1989). It was made famous by Benoit Mandelbrot (1977), as a way to describe structures whose boundaries, unlike Euclidean surfaces, appear progressively more complex/irregular, in ‘self-similar’ patterns, the closer they are observed. Almost anything we look at in nature from clouds, to snowflakes, to river

valleys, to ferns, to trees, to lungs has this property, which makes them immeasurable in terms of discrete units of length, area and volume, because how much you see depends on how close you are. For example, the length of the coastline of Madagascar seems much less to an astronaut orbiting the Earth than it does to a mite crawling around its many indentations. At infinitesimal scales of closeness, the length is infinite.

The problem of quantifying fractal structures can be solved by relinquishing the Euclidean idealization that dimensions can have only integral values of 0, 1, 2, 3, 4 etc, and allowing them also to have fractional (hence ‘fractal’) values. The fractal dimension of a structure can be calculated from the equation:

$$M = kr^D$$

where M is the material ‘content’ of a portion of the structure, r is the radius of the field in which this portion of content is contained, and D is the dimension. D can readily be found from the relationship between the logarithms of M and r for different fields of view. If the structure is homogeneous, then D will have an integral value. If it is heterogeneous, D will be fractional.

Fractal patterns can be simulated mathematically by iterating non-linear equations. A famous example is the ‘Mandelbrot set’ itself, which appeared in many guises as a colourful modern mathematical art form in the late twentieth century. This set is made by mapping the distribution of points in the ‘complex plane’ that do not result in infinity when iterated according to the rule, $z \rightarrow z^2 + c$, where z begins at zero and c is the complex number corresponding to the point being tested. Here, a ‘complex number’ is a number that consists of a combination of a ‘real’ and ‘imaginary’ component, the latter being a derivation of, ‘ i ’, the square root of -1. The complex plane is formed in the space defined by placing all ‘real’ numbers, from $-\infty$, through 0, to $+\infty$ along a horizontal line, and all ‘imaginary’ numbers, from $-\infty i$, through 0, to $+\infty i$, along a vertical line, and using these Euclidean lines as co-ordinates. In effect, it represents a way of increasing the

‘possibility space’ for numbers as discrete entities to inhabit, from one to two dimensions.

The remarkable feature of the Mandelbrot set is the extraordinarily complex boundary that occurs between points within and points outside the set, in effect between an inner attractive space of zero and an outer attractive space of infinity. Such complex boundaries formed between neighbouring attractive spaces or ‘attractors’ have more generally been referred to as ‘fractal basin boundaries’, and are clearly at least analogous to the complex boundaries of natural process geometry.

Such *deterministic* representations of complexity, however, still *begin* prescriptively with the implicit or explicit Euclidean framing or numerical *definition* of contents and containers as complete *wholes* or ‘sets of initial conditions’. They hence retain the paradoxical assumption of completeness and replace the *simultaneous* reciprocal dynamic correspondence – *attunement* or *resonance* - of coupled concave and convex domains with *sequential* ‘feedback’, fixed within a rectilinear structural frame of space and/or time. They remain firmly in the ‘box’, even though they may subdivide its contents indefinitely.

The ‘warm’, fluid dynamic geometry of inclusionality, by contrast, implies the continual emergence of intermediary, incompletely definable transition zones (dynamic boundaries) through which convex and concave spatial possibilities are coupled and transformed by one another (Rayner 2004; cf. Shakunle, 1994). The implications of this geometry for our understanding both of nature and human nature are profound. They radically shift the emphasis we have traditionally placed on isolated ‘figures’ by liberating them from definition against a fixed background and including them inextricably within dynamic spatial context. Through this shift we invert the priority analytical thought gives to ‘content’ over ‘context’ and appreciate that all content is by its very nature ‘contextual’ – a dynamic inclusion of all, not a sovereign ruler over all. We focus primarily on how the ‘field of animation’ transforms in the process of giving rise to and subsuming the local distinctions or concentrations of energy that we may define

through our explicit senses as ‘material objects’, not upon how these objects define and animate the field.

Hence we may *distinguish* but not *entirely define* the immense variety of evolutionary flow form in terms of ‘natural inclusion’ as *the co-creative, fluid-dynamic transformation of all through all in receptive spatial context*. We recognise that we cannot change or move any local identity (distinct ‘somewhere’) without simultaneously and reciprocally transforming the non-local identity of all (heterogeneous ‘everywhere’), and *vice versa*, spatially and relationally. We understand evolution in terms of reciprocal relationship - resonance or dynamic attunement - not the perfect adaptation of discrete individuals to pre-defined niches through the Darwinian ‘*preservation of favoured races in the struggle for life*’. Having not fixed the flow through prescriptive definition, there is no need to re-animate it by means of some ineffable *force*. Instead of envisaging a world of independent objects acting and reacting against and to one another in linear chains of cause and effect, we appreciate a natural neighbourhood of receptive-responsive flow-forms pooled together in common space.

Nothing is lost in this inclusional view of nature apart from the sense of absolute, predictable control and individual freedom that we may have gained by imposing definition upon it. But if this sense is a false one, an artefact that does not correspond with reality and may prove utterly misleading in the long run, what is to be gained, and how much is to be lost by adhering to it?

There is no reason to believe that a more geometrically realistic logical and methodological basis for scientific enquiry would have prevented or even delayed any of our scientific discoveries. It may, though, have made us more circumspect about their technological development and application as destructive weapons, sources of pollution and exploitative means of exercising authoritarian power over both human and non-human forms of life. Inclusionality doesn’t prevent us from identifying, distinguishing and working with diverse natural manifestations in dynamic relationship – it only holds us back from imposing stultifying limits upon their expression. By the same token, there

is every reason to believe that fully definitive approaches have restricted the scope of philosophical and scientific enquiry and contributed to the conflicts that have drained human energies and creative and loving potential throughout recorded history. Even if through the ‘wrong reason’ we can contrive in very specific circumstances to predict some apparently ‘right’ answers, the latter will only serve to entrap us in persistent habits until, eventually, they find us out through the collapse of our social, psychological and environmental relationships. Ultimately we can make life hard for others and ourselves by trying to make it easy, within prescriptive limits of right or wrong definition.

Becoming Involved, not Complicated

Einstein & Infeld (1938) referred to the ‘inertial reference frame’ and ‘absolute time’ as ‘two frightening ghosts’, whose oppressive influence would be relieved by the advent of relativity theory. But somehow the oppression has not lifted, and definitive abstraction has remained firmly nailed in the heart of much current scientific theory and practice. Why? Is there some even more frightening presence that we become aware of as absolute fixed structures begin to dissolve?

In my experience, to call for definitions to be relaxed in a culture that is addicted to definition is to come into close encounter with stony ground, if not something like the fury of a toddler threatened with separation from its favourite toy or security blanket! It is difficult to find receptivity amongst many who have become accustomed to exclude receptivity from their way of accounting for nature and human nature. Once the vital receptivity of space is lost, it cannot be regained, any more than Humpty Dumpty can be restored to life from his shattered fragments. Inclusionality is hence not accessible from objective rationality, by definition, even though objective rationality can always be derived from and/or transformed by inclusionality.

To regain spatial receptivity in the process of relaxing – but not completely removing – definitions is to encounter the ghost of deep uncertainty, involvement and vulnerability that most of us will recognise implicitly in our personal experience, if not our explicit portrayal of life. This is the ghost that objective rationality loves to deny, or not even talk about, in the quest to suppress sources of fear. The ‘ghost of the gaps’, which permeates everywhere, pooling All together in universal communion, variously alluded to by distinct but not discrete religious and scientific belief systems as ‘Tao’, ‘Buddha Nature’, ‘Brahman’, ‘Holey Ghost’, ‘Wakan-Tanka’, ‘Gravity’, ‘Heat’, ‘Dark Energy/Matter’ etc. The inclusional ‘Mother Space’ or loving Agape of Nature, which fills us with profound compassion for our mortal companions, who we include in our sense of Self as Neighbourhood – somewhere as an inclusion of everywhere.

Correspondingly, principal among objectivity’s objections to inclusionality is that the razed down simplicity that comes from defining things will ‘get lost’. Personally, I rather wish that it would! But, seriously, this objection illustrates the *addictive*, all or none quality of false dichotomy: *either* we have total definition *or* no definition. Definition is something we *must have* if we are not to get *totally lost* in a sea of troubles. We exclude between two stools the dynamic ‘middle ground’ synthesis of ‘neither entirely one nor the other’ and ‘not even both one and other in parallel universes’ but ‘one incompletely within other’ as nested ‘whirls within whirls within the whirl of common flow-field’. In that exclusion almost all possibility for natural creativity really does get lost.

In reality, nature will not become less simple to understand if we relax definition, but our understanding will become more involved through appreciating the simple underlying coupling of inner whirl with outer whirl over all spatial scales. By the same token, the complications and paradoxes that arise as artefacts from imposing an imaginary fixed reference frame upon natural field flow will disappear from view, in much the same way as did the Ptolemaic ‘epicycles’ following the Copernican Revolution. The latter were used to explain away the erratic planetary paths evident from a geocentric definition of the Universe, but became redundant no sooner had that definition been found wanting.

Art Full Science - New Avenues for Creative Exploration and Communication

By excluding that which it defines itself not to be, objective science may not only alienate itself from the public whose appreciation, understanding and money it craves, but may also greatly diminish its own opportunities for creative evolution and correspondence with other human endeavours. Such exclusion is evident in the ‘Two Culture’ split between ‘Art’ and ‘Science’ notoriously brought to light by C.P. Snow (1959, 1963; see also Petroski, 2005), and the increasingly cantankerous collision between Darwinian evolutionary science and religious ‘Creationism’ or ‘Intelligent Design’ theory. In a non-linear inclusional perspective, there is no need for this split and the nastiness it engenders: the split is an artefact of definitive logic.

Inclusionality can transform science into a far more open, receptive-responsive endeavour, in tune with natural process. Inclusional Science welcomes diverse approaches and forms of expression and does not set itself up in antithesis to Art or Religion but searches for commonality and complementarity of meaning in all worldviews. Indeed the inclusion of forms of enquiry not conventionally regarded as ‘scientific’ could do much to loosen up prejudicial definition and ‘warm’ the language, mathematics and methodology of science, so helping to release a deeper spirit of human

communion and creativity. This is the enduring dream that I dare, as one still happy to describe but not define himself as a scientist, to express as follows:

Achilles Heal

A gap breathed space
Into the fortress
Of a soul walled in
By dreaming of Absolute security
In its individual completeness

Elevated above some baseline standard
Of soles firmly planted
At odds with one as another
In foundations of quicksand
Set fast in cement

How quickly this dreaming
Would fade
In less than a lifeline
Of certain anchorage

When doubt made its fearful question
Of presence felt
In a blow below the belt
That crippled unbending fixture
Into sharply wrought relief

Curved into some new and ancient
Awareness

Where no One could still compete
 When stilled by its own completeness
 Of idolized concrete

Inviolable to all but its own violation
 Of unfelt presence
 So deeply disconcerted
 By no sense of nonsense
 In the absence of its motherhood

Through which to find communion
 From sole to soul
 Unblockaded
 By proud pretension

A humility restored
 To Faith in individual failure
 As sure and omnipresent sign
 Of love in human nature

Opening all ways
 To unending Recreation
 In the very Shadow of Tragedy
 The Community Play of Foolish Genius

Beyond restrictive lessons
 In Schools of Guilty Thought
 That burden the bleating Heart
 With endless ways to blame and shame
 By reserving the right for One Alone
 To claim superiority

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4. From Oppressive Freedom to Freedom from Oppression: The Natural Re-Inclusion of The Dislocated Self

Summary

Deep in the heart of much human psychological, social and environmental 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 *forms from* the complex dynamic *involvement* of local and non-local realms and so cannot be extricated from its natural evolutionary neighbourhood.

How Objective Simplification Makes Life less Involved and more Oppressive

As modern human life becomes more and more demanding in terms of the variety of competencies that we¹ each have to acquire as individuals, so our fear of *involvement* in *relationships* with one another and the natural world seems to grow apace. It is as though civilisation's escape from 'the Jungle out there', whence our animal nature evolves, leads only into an even more perplexing 'Jungle in here', full of mythical constructions of our own making that rule our lives far more oppressively than any 'Lion King'.

This conundrum arises because in attempting to make life more comfortable, convenient and predictable, we have tried to extricate ourselves from involvement in natural processes by means of a simplifying method that ironically only serves to obstruct and complicate this involvement. The method consists, quite *literally*, of a very *particular* and *partial* way of seeking precise factual Knowledge about the world: our much-vaunted objective rationality. It is deeply embedded in the very foundations of many of our philosophical, mathematical, scientific, theological, historical, linguistic, governmental and educational endeavours. It has led much of our thinking and practice to become unrealistically *definition-driven* and hence *deterministic* or *stochastic* (fate- or chance-

¹ Throughout this essay I use 'we' and 'us' as collective terms for the common 'humanity' and 'natural neighborhood' of which I feel 'myself' to be a dynamic inclusion, even though the attitudes and behaviour I describe need not apply to all in general or anyone in particular. Often these terms may be read as 'shorthand' for 'many of us'.

based). It lies at the root of much psychological, social and environmental damage and distress. Not least of its damaging manifestations has lain in the development over the last 30 years of ‘sociobiology’, based on the application of the definitive neo-Darwinian concepts of ‘individual selection’ and ‘selfish genes’ to all kinds of social organization, human and non-human.

Much as we may yearn for more naturally simple and sustainable ways of living and loving, objective rationality makes us fall out of correspondence with our natural human neighbourhood (cf. Taylor, 2005). Far from making us ‘impartial’ in our observations and judgements, as many might think, it actually leads us to take a very *partial* - selective and prejudicial - view of our world and one another. We define ‘things’ as discrete objects that cannot be anything other than themselves and use this as the basis for the divisive logic of the excluded middle – ‘to be or not to be’. Through this logic, we inevitably set everything in opposition to everything else because, by definition, there is no way in which anything can be both ‘A’ and ‘not A’.

In effect, objective rationality reduces Nature into a cardboard cutout model in which every distinct form or ‘figure’ is excised from the ‘ground’ of its dynamic spatial context and re-located within a fully framed stage set as a cast of independent ‘actors’. Due to being isolated within their own boundaries and ‘individual property’, these actors are somehow magically animated entirely from within, whilst being pushed and pulled about by purely external forces. Their interrelationships can only be transactional - a set of equal and opposite actions and reactions distinguished as ‘cause’ and ‘effect’ in a linear

time frame. There can be no bodily sharing of common space, no room for the inductive receptivity of Agape (loving openness to other).

This is the cold, self-referential, cubical cubicle world of Newtonian mechanics. The position and momentum of independent material bodies are plotted within a fixed Euclidean (3-dimensional) structural framework of x, y, and z co-ordinates stretching to infinity, with void space abstracted as constant empty background and, like time, divided up into equal, discrete intervals. As Henri Poincaré (1905) recognised, it makes for great mathematical convenience, but cannot adequately represent the natural dynamic relationships of more than two distinct forms moving under one another's simultaneous mutual influence.

In actuality, the notion that any thing can be defined as a discrete object is inconsistent both with contemporary scientific findings implicit in quantum mechanics, relativity and non-linear theory, and with our everyday human experience of dynamic relationship with one another and nature. Ultimately, this is because *space*, as an omnipresence of structural absence, permeates *everywhere* - nowhere has any evidence been found for the existence of an indivisible solid particle or discrete structural limit that absolutely isolates one part of nature from any other. Indeed, were there any such limit, we could have no knowledge of what lay beyond or within it.

Adverse Nature: the Distress of Dislocation from Natural Neighbourhood

Nonetheless, we persist in trying to apply such definition to everything, including our own self-identity and personal property. As we do so, we sentence ourselves to a loveless life in adversity in which we are up against 'it' and against 'them', forming alliances only through our identification of common enemies who we can take sides against. We sacrifice our capacity for love to an oppressive struggle for power that can only be resolved by the elimination of one or the other. We 'take arms against a sea of troubles' in the vain belief that we can 'by opposing, end them'.

It is as though we are driven to abstract definition by a perception of something, which is reinforced in its turn by our definition-driven accounts of nature and ourselves. So, what could this 'something' be? Ultimately, I think it is our perception of 'something wrong', a fearful aspect of Nature and the nature of ourselves that has us run for cover but in the process of covering 'it' up predisposes us to conflict. It is whatever we perceive that brings pain, death and uncertainty. We may define it as 'Evil' and often as 'Darkness', which we contrast absolutely with 'Good' and 'Light'. We split both Nature and the nature of our 'Self' into two, each of which rages against the other. In doing so, we alienate what are as naturally vital to each other's co-expression as the ridge and trough of a wave.

In other words, by *thinking* that there is *something wrong* with Nature and/or human nature, and trying to define it in order to eliminate it in terms of absolute Knowledge of Good and Evil, we actually *manufacture* something wrong. We construct intellectual

facades within which to single out the human 'Self' from its natural neighbourhood, and attribute to this dislocated entity a paradoxical and oppressive 'free agency'. We set about trying to perfect this agency by eliminating its imperfection, in much the same way that Darwinian individual selection is held to enhance competitive fitness. The actual effect of such selection is, however, to open the way for eugenics and holocaust in the pursuit of an unattainable 'ideal', some future 'end' or 'goal' deemed to be desirable in terms of prescriptive 'values'.

In the midst of such self-imposed, definition-driven free agency, our distress grows ever more palpable. We feel alone in our struggles and vacant in our isolation - unable to trust or love any that would be our rival. So we look elsewhere to satisfy or mollify our animal cravings.

A Matter of Habit: Barriers to Love

Once we define ourselves as free agencies that have something intrinsically wrong with their nature, we create a *self-fulfilling prophecy* that traps us in recurrent loops of obsessive and compulsive behaviour. We simply cannot *see* the hidden potential that our definitions wittingly or unwittingly exclude, and so get caught in the crossfire of a vicious circular war of one definition against another. We may hence feel compelled to take sides on behalf of our idealisation of freedom or security. Alternatively, we may seek a way out of this war by retreating further into our sense of meaningless isolation, and/or through various forms of escapism, that serve only to entrap us ever more deeply. These are the burgeoning forms of self-oppression that our modern culture has come in

many instances to define as ‘addictions’. Many, if not all of them are correspondingly treated as if they are illnesses, ‘something wrong *with* us’. But many of them may more realistically be understood as desperate attempts to replace the hidden potential that our definitions exclude: they are symptoms of ‘something wrong *for* us’, which originates in absolute definition.

So what is this ‘hidden potential’, which addiction to absolute definition obscures from our view? I think it is no less than what goes missing when an objective frame is imposed upon Nature and around our selves. It is ‘the’ indefinable, all pervasive, receptive, ‘Mother-Space’ of Nature, everywhere. In another word, ‘it’ is ‘Love’. When we liberate ourselves from Love, through our assertion of free agency, we subject ourselves to an extraordinarily powerful form of oppression; a liberty we impose both upon others and ourselves, which drugs our consciousness into compliance. We join the crowd that declares in unison, ‘we are all individuals’, even though some non-conformist at the back may say ‘no, I am/we are not’. The crowd is very hard of hearing when it comes to appreciating the need for receptivity. It therefore perpetuates its own prophecy of individuals struggling to be the best conformists - dedicated followers of fashion, hooked on prescriptive definition. These individuals paradoxically need prescriptive moral codes and laws to govern the selfish extremes of behaviour that they assume would arise from their free agency in the absence of natural loving influence. As Richard Dawkins (1989) once put it: ‘let us try and *teach* generosity and altruism, because we are born selfish’!

Getting Out of the Habit: Warming the Boundaries of Cold Geometry

If objective definition gets us hooked upon oppressive notions of freedom and security within fixed ‘barriers to love’, what gets us ‘unhooked’ is clearly to *relax* these definitions through the *natural inclusion* of receptive space (Rayner, 2006). In this way, the fixed boundaries of objective form are transformed into fluid dynamic distinctions of ever forming, deforming and reforming complex identities of ‘one within other’, not one *or* other, or even one *and* other. Each of these identities can be thought of as a local ‘somewhere’ that is a dynamic inclusion of non-local ‘everywhere’; they are *distinct flow-forms*, not *discrete fixed forms*. They cannot therefore have independent fixed ‘executive centres’ of local government; they can only have dynamic local *foci of spatial influence*, like our bodily ‘centre of gravity’ or the ‘eye of a hurricane’. These are *simultaneously* both *sources and sinks* for energy flow betwixt inner whirls and outer whirls in the universal, non-linear whirl of the indefinable cosmos. Their boundaries are transitional places of dynamically coupled relationship and distinction - not places of severance, which isolate subject from object. They cannot be physically extricated as discrete entities from the natural evolutionary neighbourhood of the non-local field flow that they both locally include and of which they are dynamic inclusions. Such extrication is an artefact of mental abstraction, not a physical reality.

Natural inclusion correspondingly opens up the creative evolutionary possibilities implicit in the dynamic relational involvement of interdependent flow-forms, not the stultification of independent free agents. Our awareness of natural inclusion hence *enables us to participate in the release of a deeper spirit of natural communion and creativity, which liberates us from oppressive modes of thought and governance*. In other

words, we become free from oppression - ‘unhooked’ and ‘unaddicted’ - by *accepting*, and indeed *welcoming* our lack of absolute free agency in the inescapable pooled togetherness of our common space. Like William Wordsworth, we can appreciate that ‘in nature, everything is distinct, yet nothing defined into absolute, independent singleness’. Had the intended recipient of this message, Erasmus Darwin, and his grandson, Charles, been receptive to it, the oppressive notion of our evolutionary ‘struggle for existence’ might not have arisen, and we could have relaxed instead in the wonderful vision of the *kinship of all life*.

In effect, the natural inclusion of receptive space, like love, has a *warming influence* on our understanding of living in dynamic relationship. It *melts* geometrical ‘form’ from something frozen into a fixed interval of abstract time and space - a ‘snapshot’ - into somewhere continually unfolding and enfolding.

What we perceive through our explicit senses as ‘form’ is a ‘derivative’ of ‘flow’, i.e. ‘flow-form’, not the precursor of flow. Evolutionary flow is *not* the animation of temporarily fixed ‘forms’ (a temporal-sequential ‘changing’ from one form to another form, due to the imposition of external force in a three-dimensional box), but rather a continual process of ‘forming’. This fluid dynamic geometry extends from microcosm to macrocosm and differs radically from the hard-line abstractions of Euclid. It is *primarily* non-linear or curved, due to the inductive receptivity of space, giving rise to spheres, ellipsoids, spirals and tubes. Linear structure emerges *secondarily* from this geometry, as in the cylinders formed by trees or the hexagonal arrays formed in honeycombs and the

regular surfaces of crystals. This natural geometry is also ‘nested’, with smaller domains contained within and communicating with larger domains. The simplest form of expression of this geometry would be a set of concentric perforated spheres, but has the potential to become extremely ‘involved’ or ‘complex’.

Community in Diversity: Our Natural, Co-creative, Dynamic Neighbourhood

Hence we may begin to appreciate the natural communion that is the essence of natural communities of diverse flow-forms pooled together in common space. A forest is not a discrete mathematical *set* of uniform trees, but a seething variety of herbs, shrubs, trees, animals, fungi and bacteria that participate in the fluid dynamic transformation of solar energy, water, minerals and carbon dioxide into organic circulations of growth, death, decay and re-growth. Like it or not, we human beings are inescapably caught up in such circulations. So we might as well enjoy the ride whilst we may, rather than forever try to close the door on their inspirations and expirations.

From Power Struggle to Loving Receptivity

So the possibility arises of a very different understanding of the evolution of nature and human nature, which frees us from the oppression of our dislocated liberty, and allows our shared experience to prosper. We unhook from Darwin’s ‘preservation of favoured races in the struggle for life’, and regain our confidence in ‘natural inclusion’ as the *co-creative, fluid dynamic transformation of all through all in receptive spatial context*. We seek not to perfect individuals through a process of competitive elimination, but share in

the delight of perfecting complementary *relationship*, a process of *learning* how to hold our uniquely situated contributions in dynamic balance, where none gets absolutely out of hand. We ask not, ‘what can I *do* about this’ as a context-free agency, but ‘how may I respond receptively in this situation?’ We appreciate what it means to be involved, not complicated.

Is this ‘natural inclusion’ just another Utopia, an unattainable idealisation of human beneficence and social order? I don’t think so, because it makes no pretence of regarding humanity as other than natural, or of regarding natural life as without pain, death and uncertainty. But I do think it’s what can liberate us from those partial visions that fail to account for the vitality of what it really means to be human and natural and so have us chasing our tails forever in demented loops of individual perfectionism. It allows us to frequent a world where what may rationalistically be deemed to be individual imperfection – something wrong with us – is transformed into the dynamic foundation for our loving, receptive, co-creativity. I think it’s simply what *common sense* really means - what comes from the absence of those barriers to love that we love to impose in the pursuit of unnatural power over natural influence.

That it’s a tall order to let go of all that has driven our culture to addictive abstraction, I don’t doubt. But all that’s needed to resume our sense of natural inclusion is to relax, stop teaching ourselves that we are born selfish and allow ourselves to love our natural neighbourhood as the energy source-sink that sustains our complex identity.

Transformation can be rapid, once the floodgates are open to receptive-responsive

possibility. We include ourselves in the picture from which our objective eyesight singles us out, along with many others. We also recognise that to sever what's natural to improve our personal property, only serves to expose our personal property to view from elsewhere. Be careful with that axe, *Eugene!*

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5. From ‘Space-Time’ to ‘Place-Time’: The evolutionary geometry of inclusionality and natural inclusion

Have you ever found yourself in ‘the wrong place at the wrong time’? For that matter, have you ever found yourself in the ‘right place at the right time’? Such is the nature of our human experience of misadventure and serendipity – experience that if we are honest with ourselves informs us all too clearly about how context-dependent our seeming successes and failures are, and how inapt it is either to assume *sole* credit or deny *any* responsibility for them.

Who we are and how we fare depends on *where* we find ourselves, and where we find ourselves cannot be isolated from the space that both includes and is included by the dynamic configurations of our bodily boundaries. We are always *somewhere* locally unique as dynamic inclusions of a boundless, non-local everywhere. We are continually in transition, inhabitants of a dynamic neighbourhood of ever-transforming spatial relationship that simultaneously both shapes and is shaped by us, like the water in a river that both creates and follows paths of least resistance to its flow.

We cannot therefore make random exceptions of ourselves from Nature, as if we were independently definable objects, capable of being anywhere, anytime and driven hither and thither from some magical, forceful control centre somewhere either outside or inside the fixed definition of our bodies and living space. But that is precisely what rationalistic logic, based ultimately on the exclusion of ‘space’ as ‘void nothing’ from ‘matter’ as ‘definite something’, has been persuading us to try vainly to ‘do’ for millennia, whilst becoming ever more deeply entrenched in our philosophical, mathematical and scientific foundations. The fundamental premise of this logic – the existence of independently definable and quantifiable objects – lies in an idealized freezing out of ‘imperfection’ (i.e. ‘space’) from discrete and regularized geometrical form, constrained within a three-dimensional box extended to infinity.

This abstract imposition of discontinuity by definition neither takes account of nor does justice to contemporary scientific findings and real life experience of the dynamic continuity of natural flow. Yet it continues to be defended most zealously by those whose claim to authority rests in what they regard as disinterested objective observation and evidence. It also leads to the deep paradox, conflict, waste and damage that arises through dislocating 'self' from 'neighbourhood', making us believe in an unsustainable, competitive struggle for existence and individual perfection that is at odds with the variability of the natural world that both sustains and includes us.

The scientific beginnings of the ending of this dislocation, and associated recovery in awareness of our dynamically continuous natural geometry, have emerged with the advent of relativity, quantum mechanics and non-linear dynamical systems theory. All these theories signify, in one way or another, the inextricability of space from matter in a fluid dynamic cosmos of energy flow.

None of these theories, however, has yet been able to escape from self-imposed logical and mathematical constraints based on definitive initial assumptions, an upshot of which is that what is implicitly complementary in their reciprocal views of spatial inclusion in natural geometry appears to be contradictory. In particular, there has been continual altercation amongst proponents of 'stochastic' and 'deterministic' interpretations of dynamic processes. The former interpretations are based on models that default to a random distribution of independent events or objects, arising in effect from the degenerative influence of space, which results in an inexorable rise in 'entropy' ('disorder') within a defined system. The latter assume that all future evolution of a system is fully dependent upon (i.e. 'fixed' or 'fated' by) 'initial conditions'. These conditions are defined within a local frame or 'attractor' of space at an instant beginning point in time, albeit that tiny differences in these conditions can be amplified into enormous changes in long term behaviour (the famous 'butterfly effect' of chaos theory).

The altercation between deterministic and stochastic views of evolutionary processes is epitomized by the inconsistency between Einstein's saying on the one hand that the environment is 'everything except me' and on the other his protestation against quantum theory that 'God does not play dice'. The origin of this altercation lies in the alternative fixed geometries of space within which the two views are framed, neither of which is supported by actual evidence or experience. In these geometries space is either confined, along with time, to the curved surface of a zero-thickness fabric that gets locally warped by material condensations of energy, or within a rigid container that discrete objects can pop into or out of, as if from or into nothing or nowhere.

This altercation parallels the 2,500 year-old battle between propositional ('either/or') and dialectical ('both/and in mutual contradiction'), and associated reductive and holistic forms of logic, each of which assumes the independent existence of definable *whole* entities whilst rejecting the rationality of the other's position. The battle, along with its implications for the origins of human conflict, is eloquently depicted in the following excerpt from C.S. Lewis's 'Screwtape Letters' from a senior to an apprentice devil:

"The whole philosophy of Hell rests on a recognition of the axiom that one thing is not another thing, and, specifically, that one self is not another self. My good is my good and your good is yours. What one gains another loses. Even an inanimate object is what it is by excluding all other objects from the space it occupies; as it expands, it does so by pushing all other objects aside or by absorbing them. A self does the same. With beasts the absorption takes the form of eating; for us, it means the sucking of will and freedom out of a weaker self into a stronger. 'To be' means 'to be in competition'.

Now the Enemy's philosophy is nothing more or less than one continued attempt to evade this very obvious truth. He aims at contradiction. Things are to be many, yet also one. The good of one self is to be the good of another. This impossibility he calls love, and this same monotonous panacea can be detected under all He does and even all He is - or claims to be. Thus He is not content, even Himself, to be a sheer arithmetical unity; He claims to be three as well as one, in order that this nonsense about Love may find a foothold in his own nature. At the other end of the scale, He introduces

into matter that obscene invention the organism, in which the parts are perverted from their natural destiny of competition and made to cooperate...

Family... is like the organism, only worse; for the members of the family are distinct, yet also united in a more conscious and responsible way. The whole thing, in fact, turns out to be simply one more device for dragging in Love."

No sooner are the restrictive definitions of matter, space and time relaxed, however, than a fluid geometry of Nature becomes obvious, in which material information, as a local condensation of energy, is understood to be a responsive dynamic inclusion of receptive immaterial space and *vice versa*. The informational and spatial phases are as solute and solvent are to one another in a natural solution, and the fluid geometry is to the fixed geometry as water is to ice, not in opposition to one another but in mutually transforming dynamic relationship. The receptive ('loving') influence of space extends everywhere without having to be dragged into paradoxically defined subjects and objects.

The concepts of 'inclusionality' and 'natural inclusion' that arise from appreciation of this fluid geometry offer a new logical foundation for understanding the dynamic relational quality of living systems in a more realistic and contextually aware way, which transcends the definitive limitations of propositional and dialectic formulations. Correspondingly, inclusionality can be described, but not defined, as a comprehension of Nature as a fluid continuum of mutually inclusive local informational and non-local spatial phases in which all form is flow-form, a dynamic receptive-responsive configuration of everywhere in somewhere, with no fixed centre. Natural inclusion is the co-creative, fluid dynamic transformation of all through all in receptive spatial context.

With these concepts, matter and space mutually melt into a heterogeneous, variable viscosity energy flow of 'place-time' or 'co-creative evolutionary geometry'. Notions of both 'competition' and 'co-operation' are understood to be predicated upon the prescriptive definition of at least initially discrete entities, for which there is no evidence

and which does not make sense of actual scientific observations or personal experience of natural dynamic communion. Similarly, notions of 'selfishness' and 'altruism', based on the definitive assertion or denial of self-centredness are subsumed by awareness that our complex local-non-local self-identity arises within the dynamic context of, not in isolation from natural neighbourhood, and varies accordingly. To understand ourselves and others we ask not 'who' or 'what' we are as objects occupying the fabric of space-time, but 'where' we are as dynamic inclusions of the continuum of place-time. The whole basis for the philosophy of Hell collapses and Love, as receptive-responsive influence is a dynamic inclusion of all, without contradiction.

6. Beyond Objective Definition: The Inclusional Nature of Evolutionarily Sustainable Organization, and What This Means both in Theory and Practice

The evolutionary sustainability of *living* processes rests on the capacity to attune patterns of energy flow with continually changing contextual circumstances. Any kind of human endeavour or enquiry made within a rigidly prescribed frame of reference cannot therefore endure in the long run, no matter how convenient it may appear to be in the short term. There is therefore a need not only to be able to recognise the diverse and often covert ways in which such a reference frame is imposed in human organizations, but also how this can be obviated, both in theory and practice.

Most fundamentally, prescriptive objective definition is evident whenever *structure* is given precedence over *flow*. In other words, prescriptive definition treats structure as a given, *already set in place*, which is not dynamically *emergent* from and within flow but solidly *fixed* before flow. By the same token, boundaries are regarded absolutely as defining limits between discontinuous insides and outsides, not as dynamic relational distinctions between spatially continuous inner and outer neighbourhoods.

The paradoxical outcome is tantamount to arguing nonsensically that a river consists of zillions of cups of water abstracted from its flow or that the process of someone running or walking comprises the instantaneous ‘events’ localized in the freeze-frames of a cine film of their movement. First the flow is *stalled* within discontinuous segments of space and time, *and then* an attempt is made to *re-install* the original fluidity by aligning the segments contiguously, which is no more possible in reality than it is for all the King’s horses and all the King’s men to restore the *living* spatial continuity of Humpty Dumpty’s fluid identity. To insist that it *is* possible, whether by way of conceptual explanations of natural phenomena or physical endeavours to assemble a live ‘whole’ from its ‘parts’ is a mark of the utmost existential and intellectual Pride. It represents a *vain* attempt to create an abstract virtual reality in which the *local* and *particular* can have *dominion* over the

non-local omnipresence of space throughout Nature, based on assuming that Nature *as a whole* can be *completely* divided up into that from which it is assembled by some ineffable external force. It arises from trying to localize infinity within a three-dimensional box-frame.

7. The dependence of rationalistic belief systems upon independence, how this engenders human conflict, and how it can be transfigured through the dynamic natural inclusion of non-local space

Problems arise when an effort is made to localize the omnipresence of nature's dynamical powers in the guise of local executive objects performing forceful acts.

This 'prescriptive objective definition' is the source of profound human conflict. Localizing the omnipresence of nature's powers is what Richard Dawkins rails against in his denunciations of 'the God Delusion' yet he has been building this same baseless assumption into the foundations of his own scientific theory.

Opposing views from the same dichotomy

Confrontations between bitterly opposed ideologies, each of which inconsistently accuse the other of wrongdoing and inciting conflict, continue to pervade modern human culture. The current debate raging between fundamentalist advocates of science and religion is a potent example. What both sides of such confrontations cannot admit, however, is that what they implicitly or explicitly rail against in their opponents' argument is actually what they themselves depend upon in constructing their own position – the belief that it is possible to isolate the insides from the outsides of discrete objective realities. Most fundamentally, this belief arises from supposing that the informational (material) and spatial (immaterial) aspects of reality are mutually exclusive.

No sooner does the existence of an objective 'outside reality' become taken for granted, than the scene is set for oppositional and paradoxical systems of logic to become entrenched in human endeavours to isolate 'one' from 'many', 'self' from 'other', 'us' from 'them' and 'here' from 'there'. This 'outside reality' becomes an ineffable 'somewhere else' from which Divine, Newtonian or Darwinian 'Forces' can somehow be

exerted upon the contents of ‘inside realities’ and into which these contents can be excluded. Shakespeare’s Hamlet is hence given cause to ponder: ‘to be *or* not to be, that is the question: whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, *or* to *take arms against* a sea of troubles, and by *opposing end* them?’

Complementary Views of the Same Reality

The grounds for opposition between discrete conceptions of reality are, however, dissolved as soon as it is recognized that there is no scientific evidence and can be no scientific evidence for the localized existence of objective outsides and insides in a fluid dynamical cosmos that necessarily includes limitless (non-local) space everywhere. The way is then clear for the development of a mutually inclusive, local-non-local logic of ‘somewhere as a dynamic inclusion of everywhere’, whereby all local manifestations of energy flow are understood as responsive informational configurations of receptive space. With this ‘inclusional’ logic, objectified opposites are transformed into dynamic relational complementarities in evolutionarily *co-creative* (neither competitive nor co-operative) *natural communion* with one another. The basis for human conflict embedded in what C.S. Lewis alluded to as ‘the whole philosophy of Hell...the axiom that one thing is not another thing and, specifically, that one self is not another self.... to be means to be in competition’, is rendered obsolete. There is no verifiable or falsifiable objective outside reality upon which to found such an abstraction. It makes sense to love our natural human neighbourhood not as an exception from but as an inclusion of our local-non-local fluid self-identity.

8. Evolutionary Transformation: From rationalistic '*simplistic*' to inclusional simplicity

Rationalistic 'simplistic' arises from the imposition of false limits on natural fluid flow - i.e. the insertion of arbitrary definitive boundaries into and around a spatial continuum so as to render it discontinuous and so easier to explain, manipulate, quantify and communicate about in literal and objective terms. But complications, paradoxes and damagingly erroneous concepts arise from this simplistic as 'artifacts of definition', i.e. due to the exclusion of receptive spatial context. Truth is sacrificed for the sake of the seeming convenience and authoritative power given by the logic of mutual exclusion and opposition.

Inclusional simplicity arises from understanding and relating dynamically to the continual evolutionary transformation of natural fluid flow. Natural boundaries are understood as dynamic relational, locally manifest, responsive informational (electromagnetic) interfacings in an omnipresent, non-local continuum of receptive space everywhere. These natural boundaries provide a basis for recognising dynamic distinctions, not imposing discrete definitions, amongst local configurations of energy flow (i.e. 'flow-forms'). Messiness and irregularity arise from turbulence and variable viscosity in an indeterminate, all-inclusive, dynamic relational process, corresponding with a simple logic of mutual inclusion, not as complications from prescriptive definition arising from a simplistic logic of mutual exclusion.

So, in the spirit of honest scientists, seeking to observe and interpret nature impartially, i.e. without prejudice or willful ignorance of evidence, and so ready to sacrifice convenience for the sake of truth, we need to

recognize and transform those concepts that have arisen as artifacts of simplistic definition. Amongst these simplistic concepts is that of 'natural selection', a mythical external objective agency that makes authoritative and eliminative judgments about the goodness of fit and right to continuing existence of its subjects. Natural selection, as an exclusive mechanism, cannot explain the dynamic relational creativity of an endlessly transforming evolutionary flow of energy - only the natural inclusion of space in matter and matter in space can suffice for that purpose. At most, natural selection as a simplistic concept can only correspond with a subset of natural inclusion processes that lead to local solidification and laminar flow. Operating exclusively, such processes would result in the stalling and cancerous parasitism and degeneration of evolutionary flow, not its enrichment.

Natural selection is to natural inclusion as rationalistic simplicity is to inclusional simplicity and as linearity is to non-linearity in an evolutionary cosmos where fixed points, straight lines, flat planes and solid cubes are derivatives from, not the progenitors of fluidly dynamic, space-including curvature. Nature is not - so far as anyone can tell on the basis of evidence or good reason - assembled from building blocks brought together judgmentally by an external architect. Nature is her own architect, who includes the non-locality of space everywhere in his local concrete mix.

9. The Simplistic Nature of Favouritism – and How It Produces Junk

A prevalent notion in our competitive culture is that there is such a thing as ‘junk’, by way of stuff that has no discernible value or purpose, and even worse, just gets in the way of successful enterprise. Not only can this notion be applied to anything from the rotting and rusting products of outmoded human fashions and industries to stretches of our genetic material – ‘junk DNA’ – that don’t function explicitly as ‘genes’. It is also often applied, overtly or covertly, to people – those unskilled, unmotivated and needy ‘wasters’, ‘spongers’, ‘losers’ and ‘primitives’ who aren’t valued in human societies and may even be regarded as burdensome upon the winning ways of their more successful, go-getting peers.

The resulting singling out of individuals and groups for reward and disparagement is a continual source of pride and distress that drives a wedge between rich and poor, elevated and depressed, which fuels the resentments and conflicts that so damagingly undermine human compassion and well-being. Our need to find a way to remove this wedge draws attention to what is perhaps the most fundamental social, psychological and environmental implication of the recently developed concept of inclusionality.

Inclusionality can be described, but not defined, as a comprehension of nature as a fluid continuum of mutually inclusive informational (material) and spatial (immaterial) phases in which all form is flow-form, a dynamic receptive-responsive configuration of ‘everywhere’ in ‘somewhere’, with no fixed centre

In the inclusional, continually evolving energy flow of nature, there is no such thing as 'junk'. Neither is there any such thing as individual 'perfection' in isolation from others.

The very idea of ‘junk’ arises from the kind of favouritism, or simplistic singling out of context, which is evident in Darwin’s description of ‘natural selection’ as ‘the preservation

of favoured races in the struggle for life'. Such singling out is the product of rationalistic exclusion, most fundamentally of all the exclusion of 'space' from 'matter', such that only the latter 'counts', as in the discreteness/discontinuity embedded in the foundations of classical and modern mathematics and objectivist science. It produces a very partial, deterministically narrowed down retrospective and prescriptive view of history and evolution in which only the 'big hitters' count and there is no play in the system for improvisational co-creativity. It leads inexorably to eugenics and the motivations for fascism. It alienates the loving influence of receptive spatial context that makes evolution possible in the first place. It negates negativity in a misogynistic 'false positivism' that denies our natural source.

This is why it is so crucial for us to develop and communicate the kind of science and mathematics, based on an inclusional understanding of evolutionary processes, which can help us out of the fix of producing more and more junk by objective definition.

Correspondingly, we may come to speak not of 'natural selection' and 'struggle', which are based on a simplistic and unnatural presupposition of objective independence, but of 'natural inclusion' and 'natural communion'. *Natural inclusion* is the co-creative, fluid dynamic transformation of all through all in receptive spatial context. *Natural communion* is the dynamic continuity of all Nature in receptive spatial context.

Correspondingly, self-identity arises within the context of, not in isolation from natural neighbourhood.

Everest isn't the only mountain in the Himalayas. The Great White Shark isn't the only fish in the sea. The solute isn't alone in the solution. Alone, stuck on top of the pyramidal winner-takes-all peaks of their ascendant architecture, they are going nowhere fast.

The simplicity of rationalistic favouritism not only produces junk, it is junk! And our modern human culture of perversely discontinuous flow is full of it! Let's re-move the clot in the communication channel and open the space for natural energy flow!

10. Educational Transformation: Communicating an evolutionary understanding of life as a gift flow, not a competition for ownership

How inspiring might it be for us to learn to appreciate, that from our first intake of breath to our last gasp, life is a gift that comes from our natural inclusion in a co-creative energy flow, which we hold openly and pass on with love and care to others as others pass on to us? How profound an education into the wider implications of our human belonging with, not to one another in natural communion would this present? How could it deepen and enrich our social, psychological and environmental relationships and enable us to come to terms with our mortality, vulnerabilities and differences not as weaknesses and sources of conflict, but vital ingredients of our evolutionary community play?

But, by and large, we don't learn this lesson because our currently predominating systems of education continually promote competitive mentalities that reinforce the adage of Darwinian selection theory that life is a struggle for existence that only the elite can endure. We teach ourselves to race selfishly against prescriptive standards for some kind of winner's trophy that we can proudly display and hold on to in opposition to and at the expense of others. Those who lose out are regarded as failures whose best hope is to be on the receiving end of charity or minimal wages for menial work, trickling down from the excesses of their superiors. At worst they may be treated as junk, to be discarded on the wayside if they are not to be a burdensome detraction from the enterprise of the successful. Meanwhile, just as we are driving ourselves to succeed at all costs, other moralizing voices are telling us to be democratic, altruistic, egalitarian, law-abiding citizens if we are not to be judged unfavourably by higher authority. We come to live by double standards that stall the flow of our natural co-creativity and neighbourly humanity.

Competitive mentalities can only aggravate the distress, mistrust, disparity, carelessness, fault-intolerance, resentment and conflict within and between human communities that is fuelling a burgeoning social, psychological and environmental crisis. So why do we persist in educationally adulterating ourselves in this way, even from the earliest years when we are barely out of nappies? How on Earth could we have come to believe that competition is somehow good for learning and evolutionary advancement?

The rot begins to set in the moment we become deluded into believing that we are ‘self-possessed’, discrete individual ‘subjects’ paradoxically independent from yet capable of doing things to and having things done to us by the ‘objects’ that surround us in our natural neighbourhood. This promotes both a fearful and exploitative attitude of ‘self’ towards ‘other’ that puts the ownership of our very lives at stake – capable of being ‘taken away’ or ‘subtracted’ in a way that reduces us to nothing unless we strike first. This attitude, and its tragic implications, is all too evident in Hamlet’s famous soliloquy:

‘To be or not to be, that is the question: whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles, and by opposing end them?’

Herein lies the great false dichotomy, embedded in the rationalistic logical foundations that to this day underpin our objectivist science and mathematics, which, for the sake of convenience, not truth, dislocates the individual self from its spatial context or neighbourhood and places the two in opposition. The ‘I’ is treated *as if* it is an independent singularity, a positive ‘one alone’ that is threatened by and strives to deny and defy the ‘negativity’ of the receptive omnipresence throughout nature, which resides both in its heart and everywhere around. This treatment enables the ‘I’ to be held fully responsible for its behaviour and so rewarded or punished in accord with definitive standards of good and bad, regardless of its dynamic situation. It leads to the pursuit of an unrealistic, fixed ideal, any variation from or around which is disparaged as a deviation or ‘error’. This perfectionism truly does hold the evolutionarily creative pleasure of our

learning lives to ransom and addicts us to conflict as we teach it to our offspring in an endless vicious cycle.

At the root of this dichotomy is the presupposition that matter and space are mutually exclusive. On the basis of this presupposition, we divide the world into the material that matters and counts as 'something' and the immaterial that doesn't matter and counts as 'nothing'. Yet a moment's reflection of how nature would be if it consisted of pure space (i.e. it would be formless), and if it consisted solely of matter (i.e. it would be a dimensionless concrete point) reveals that each is inextricable from the other. Moreover, modern scientific findings that have given rise to relativity, quantum mechanics and non-linear dynamical systems theory all make sense in terms of the mutual dynamic inclusion of informational (electromagnetic) and spatial (thermal and gravitational) phases in a heterogeneous, variably resistive and accommodative natural energy flow.

There is therefore a need for a new, more realistic evolutionary understanding of learning processes whereby the creativity of life is regarded as not as a discrete material possession that individuals can claim sole ownership of, but as a gift of natural energy flow. The foundations for this new approach have been laid in concepts of 'inclusionality', 'natural inclusion' and 'natural communion'.

Inclusionality can be described, but not defined, as a comprehension of nature as a fluid continuum of mutually inclusive informational (material) and spatial (immaterial) phases in which all form is flow-form, a dynamically receptive-responsive configuration of everywhere in somewhere, with no fixed centre. Natural inclusion is the co-creative, fluid dynamic transformation of all through all in receptive spatial context, whereby unique self-identity arises within the context of, not in isolation from natural neighbourhood. Natural communion is the dynamic continuity of all nature in receptive spatial context, where all can be dynamically distinct and distinguishable, but none defined in absolute, independent singularity.

With these inclusional understandings, a new science of learning becomes possible that includes the vital space for play in an ever-transforming, context. Evolution is understood as an improvisational process that involves all in diverse dynamic relationship, not a prescriptive process in which only a select few with a hard competitive edge can succeed. Previous concepts, mathematics and language-use founded on suppositions of mutual exclusivity and opposition are radically transformed into a comprehension of all forms as complementary, variably resistive, dynamic local configurations of non-local space. Within the scope of this new science, we can explain our living educational practice in terms of receptively and responsively communicating our evolutionary understanding of life as a gift of natural inclusion in co-creative energy flow, to be held openly and passed on with love and care, not a possession or trophy to be competed for.

11. Looking the Gift Horse of Nature in the Mouth – How Objective Evaluation Breeds Resentment

There is an awful moment or phase in our lives for many of us when we become aware of our innate *joie de vivre* turning sour. What we had taken to be the wonderful gift of rejuvenation that inspires our young lives with rich possibility suddenly or gradually becomes adulterated by encountering what some describe as ‘the real world’. We become painfully self-aware. We begin to recognise our own and others’ vulnerability and capacity for suffering, and to realize that not all our fellow creatures’ views of us are necessarily benevolent. Along with this we may be encouraged or cajoled into competing with our peers, spurred on by the Darwinian and capitalist maxim that life is a struggle for existence in which we can only succeed by proving ourselves better than and exploiting others. We learn to abide by what CS Lewis referred to as the loveless ‘Philosophy of Hell’ – ‘the axiom that one thing is not another thing, and, specifically, that one self is not another self...to be means to be in competition’.

Our trust is shattered and in that fall from grace we become suspicious, questioning the motivation of all that lies within and around our bodily selves – what is true, what is false; what is right, what is wrong; what is good, what is bad? This departure into ‘Paradise Lost’ applies to us both individually and culturally, leaving us forever questing for the ‘Truth’ or ‘Holy Grail’ that will bring us around into ‘Paradise Regained’. But such is the way that we have predominantly gone about this quest that we continually fall into the trap of one inadequate complete answer after another. Our journey becomes a travail between sticking points. This is because our enquiry is always anchored in the very same core belief that shattered our trust in the first place – that there can be any such ‘thing’ as ‘The Whole Truth and Nothing But the Truth’. For, in the dynamic reality of energy flow, truth cannot be whole, complete in itself.

In looking endlessly for something whole, in which we can have absolute faith, we lose sight of the possibility of an endless hole, a receptive spatial continuum that includes all in one and one in all, everywhere. Even if we catch sight – or rather, feeling – of this hole, the likelihood is that we will stop short of it, for fear of stepping into the void where no thing can truly be known. And so it is that for millennia we have relied on definitive systems of propositional and dialectic logic that wholly divide matter from space and embed this schism in the numerical and geometrical foundations of classical and modern mathematics, which in turn lie at the core of objective philosophical and scientific enquiry.

Instead of feeling included in some kind of relay team or gift flow, where we run with and pass on the life-giving energy that we each gratefully receive, we feel obliged by a sense of being discrete subjects and objects in competition with the world and one another to take possession of this flow for ourselves and defend it against all comers. We deny and defy our dynamic neighbourhood in an effort to survive at all costs by proving ourselves, or being proven better than the rest. Unable to trust that what is freely given can equally freely return in living cycles and spirals of what's going around is coming around, we come to regard and measure ourselves and others solely in terms of finite property, thereby reducing our relationships to local transactions, for which we require a set of accountancy rules to ensure equity. But these rules literally come at a price, because they cannot include what cannot be measured, and so leave out what is vital to sustaining an energy flow – the continuity of space everywhere that includes all and that all dynamically include. From being and becoming invaluable local co-creative expressions of infinity, everything and everyone is rendered down into discontinuous, quantifiable local packaging that can be compared and contrasted as if it were alone in the universe. We enter a vicious closed circle or dying spiral that respectively either keeps itself in a state of civil war with itself for eternity or decays into entropy.

As we continually reinforce our false sense of being in competition with one another through our systems of governance and education, so we increasingly view our individual frailties and mortality as signs of weakness, which need to be eliminated if we are to gain

and sustain our place on an evolutionary pinnacle. A compassion-killing perfectionism takes hold whereby 'not being good enough' is the motivation for 'getting better all the time'. Here, the 'I' is a narcissistic singular object/subject that does things to others (and has things done to it) in the process of ensuring its own furtherance, and the 'need to improve' can in itself seem to stand as an admission of weakness. Being a 'learner' in this context is hence a source of shameful deficiency, which is why novice drivers are so keen to abandon the 'L' plates that advertise their 'not yet good enoughness' to the world. There is no joy in being a learner, only a compulsion to get past this stage as fast as possible in order to be able to get on and do things, especially if it involves making money and/or gaining status. The upshot is the widespread pseudo-competence of clever clogs, who feel they cannot afford the 'time', let alone humility to learn deeply, and so channel their energies into blocking the channels of natural communion by devising objective 'tests' for each other to get past.

Within this context, 'positive' comes to stand for 'good' and negative comes to stand for 'bad'. Everyone strives to 'feel good' by denying the 'bad', to celebrate their 'achievements' and disregard their 'frailties' and resultant 'neediness'. Unable or unwilling to accept that what comes naturally as the source of life's evolutionary inspiration and dynamic configuration is also the sink of life's expiration and reconfiguration in a continual transformation of one becoming other, we view our vulnerability and mortality as a flaw in our nature. This leads to a desire to isolate one self from what truly is the real world of dynamic experience, as an encapsulation of ideal form from which every divergence is regarded as a deviation or error to be removed, not a fluid variation converging around an ever-evolving theme. And so we strive to be better not as receptive and responsive inclusions of a co-creative flow that includes all it can sustain in dynamic relationship, but as judgmental competitors marking ourselves up or down by reference to some standard yardstick.

The upshot is a process in which everybody's unique and inestimable worth is reduced to the comparative values of objective commodities defined as greater or lesser, better or worse. Far from sustaining the diversity of life and evolution, this process restricts and

stalls it by singling out winners and losers in opposition to one another. For a race that culminates with a winner who takes all is the end of the road for evolution, not its continuation.

Where, however, the philosophical context transforms from rationalistic to what has been called 'inclusional', the emphasis switches from 'learning to be good enough' to 'being good enough to learn'. This is because we no longer see ourselves as independent objects in competition with one another, but as co-creative, receptive and responsive inclusions of a dynamic evolutionary neighbourhood in which our self-identity includes and is included by what rationalism regards as 'other'. The receptivity to other that comes with our vulnerability and mortality is no longer regarded as deficiency, i.e. as 'neediness' - but as 'needfulness' a vital capacity through which we can lovingly and caringly accept, protect and pass on the gift of life that comes from our local inclusion of the natural energy flow of everywhere. Our 'I' is no longer a locally defined positivistic singularity that negates negativity, but a transfigured local-non-local self, a true '+', which is receptively opens to inclusion of other through its needfulness. We shift from being forceful 'drivers', imposing our willful intent upon what surrounds us, to influential 'pilots' enhancing, through growing experience, our skills of receptive-response to the fluid dynamics of our natural neighbourhood, which inescapably includes us. And as we learn, we pass on the gift of our dynamically embodied knowledge, i.e. the benefit of our learning experience, to others. The idea of 'improvement' shifts from the judgmental 'correction of deficiency' to 'energising understanding'. Learning becomes a pleasure, not a compulsion.

So, if, when presented with a gift horse our first inclination is to check it for faults to assess whether it measures up to expectation, perhaps we are behaving like clever clots that cannot appreciate the generous spirit in what is being offered. With that lack of appreciation comes the inevitable distress and resentment of those judged 'not good enough', which manifests in a huge variety of guises in our modern competitive culture. To look the gift horse, which Nature makes possible, in the mouth reveals both the height of arrogance and the depth of ignorance of evolutionary creativity that is packaged within

the discrete logic of objective rationality. So, don't be surprised when the horse bucks the system! But be prepared to care for it, and you never know where it might take you, perhaps even to 'Paradise Regained', in a world inclusionally transformed – not without suffering, of course, but at least without the insufferable disregard that adds insult to injury and vice versa, everywhere in our exclusive midst.

12. Why Competition is a Big Myth Take

In ‘*The Screwtape Letters*’, from a senior devil to his apprentice, CS Lewis (1942) refers to ‘the whole Philosophy of Hell’ as resting

“... on a recognition of the axiom that one thing is not another thing, and, specifically, that one self is not another self. My good is my good and your good is yours. What one gains another loses. Even an inanimate object is what it is by excluding all other objects from the space it occupies; as it expands, it does so by pushing all other objects aside or by absorbing them. A self does the same. With beasts the absorption takes the form of eating; for us, it means the sucking of will and freedom out of a weaker self into a stronger. 'To be' means 'to be in competition'.”

By the sound of it, our modern human culture is utterly under the spell of this philosophy, along with its associated Darwinian and capitalist maxim that life is a struggle for existence in which we can only succeed by occupying a space or ‘niche’ in which we can prove ourselves fitter than and exploit others. This is a maxim that we teach ourselves to believe in throughout our education and business and governmental systems, scarcely stopping for a moment to reflect on whether it has a sound evidential or logical basis. If we did, we might come to realize that it is no more and no less than a convenient supposition, a simplistic figment of restrictive imagination that cannot do justice – indeed does great injustice – to the reality of natural evolutionary processes and our actual human experience of living and loving. But it has a very strong allure because it gives a sense of power over other, a false sense of freedom and security that can fortify self or group against the fearful uncertainty that lies beyond its immediate locality.

So, what could be wrong with the idea of being in competition? In a word: *everything!* To be in competition means to be in opposing, not complementary relationship, with the

underlying objective being for one to gain or ‘win’ through the other’s loss. This is the situation envisaged by Shakespeare’s Hamlet, when he ponders:-

‘To be or not to be, that is the question: whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles, and by opposing end them?’

The very idea of opposing things or forces depends *completely* on the assumed independence of matter from space such that the latter can come under the controlling influence of the former. Such independence ensures that any one thing or occupying agency is absolutely discontinuous from another thing in accordance with the definitive axiom known as ‘the law of the excluded middle’ upon which rests the *whole* philosophy of Hell.

But for such absolute discontinuity to hold, i.e. for there to be no continuity from one thing to another, the boundary between the inside and outside of each must be completely fixed and closed. That is, each thing must be a ‘something’ opposed to ‘nothing’, a completely definable ‘object’ or ‘subject’, which counts as an independent singularity or ‘whole’. This is the paradoxical ‘idealization’ of natural form that is embedded in the numerical and geometrical foundations of classical and modern mathematics and objectivist science. The individual ‘self’ or ‘set’ must be an exception from its spatial neighbourhood in order to stand against, not be included within its ‘sea of troubles’. Only by such means can someone or some group have the temerity to objectify himself or itself and other, and by so doing feel *free* to claim, as Albert Einstein did, that ‘the environment is everything that isn’t me’, which opens the door to abuse of whatever is regarded as ‘outside’ as somewhere or something to lay waste.

Alas, poor Yorick: herein lies the whole source of the joy-killing nonsense upon which the myth of competition is constructed via the simplistic and arbitrary imposition of discrete limits upon natural energy flow! To be in opposition to other requires the presence of a discrete boundary. The presence of a discrete boundary prevents any communication or flow of energy across itself. So any discretely bounded entity is locked

inside of itself and so inert with respect to its surroundings: its sole source of sustenance is internal. The closest that real live organisms get to such a condition is when they produce 'survival capsules' – spores, seeds, cysts, sclerotia, pupae etc – that enable them to suspend their animation under adverse circumstances. This is what real biological survival implies – not competing like Hell as energy availability diminishes, but entering a dormant phase that conserves what has already been assimilated. These dormant phases provide continuity within and between generations, which enables regeneration of growth potential through variably opening boundaries as energy availability increases.

There is no complete discontinuity in real organic life on Earth between genes, individuals, populations, communities and ecosystems; there is only continual reconfiguration of living system boundaries in a pool of space everywhere, through cycles of birth, growth, death and decay that correspond directly with the waxing and waning of energy supplies. It is the variable distribution of energy supply, not competition, which governs living patterns, processes and relationships. Organic life comes as a gift of predominantly solar energy via the infinite cosmos, which is packaged on Earth in finite but recyclable carbon. It is not a struggle for sovereign rights of ownership of local material resources. Matter cannot occupy space without closing itself down in frozen still life. Space permeates matter as it breathes in warmth and melts or dissolves into myriad distinguishable but not absolutely definable fluid dynamic forms of energy flow, some harder, some softer but none completely isolated within a permanent hard edge until or unless all possibility of opening closes.

So, what are the implications for a human culture that bases its thinking and governance on the paradoxical material independence from and control over space that underpins notions of competition and individual or group rights of ownership? In a few words, conflict, imperialism, eugenics, distress, loss of creativity, loss of loving relationship, selfishness, disintegration and unsustainable development out of phase with natural energy flows. Does this sound familiar? If so, what can we do about it – or, more to the point, what can we *stop* doing? I can only suggest that we stop competing with all and sundry, stop and think about the way we think, recognise the inadequacy of rationalistic

system, based on this interpretation, and to use this without question or evident failure in our calendars, navigational aids and astronomic and astrological predictions. But eventually it just ceased to make good sense, i.e. to be consistent with evidence not supposition, and the less ‘obvious’ but simpler and more coherent Copernican system emerged. This did not need to include the *ad hoc* ‘epicycles’ used to explain the apparently erratic loop-the-loop paths of the planets or ‘coincidence’ to explain the 365 day periodicity in the cycles of movement of constellations. These now redundant explanations were quickly forgotten.

How, then, might an inclusional interpretation make more sense of natural evolutionary processes? To begin with, it can help by requiring neither an *ad hoc* stationary reference frame against and within which to plot the movements and spread of genes, organisms and populations, nor of definitive boundary limits within which paradoxically to isolate the variably permeable bodies of these local identities from their spatial neighbourhood. By the same token, it removes the need for either an external or an internal driving force, design or designer to bring about movement or evolutionary change, since these are implicit in the fluid logic and geometry of a natural energy flow in which matter and space are mutually inclusive. Correspondingly, it is fully consistent with evidence implicit in the development of contemporary scientific theories of relativity, quantum mechanics and non-linear dynamical systems, whilst removing the need for these latter to be framed mathematically within a fixed structure. It provides opportunity for new mathematical and scientific framings based on dynamic relational natural boundaries, not artificially imposed limits. It releases our creative potential from the distress of trying to live our lives as if these limits existed.

What, then, about all that ‘obvious’ aggression that we find in natural and human communities – how can this be understood if not in terms of competition? The point here is that apparent aggression need not signify *opposition* of one *against* other any more than the erosion of a river’s bank need imply that the stream is at war with the landscape, or than the mountain ridge that forms at the watershed between two river basins implies that the two sides are at loggerheads. In natural flows there are confluences and

divergences that can lead both to *differentiation* and *integration* of local identities depending on the quality and quantity of energy supply within and amongst the variably resistive and yielding interfacings of their spatial neighbourhood. Since these identities are *distinct but not discrete*, they neither strictly *compete* nor *co-operate*, but relate complementarily depending on their local situation, so as to balance their inflows and outflows in an energetically and evolutionarily sustainable way. Natural territorial boundaries are correspondingly the dynamic product of co-creative energetic interplay, which can help to protect and sustain local distinct identity and diversity, not an intention or requirement to join or eliminate opposing forces. The apparent consumption or replacement of one by another is not an act of forceful extermination of the former from somewhere to nowhere, but vital to natural processes of evolutionary reconfiguration and continuity that underlie all kinds of ecological succession and community development. Here death feeds life through the inclusion of space, life doesn't feed death through the exclusion of space upon which so much human conflict and waste is predicated.

Whereas differentiation and integration are therefore understandable as natural processes contributing to the evolutionary diversity and complementary relationship of distinctive local informational identities in non-local space, competition and co-operation are – at least in the rationalistic sense these terms are usually used – artefacts of prescriptive definition. In this rationalistic sense, diversity itself becomes the enemy, a departure from 'ideal form' and 'line of best fit' that needs to be straightened out into conformity if life is to be made ordered, predictable and free from the conflict – not the rich complementary relationship – that comes of difference. Competition and conformity destroy the diversity and dynamic, synergistic relationship upon which evolution depends, in a hegemonic march to unsustainable monoculture whose influence on natural and human communities is cancerous.

In terms of the way we educate one another and embed this in the way we live and relate to one another and our surroundings, there is therefore a huge difference between competing with one another to achieve prescriptive targets defined by set standards or 'norms', and learning, through improvisation, to be receptive and responsive to diverse

knowledge and viewpoints. The prescriptive, selective approach is restricted within its own rigid definitions as self-fulfilling prophecies, and so gets stuck with its apparent 'successes' whilst eliminating its 'failures' as worthless 'junk' into 'somewhere else'. Not only is it a source of profound distress and waste, but it is also unsustainable in the long run, where context is continually evolving. The improvisational, inclusional approach enables co-creative mutual understanding and transformation of all through all, in an evolutionarily sustainable way that respects and values diverse contributions to an ever-changing theme.

Hence there is nothing wrong with striving for excellence in dynamic relationship with others whose efforts can guide us – and who we can guide through our efforts – to appreciate the possibilities that reside within our uniquely situated and complementary personal identities. There is everything right in being able to differentiate and integrate between and amongst our diverse capabilities. But there is everything wrong in striving for supremacy within centres of complacency or 'ivory towers' that can look down with lofty arrogance and deep ignorance – at best with charity at worst with contempt – on the riff-raff of their natural neighbourhood.

So, as the 200th anniversary of Charles Darwin's birth approaches, perhaps we can celebrate both his wonderful recognition of the evolutionary kinship of all life, in all its diverse natural communion, and deliverance from the diabolical, hegemonic oxymoron of 'natural selection' as 'the preservation of favoured races in the struggle for life'.

13. Western addictive rationality (WAR) as a myth of dislocation from natural energy flow

Some say that we human beings are now living in the ‘End Time’, a turbulent and maybe even catastrophic phase in our evolutionary history. This could culminate either in our own extinction, along perhaps with many other forms of life, or in some extraordinary ‘new beginning’ or ‘New Age’ when a re-enlightened sense of ‘common spirit’ or ‘communion’ will subsume our divisive cultures of times gone by.

Be that as it may, there is certainly something about our predominant human perception of space and time that, for millennia, has brought us into deep conflict with one another and our natural neighbourhood. This perception leads us to discriminate absolutely between ‘something’, by way of pure matter, and ‘nothing’, by way of pure space or ‘void’. Such discrimination has become deeply embedded in the logic, language, mathematics and objectivist science of a culture for whom, increasingly, ‘only matter counts’. What cannot be quantified – because of its infinite omnipresence, everywhere, without definable limit – is thereby either ignored altogether or treated *as if* it really can be divided and packaged up into singular structural units with discrete boundaries. Space and/or time is abstracted from natural energy flow and converted into a rigid reference frame against which the dynamics of pure material objects can be judged, as if independent from one another. We begin to talk of ‘a space’ or ‘a time’ or even ‘a space-time’ as if they exist as finite containing blocks of reality whose material contents act and react in opposition to one another from one instantaneous moment to the next. This is analogous to regarding the still frames of a cine film as complete and independent records of the continuous movement from which they were derived as isolated bits.

The trouble here is that once one has mentally dislocated material content from spatial context, the inductive influence of the latter recedes from consideration, and it becomes necessary to invent other, after-the-fact explanations for diverse patterns of evolutionary

development and behaviour. These back-projections invert natural dynamic relationships in an unsustainable way that effectively places the cart before the horse.

So, for example, instead of recognising the direct influence of variable energy availability on the differentiation and integration of dynamic organization, some 'intentional mechanism', 'driving principle' or 'controlling agency' is sought within isolated organisms or their genes. This mythical agency ensures optimal pleasure, survival, productivity and ordered development or whatever. Taken to extremes, absolute faith in this agency can give rise to such statements as 'we are survival machines – robot vehicles blindly programmed to preserve the selfish molecules known as genes', in Richard Dawkins' damagingly influential book, 'The Selfish Gene'. It may even, ironically, be pitted against that other kind of absolute faith in the existence of an external authoritarian *force*, which Dawkins has railed against in 'The God Delusion' whilst accepting it in the oxymoronic form of 'natural selection'.

The catch is that this agency is now given priority so that it *opposes*, rather than *attunes* with the energy flow of its natural neighbourhood. An organism motivated by belief in such an agency therefore does the opposite of what is vital for its evolutionary sustainability and will also project its own contrary nature onto others. Instead of differentiating where there is plentiful energy supply - 'making hay where the sun shines' - and integrating - 'reining itself in' - where there is shortage, it does the opposite. It attempts to compete with others by making more of itself where there is shortage, and seeks to secure its capital gains where there is plenty.

The upshot is a cancerous *reversal* of natural energy flow. Instead of an equilibrating current from those who hath to those who hath not - from 'high pressure' to 'low pressure' – there is a power drain into those already most wealthy. This reversal destroys the harmony and diversity of natural community organization. 'Shortage' is taken to be a call for individual expansion, with competition, not energy flow, being given the decisive role in the limitation of growth to a select few and ultimately a select one. 'Plenty' is taken to be a call for individual retentiveness, not outreach, to prevent the impoverished 'masses'

from taking over. A gap grows between 'rich' and 'poor', which the former desperately try to defend and the latter desperately try to fill, each in their own unsustainable way. The potential for conflict of one against other grows inexorably as each side sustains belief in its certainty of separate identity. With their pride at stake, neither side wants the great lie to be known, which enables the rich to get richer and give themselves credit – the lie that makes victims of the masses and will never allow poverty to become history.

Such are the peculiar inverse dynamics that have come to typify human population and economic growth, dislocated from natural neighbourhood. These dynamics promote an unsustainably divided world at odds with itself, yet which is projected through Darwinian theory onto the non-human natural world, which does nothing of the sort. We need to learn lovingly and respectfully from, not impose our hateful rationalistic back projections upon our natural neighbourhood, if the 'End Time' is to fulfill its promise of a 'new beginning' and not culminate in disaster.

14. Evolutionary Life as a Variably Permissive Culture

Since its inception, Darwinian ‘natural selection’ has been represented as an oppressively exacting process, intolerant of any departure from the form or behaviour required to adapt to and compete successfully for segments of living space called ‘niches’. Anything less than an exact fit to niche specifications leads to a summary death penalty in the relentless struggle for life known as ‘survival of the fittest’. Nothing but the ‘best’ is thereby ‘good enough’ to merit acceptance through the gates of selective judgement. But what is actually meant by ‘best’ or ‘fittest’ in this context doesn’t necessarily mean ‘nicest’ or even ‘healthiest’ – indeed in recent decades it has increasingly been defined as ‘most genetically selfish’.

This interpretation of evolutionary processes both arises within and reinforces an elitist and capitalist cultural context, which is the antithesis of caring and sharing. Intolerant of natural variety, frailty and perish ability, it is ironically also the antithesis of what is actually not only inescapable, but also vital for evolutionary creativity! It closes down rather than opens up possibility for innovation, by imposing a prescriptive and restrictive hierarchical structure that ensures increasing exclusivity until a hegemonic end point or ‘adaptive peak’ is attained, by trial and elimination of ‘error’, as the fulfilment of a self-fulfilling prophecy in search of an ideal by way of complete perfection. From this perfect peak there can be no descent without loss of sovereignty: there is no dignified way down from the apex of the pyramid. The process therefore ends in a fixed point or objective goal that allows no possibility for change except through random accident or an external shift in environmental circumstances such as the intrusion of a comet into the Earth’s atmosphere.

There is, however, something profoundly *partial* and paradoxically anti-natural about this *whole* way of goal-oriented selective thinking. Far from freeing us from an oppressive

‘God Delusion’, as Richard Dawkins argues, it simply substitutes one excuse for authoritarian cruelty with another kind of supernatural external judgmental ‘Force’.

When this kind of thinking gets widely embedded and applied without question – as it currently does – in our educational, theological and governmental systems, it becomes a source of profound human distress. Many of us come to see life as a competition for possessive occupation of living space – the very thought that fuelled the invasive forcefulness of Nazi Germany. We set ourselves up in opposition to others and desire the equipment and knowledge that will ensure our individual or group success in confrontations between ‘Me or You’ and ‘Us or Them’. We come to fear any deficiency of body, mind, knowledge or technology that will cause our ‘defeat’ or ‘failure’. We become oddly obsessive about ‘fairness’ and demand ‘equal rights’ on an ‘even playing field’, so we can be truly sure that in the end ‘the best man wins’.

In a competitive culture, those of us who are most sensitively aware of our human inadequacy and need for support can rapidly lose self-esteem. We become terrified of exposing our true abilities, inabilities and feelings to others in gatherings where the possibility of being outclassed puts at risk any chance of giving and receiving the love and nurture we need to thrive. In the face of objective judgment, we can freeze, play the fool, get distracted, withdraw, and feign ignorance and helplessness. We may even deliberately fail in order not to be found – or find ourselves – wanting. One way and another we allow our true gifts and talents to be squandered. On the other hand, those least sensitive – and who in some select ways may also be most skilled – aspire to outclass others as clever clods atop power structures from which we can wield self-serving controlling influence. Once there, our sense of superiority is continually rewarded so long as we don’t slip. But the thought of slipping can become a recurrent nightmare, especially if deep down we are aware of our inadequacy as isolated entities.

We begin to live a life of double standards, in which yearnings to love and be loved – and associated moral imperatives to do as we would be done by, are pitted against the need to succeed at others’ expense – the more so, the more unrelated these others are to

ourselves. But what is most rewarded in this confrontation is not the ‘weak sentimentality’ of compassion, but the ‘strong authority’ of command.

The upshot is a cancerous, internally divided and divisive culture, steeped in conflict. What is encouraged is not the continual reception, temporary holding, protection and passing on of life-giving energy in an ongoing relay amongst a diverse neighbourhood of interconnecting, intercommunicating channels, but instead the localisation and sequestration of this flow within local command centres. These nodal points are thereby enabled to grow as self-crediting power drains that monopolize resources and may even have the audacity to speak complacently of themselves as ‘centres of excellence’ – a notable recent trend in dysfunctional organisations. Their ultimate influence is to destroy the variety of their natural neighbourhood upon which they capitalize, but in which they are nonetheless, inescapably included. They become caught up in a holocaust of their own making, victims of their own aspiration to monolithic survival in the contest of one that becomes many against many that becomes none.

At the root of this cancerous culture is alienation from a perishable nature characterised by continual cycles of growth, death, decay and re-growth, in which diverse local dynamic relational configurations of space – ‘flow-forms’ – resist and make way for one another’s co-creative evolution in natural communities and ecosystems. This alienation arises psychologically from fear of death and uncertainty, which is associated in its turn with the invisible, intangible darkness of void ‘space’. Such fear engenders an (almost) irresistible desire for definitive certainty – absolute knowledge of what’s good and what’s bad and how to predict and control nature so as to ensure a desirable future. The necessary logic to fulfil this desire comes along conveniently with our predisposition as terrestrial, omnivorous, bipedal primates unable to digest cellulose but equipped with binocular vision and opposable thumbs that enable us to catch and grasp, to view the geometry of our natural neighbourhood in a fixed perspective. We see ‘boundaries’ as the limits of definable ‘objects’ and ‘space’ as ‘nothing’ – a gap or absence outside and between these objects.

In this way arises the whole system of alienating logic that is based on the mutual exclusion of a material world of fully definable objects and an immaterial space extended to infinity yet somehow localized within three dimensional planes set at right-angles to one another, which is the basis for Euclidean geometry. It doesn't require much wit to recognize that such a logic and associated geometry is pure artifice, a convenient 'idealization' that fulfils the desire for definitive certainty but cannot correspond with the intrinsically evolutionary geometry of natural dynamic processes of energy flow. It is based on a premise of material independence from space for which there is no evidence and that does not make sense. Yet this is the logic and geometry upon which the ability to 'select' any 'thing' in isolation depends, which is deeply embedded in conventional science and mathematics, and that we continually teach ourselves to abide by as we compete to occupy predetermined positions of authority. These definitive positions can be anything from 'job descriptions' to 'whole' tracts of land, sea or sky that we stressfully try to fit ourselves into, not fit around ourselves.

The truth is that truth in a fluid dynamic nature can neither be 'absolute' nor 'whole'. In a continuous energy flow, local 'matter' can neither be freed from nor wholly occupy 'space' that permeates *everywhere*, without local limit. We can no more define an 'even playing field' for performing objects to compete on, than we can arrange a flat calm sea for waves to seek supremacy within. In nature, the players are uniquely situated dynamic local inclusions of the non-local field, which is richly heterogeneous and hence anything but even. The 'content' is 'contextual': 'matter' includes 'space', the 'inhabitant' includes the 'habitat' and *vice versa*. Each is in complementary dynamic relationship with and embodies 'other' as a vital contributor to its local identity. None can be in opposition to other. There is no 'one self' that can survive alone.

So, to ask who or what is completely equipped to reign supreme in the whole or a part of Nature is meaningless, because there can be no completeness of whole or part in a continuous evolutionary flow. Far from being a prescriptively restrictive process that excludes anything but the most perfectly adapted to its predetermined rules and regulations, natural evolution is a playfully improvisational process, a variably

permissive culture, which includes all 'good enough' to be sustained for a while within its dynamic configurations of spatial possibility. Those that cannot be sustained – and none can be sustained indefinitely without freezing into stasis – pass on their locally embodied energy for reconfiguration in others. Their incompleteness is vital to the continuity of the evolutionary process of 'natural inclusion', not as the 'preservation of favoured races in the struggle for life', but as the co-creative, fluid dynamic transformation of all through all in receptive spatial context.

To view any manifestation of our natural incompleteness – any vulnerable 'Achilles Heel' – as some kind of 'design fault' or 'something wrong' that makes any one 'not good enough' and needing to be eliminated to ensure advancement in the race for sovereignty, is therefore unwise. It is to look the gift horse of nature in the mouth. On the other hand, any officious attitude of complete self-satisfaction may need to be loosened if it is not to assume too much power to deny our rich variations around – not deviations from – an ever-evolving theme.

We come into this world as evanescent, dynamic relational, receptive and responsive co-expressions of energy flow, not as performing objects defined and designed for a set purpose. How many of us can have the grace to accept, hold, protect and pass on what that means?

15. Sustainability of the Fitting - From Opposing Forces to Co-creative Transformation

Summary

‘Natural inclusion’ involves the fluid dynamic transformation of all through all in receptive spatial context. This new paradigm provides an understanding of evolutionary diversification as a process of co-creative energy flow, which is very different from that arising from externally imposed ‘natural selection’. Attention focuses on the variable *energetic sustainability* of life forms as co-expressions of an ever-transforming flux of nature, *not* competitive *genetic survival* based on the abstract definition of discrete objective entities in mutual opposition. Discourse shifts from tautological ‘just-so stories’ of ‘differential survival’ or ‘persistence of discrete whole entities in time’ to considerations of ‘variable sustainability’ in terms of ‘persistence of distinct, continually transforming, holey identities in dynamic relational space or ‘place-time’. The associated mental imagery of the ‘unmoved mover’ that primarily motivates natural dynamics shifts from that of a local, eternally static *being* as a *forcefully* censorious *positivistic agency*, to a non-local, continually transforming *becoming* as an *inductive*, variably permissive *receptive spatial influence*. Evolutionary ‘history’ is understood to be made by All in fluid dynamic relational correspondence, not any One particular in splendid isolation.

The Beginning of the End Game – The Divorce of Responsive Matter from Receptive Space

For millennia, the repercussions of an unnatural split and unholy alliance have been driving people to seek seemingly desirable future ends by unseemly present means. The naturally complementary dynamic relationship between material and immaterial presences, as responsive informational and receptive spatial partners has been sundered into opposing forces of light and darkness, positive and negative, male and female, man and nature, supposedly allied to just and unjust causes of Good and Evil, Right and Wrong. With such opposition comes a profound sense of dislocation from and conflict with ‘the other side’ from which, in reality, any locally manifest form is not only distinguishable but also inseparable – distinct but not discrete.

Often, the resulting dualistic ‘struggle’ of ‘one’ with its ‘other’ aspect has been – and in many places still is being – battled out on religious grounds. Not only is there a tendency for members of any particular religious persuasion to view those of a different persuasion as ‘not as good as us’ if not downright ‘evil’, but also within a faith there is a great tendency for fragmentation into mutually exclusive factions. Moreover, for many a tortured individual, there is often a furious internal conflict between what is perceived to be ‘righteous’ and his or her ‘sinful’ natural inclinations and internal ‘demons’.

The struggle has by no means eased, however, with the increasing secularity of modern culture: if anything, it has only found distressing new criteria for discrimination between what is and isn’t good enough in nature and her diverse forms of expression. Amongst the most potent of these criteria had its origins in what, ironically, some regard as an ‘antidote’ to the intoxicating influence of irrational belief systems, but is in its own way founded just as much on superstition and prejudice rather than truly impartial observation and reason. This is the objective scientific rationalism that was the spawning ground not only for the dark satanic mills of industrial mechanization, but also for the imperialistic Victorian notion of ‘natural selection’ – what Charles Darwin himself described as ‘the

preservation of favoured races in the struggle for life', more popularly known as 'survival of the fittest'.

Objective science and its Darwinian offshoot *depend* wholly and paradoxically on an unrealistic logical premise of *independence* – the preconception that nature consists of discrete material entities that can selectively be singled out in isolation from their spatial neighbourhood and either be subjected to, or subject others to externally imposed force. In the absence of such forceful imposition, it is assumed that these actors and reactors will, in accordance with Newton's first Law, continue in their state of rest or uniform straight-line motion – i.e. carry on regardless of their local spatial situation, stalled or driven by their own physical inertia.

This requirement of orthodox science for either some kind of external force or its injection into an internal command centre, in order to make material movement or change in trajectory possible, represents a continuation, not a departure from the kind of thought underlying orthodox theology. An equal, opposite and sequential relationship between 'action' and 'reaction' as local 'cause' and proportional 'effect' is envisaged, whose logical conclusion demands some 'ultimate cause' within or outside the centre of a discrete object. But in order for this ultimate authority to exert its influence, it cannot itself be subject to external influence. It must therefore somehow be *fixed in place* as an 'unmoved mover', whose secular interpretation is an objective, selective 'forceful agency' and whose religious interpretation is an objective, judgmental 'God'.

Objective rationalizations of both 'God' and 'Natural Selection' correspondingly have the same origins, as executive mechanisms used to explain the natural dynamics of isolated material bodies. These bodies collide and compete with one another for occupancy of an imaginary, closed container or 'niche' of empty, passive space, localized within a three-dimensional box or depthless curved surface, as in Euclidean and non-Euclidean geometries respectively.

The scene is thereby set for ultimate battle between the sovereign ownership rights of internally centralized human ‘free will’ and externalized Godly or Natural ‘authority’, which finds expression in a huge variety of paradoxical one-other dichotomies. Amongst the latter are ‘subject’ or ‘object’; ‘genes’ or ‘environment’; ‘positive’ or ‘negative’; ‘particle’ or ‘wave’; ‘matter’ or ‘anti-matter’; ‘figure’ or ‘ground’; ‘ego’ or ‘shadow’; ‘money’ or ‘love’; ‘masculine’ or ‘feminine’; ‘reductionism’ or ‘holism’ etc, etc.

It doesn’t take much common sense – or sense of common experience – to recognize just how *odd* and indeed *singular* the one-alone thinking is that leads to such profound dichotomy and ultimately futile conflict between material and immaterial expressions of reality. One only has to reflect that a purely material reality would be confined within a fixed, dimensionless ‘point’, and a purely spatial reality would be formless, to recognize that any absolute severance of matter from space is inconsistent with our observation and experience of inhabiting a dynamic, evolutionary cosmos.

Nevertheless, this very dichotomy lies deep in the foundations of the definitive logic of the excluded middle – whereby one thing cannot be another thing – which underpins conventional mathematics and objective science and is deeply rooted in the governance and belief systems of modern human culture. The persistence of this dichotomy in the face of its obvious inconsistencies and shortcomings is hard to understand, but may have to do with human cognitive predispositions, combined with a desire for power that can bring with it a sense – albeit a false sense – of freedom and security. The divorce of matter from space begets a marriage of convenience between lust and fear, which cannot admit any vulnerability to uncertain or loving influence that might otherwise permeate its solidly fortified boundaries. Once embedded in the structures and strictures that we use to regulate our lives and careers, it is difficult to dislodge without enormous upheaval, even as it continues to be the source of deep distress and unsustainable behaviour.

The upshot is a common nonsense world in which the individual ‘self’ is both estranged and worshipped as a vampiric one and only ‘I am’ that does it ‘my way’ through a defiant unilateral declaration of independence from the natural neighbourhood upon which it

depends to supply its energy needs. This sovereign self can only blow its own trumpet as it strives to survive and thrive in competition with and at the expense of others, for it cannot acknowledge succour from, nor unconditionally give succour to any within its vicinity. It is *entirely* self-centred, a narcissistic *whole* object of its own subjective regard, with no room for consideration of whatever or whoever lies within its bodily vicinity as anything other than something or someone to exploit or exclude.

This is the fearfully unkind kind of sovereign self that seeks possessive dominion over its 'environment' and may even go to such fundamentalist extremes as to regard its living, loving body as no more than a temporary mechanical vehicle serving the interests of its 'selfish genes' or over-ruling Deity in confrontation with others. This is the kind of self whose capacity for loving and giving to any other than its own internal and external projections of itself is so truncated that it will go to any self-reproducing lengths to ensure its hegemonic monopolization of resources within the diverse natural communities in which it is included. In the face of energy shortage, this kind of self does not slow down its growth and conserve or pool resources with others, but goes all out to gain a selective advantage over its peers by out-competing and exploiting them. Its population of more of the same explodes whilst all around are taking cover and re-grouping.

This is the kind of 'self' that rationalism perceives and celebrates as a 'winner', a 'born survivor' and 'chosen one' fit to reign supreme amongst the many unequal losers whose fate is extinction somewhere along the wayside in a heartless process of trial and removal of error in pursuit of invulnerable, infallible, perfect mechanical performance. The quest to discover and become such winners is everywhere evident in the competitions and hierarchies that characterize human social formations, from rivalries within families to wars between superpowers. But along the wayside, what truly is vital to evolutionary sustainability, as distinct from solitary individual survival, gets lost.

The inconvenient truth for this kind of self is, however, that in an ongoing evolutionary process there can be no closed down space in which such a thing as a perfectible individual vehicle can exist in which it can survive forever whilst excluding all others.

All that is possible and perfectible depends on the continually changeable spatial context in which it is dynamic relationally included, like a river that simultaneously shapes and is shaped by the landscape it flows through. The persistence of a perfect entity that destroys the diversity of its natural neighbourhood is no more sustainable, in the end, than the life of a cancer cell. There may be short-term ‘success’, as the self-serving automaton runs riot, but in the long run it can only bring about its own demise through the demise of what keeps it going. There can be no fittest ending for the individual that closes down the assembly line because evolutionary life doesn’t conclude with self-sufficient machines – it only opens up co-creative possibilities for each in dynamic relationship with other.

What kind of truth, then, could bring an end to this cancerously oppressive end game of ‘survival of the fittest’ and bring hope for a future of humanity that isn’t dislocated from sustaining the creativity of our natural diversity of life in the present? What kind of truth might allow us to view our selves not as flawed machines whose erratic ways need to be corrected by a process of elimination, but as natural dynamic relational forms whose self-insufficiencies are vital to our complementary correspondence with one another? What kind of truth might provide room for play in a co-creative evolutionary process without working our selves competitively towards a dead end? Only the kind of truth that through the dynamic involvement of space in its ‘logic of the included middle’ whereby self-identity naturally includes neighbourhood, can neither be Absolute or Whole in material terms alone. Only the kind of truth in which the ‘unmoved mover’ cannot be localized anywhere in particular, but is instead to be found in the receptive presence of immaterial space that permeates everywhere, without limit – the very place in front of and within our noses where we may refuse to look, for fear of darkness.

Dynamic Renewal – Re-engaging the Inseparable Couple

No sooner are the spatial and informational aspects of continuous energy flow recognized to be mutually inclusive, not mutually exclusive, than a radical transformation occurs in our understanding of natural organization, identity and evolutionary processes. There is

no need to invent any kind of over-ruling supra-natural agency to bring about movement or change because the primary nature of nature as an inclusion of space everywhere is dynamic relational. Only when frozen or crystallized out from its fluid condition does natural form assume fixed, linear proportions, and even then the underlying geometry is curved – as in a hexagonal array of close-packed spheres – not cubical. Melting or dissolution of these fixed forms involves the incorporation of space into their informational structure, so that their boundaries are fluidized into more receptive and responsive energetic configurations.

Correspondingly, fixed form and fluid form arise from the variable inclusion of space in their informational content, in much the same way that the mobility of a blob of paint can be varied by adding and removing solvent. Continuity is due to the dynamic inclusion of space as the ‘unmoved mover’ throughout the informational content of nature, not the contiguous alignment of discontinuous infinitesimal points of matter, as in classical and modern number theories, calculus and Euclidean and non-Euclidean geometries.

Mathematical foundations that ban space from their material structure effectively ban zero and infinity from their efforts to quantify reality because it is not possible to count down to zero or up to infinity in purely material terms, nor is it possible to corner infinity within three dimensional planes set at right-angles to one another. All such foundations therefore have paradox built in to the axiomatic formulations within which they seek to establish ‘proofs’ by way of self-fulfilling prophecy – i.e. the ‘proofs’ are ‘just-so stories’, artifacts of the local definitive limits imposed on infinite natural space in the first place.

When such mathematical foundations are accepted without question not just as a convenient calculating tool but a true representation of natural evolutionary organization, the danger of grave misrepresentation becomes acute, effectively rendering all that is dynamically continuous – distinct but not discrete – into isolated fragments. All concepts that are based on such rendering down of reality are no more and no less than artifacts of definition. Unfortunately, these include just about all the concepts arising from objective

scientific rationalization, not least Darwinian ‘natural selection’. And when these concepts lie at the root of deep human distress and environmental damage, the problem is not merely a question of academic nicety: it is serious and requires urgent attention.

The need for a more realistic philosophical, scientific and mathematical approach to understanding natural evolutionary processes than that arising as an artifact of prescriptive material definition is therefore paramount. This approach should take account of the dynamic geometry of natural space, boundaries and centres, not the imposition of convenient arbitrary limits around and within natural form.

Efforts to develop such an approach are already well under way, under the headings of ‘inclusionality’, ‘natural inclusion’, ‘natural communion’ and ‘transfigural mathematics’. Inclusionality can be described, but not defined, as a comprehension of nature as a fluid continuum of mutually inclusive informational (material) and spatial (immaterial) phases in which all form is flow-form, a dynamically receptive-responsive configuration of everywhere in somewhere, with no fixed centre. Natural inclusion is the co-creative, fluid dynamic transformation of all through all in receptive spatial context, whereby unique self-identity arises within the context of, not in isolation from natural neighbourhood. Natural communion is the dynamic continuity of all nature in receptive spatial context, where all can be dynamically distinct and distinguishable, but none defined in absolute, independent singularity.

Transfigural mathematics solves the problem of continuity that conventional mathematics cannot reach, through the inclusional logic of dynamically including space in matter and *vice versa*. Correspondingly, rather than treat numerical identities as dimensionless points along a discrete line, and so in effect excluding both zero and infinity, this mathematics envisages numbers as dynamic relational neighbourhoods. Here, overlapping local informational spheres of non-local spatial influence form a truly continuous, ‘dimension-full line’ or ‘resonant superchannel’ (Figure 1) in which reciprocal, spiralling inflows and outflows are dynamically balanced through inner core identities called ‘zeroids’ (from *zero identities*). The zeroids are hence equivalent to ‘organisms’ or ‘convection cells’ in

simultaneously receptive and responsive fluid relationship with their immediate environmental neighbourhood, and through this neighbourhood with all Nature.

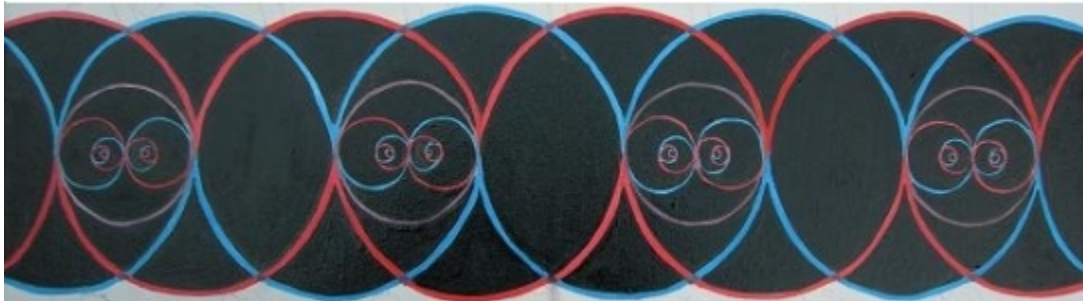


Figure 1. *The continuous ‘superchannel’ of transfigural geometry. This channel represents the spatial expansion of the discrete, one-dimensional, purely material line comprising contiguous but spatially discontinuous and dimensionless numerical point-masses upon which classical and modern mathematics are founded. Each discrete point is transformed from a static, lifeless entity to a dynamic, breathing identity as a local informational (electromagnetic) sphere of non-local spatial influence, known as a ‘zeroid’ (from zero identity). The zeroids reciprocally inspire from and expire to their immediate neighbours, creating a double helical energy flow through coupled numerical neighbourhoods of three.*

A Question of Natural Inclusion: What Is Evolutionarily Sustainable?

So, what kind of difference can these inclusional and transfigural approaches make to our understanding of evolutionary processes and the true nature of self-identity?

Imagine how inspiring might it be for us to learn to appreciate, that from our first intake of breath to our last gasp, life is a gift that comes from our natural inclusion in a co-creative energy flow, which we hold openly and pass on with love and care to others as others pass on to us? How profound an education into the wider implications of our

human belonging with, not to one another in natural communion would this present? How could it deepen and enrich our social, psychological and environmental relationships and enable us to come to terms with our mortality, vulnerabilities and differences not as weaknesses and sources of conflict, but vital ingredients of our evolutionary community play?

That is the kind of difference I think these new approaches could make. Instead of asking questions about ‘how can I, you, we or it survive’ and ‘what can I, you, we or it do, acquire or get rid of’ to be successful in and gain or regain control over a hostile world, we can ask ‘what is sustainable?’. This latter question goes to the heart of what it means to be included in a superchannel of energy flow, both as receivers and passers on of what keeps us all coming and going in the circuitry of a natural relay team in dynamic relational ‘place-time’.

What is sustainable is what can keep coming and going in dynamic attunement with the ebbs and flows of its natural neighbourhood. And what keeps coming and going is not something that can be kept to one self by way of abstract material possession, whether this be money, genes, land or intellectual property. Natural currency resides in the mutual inclusion of informational and spatial contributions to energy flow. To close down the flow as a sovereign self that regards itself and others as a set of independent performing mechanical objects seeking supremacy by proliferating at others’ expense when supplies run short is unsustainable. To keep the flow coming and going as dynamic relational selves whose identity includes all in their spatial neighbourhood by being openly receptive and responsive to changing circumstances, ready lovingly to pass on as well as receive in a continual process of transformation is evolutionarily sustainable.

Evolution of all through all involves the variable sustainability of the fitting, not the differential survival of the fittest, which are doomed to fail in their self-limiting quest for individual success.

16. Inductive Influence and Forceful Imposition: the Use and Abuse of Humility-Tools and Power-Tools in Environmental Awareness and Problem Solving

Opening Reflections

Undoubtedly, the self-named creature, *Homo sapiens*, owes much of its current status in the living world to its ability to design, fashion and use tools. But does the creature actually use its tools wisely? Do these tools truly provide a means of enriching and sustaining life's creative possibilities? Could they serve ultimately only as a destructive means to an untimely end for the creature and its natural neighbourhood? These questions are especially significant at this juncture in the Earth's evolutionary history, when the environmental implications of human tool use may be gaining an overwhelming and not necessarily desirable momentum hastening the desertion of the biosphere. To begin to answer these questions, we need to ask another question.

What Is the Use of Tools?

In time-honoured tradition, this seemingly straightforward question of definition only begets a potentially infinite regression of further questions of definition, which reveals an underlying circularity of definitive presuppositions. What is the meaning of 'use', and what is the meaning of 'tools'? Ultimately, we might come to realize that the answers to these questions depend on context – but then, what is 'context'? Also, if the answers depend on context, what is the point of trying to define them precisely in the first place? It seems that definition is itself a tool, whose utility depends on the context in which it is being used! A minefield of paradoxical self-referential enquiry closes in around the question as it paints itself into a corner. How could we get into such a logical and linguistic mess? How might we find a way out? To answer those questions, we need to ask another, double-barrelled question, concerning how we come to impose definition on the world about us.

What is the Thought That Governs our Perception, and what is the Perception that Governs our Thought about Tool-Use?

Most fundamentally, our human facility for tool use may be traceable to five inter-related biological attributes: our binocular vision, our upright terrestrial stance, our self-consciousness, our opposable thumbs and our big brains, with their relatively enormous inhibitory frontal lobes. All these attributes predispose us to be absolutely definitive in the way we simultaneously picture and frame the reality of our living space as a concrete yet abstract construction, in which everything appears or is conveniently assumed to be hard-edged – categorical and graspable.

When we perceive ourselves and nature definitively, we think definitively as rationalistic hard-liners who regard ‘softness’ as physical and mental ‘weakness’. Thought and perception form a closed loop that reinforces the mental isolation of subject from object that in turn depends most fundamentally on the isolation of the material contents of nature from the spatial pool everywhere in which they are all immersed. Everything becomes separated by and from space everywhere, such that one thing cannot be another thing, and one self cannot be another self – which is the basis for the devilish logic of the excluded middle that is embedded in the ancient foundations of orthodox philosophy, science, theology and governance. When we both think about and perceive nature definitively, we reinforce a very particular, strangely one-sided (propositional) or bipolar (dialectic) attitude of mind into both our theory and practice of tool-use. In what follows I will show why this attitude is a source of deep distress and alienation, profoundly obstructive to natural creativity, in spite of and because of its apparent ‘success’ in promoting technological innovation.

Power-Tools – Solving ‘Environmental Problems’ By Force

No sooner is subject rationalistically dislocated from object via the abstraction of space from matter, than an oppositional power relationship is set up between the two such that they can only act upon or react to one another through the imposition of external force, fed through their bodily centres and applied at their bodily boundaries. This is the basis

not only of Newtonian mechanics, but also for all theories of governance of objective subjects by some kind of subjective object. The latter is a controlling central authority or ‘driver’ that is installed within the seat of power or free will of each objective subject as well as in the seat of the ultimate subjective object or prime ‘causal agency’ necessary to kick start the cosmos from its assumed default condition of stasis. This kick-starting agency must in turn be localized definitively in place as an ‘unmoved mover’ or ‘backstop’ with fixed centre and boundaries.

In other words, having started by paradoxically enforcing independence on ‘Many’ material bodies from the space that includes them, rationalistic theories are obliged to make these bodies subservient to the overruling power of ‘One’ body, as an all-encompassing Whole. Incompatible desires for absolute freedom and absolute security are magically fulfilled by conflating what was initially separated out as definable ‘matter’ and indefinable ‘space’ into a fixed structure or ‘confined space’. That is, instead of being an infinite ‘everywhere’, without local limit, space is, for the sake of authoritative convenience, made to be measurable in terms of distance defined within fixed structural limits. These limits may lie (in both meanings of the word) at the corners of an infinite three-dimensional Cube or within a finite, depthless curved surface, as in the classical Euclidean and modern non-Euclidean geometries respectively.

By means of this powerful definitive doublethink tool, a rationale for tool-use emerges as a means of imposing forceful executive action upon objectified ‘others’ perceived as a ‘problem’ to be solved by way of achieving prescriptively desirable ‘ends’ or ‘results’. The perceived problem is often framed in terms of the question ‘what can I/we *do* with/about it?’ The underlying attitude of mind or intention is to make use of, regulate or eliminate the objectified ‘other than’ individual self or group in order to reap benefits and avoid costs. To fulfil such objective purposes there is no need for – and indeed there may be a need to avoid deeper understanding of this object beyond what needs to be known about ‘it’ to bring about desired results. All information considered superfluous – especially all information about the contextual situation of the object – is filtered out, to

avoid complication. Then, when all is known that needs to be known to clarify object and objective, a tool can be fashioned to enforce the requisite action and reaction.

This executive use of tools as a rational means of enforcing wilful intent is prevalent in modern human culture. Whenever a 'problem' is perceived, we almost invariably seek to find or invent the requisite power tool to solve or fix it. The tools themselves may be actual physical artefacts or they may be imaginary constructs, such as definitive words, metaphors, rules and regulations that impose discrete limits of acceptability on our own and others' observable behaviours. Power is thereby administered forcefully down administrative chains of command from subjective executive function or operator to objective performer or worker that serves the will of absolute authority.

A hierarchical master-slave relationship is hence set up between user and tool, whereby any apparent uncontrollable 'wilfulness' of the latter, as when a chainsaw kicks back into the face of an incautious forester, is interpreted as undesirable disruptiveness or rebelliousness. Yet just such a potential for reversal of hierarchy is built in to the linear relationship between causal subject and effective object. Who, for example is really in charge as we sit glued in front of our computer terminals or encased in the solitary confinement of our automobiles in a traffic jam? The tool can all too easily ensnare the workman and confine his creativity.

The full tragedy of believing in such simplistically rational relationships between actor and reactor begins to unfold when, so to speak, we not only hammer a nail on the head to connect something to a piece of wood, but when that something is a vital aspect of ourselves and/or other living creatures in our neighbourhood – a paw or hand, for example. As we rationalistically reduce ourselves and others to performing subjects and objects, the tools we design acquire a forceful potential wittingly or unwittingly to be used as instruments of abusive power – weapons and constraints that serve the interests of conflict and cruelty, not synergistic co-creativity.

There is therefore a need to be aware that the very executive tool that may seem so wondrously to solve our problems is liable to become a problem in itself, holding us enthralled within a trap of our own making. Indeed whatever the rationalistic tool is that leads us to perceive something as a ‘problem’ can itself be just such a trap, which, as we vainly try to solve or fix the problem, ensnares us even more deeply in ever-intensifying vicious circles. We single-mindedly dig our selves into the proverbial hole that obliges us to stop digging if we’re ever to find a way out.

For example, when we perceive ourselves to be in the midst of an environmental crisis engendered by our own wilful and unsustainable exploitation of natural resources, what should we ‘do’ about ‘it’? Do we look for a technological or legislative tool that can help us to power our way out by brute force? Or do we need to stop digging and reflect on the whole attitude of mind that got us stuck in the hole? Could there be some other kind of tool to help us out of the fix and into a more realistic, sustainable, living and loving relationship with our natural neighbourhood? Would we be able to recognise such a tool if it was placed in front of our noses, maybe even the same tool that got us trapped in the first place but used more creatively, with a different intention – or would we still clamour for a ladder to replace the spade?

Humility Tools – Attuning Evolutionarily Through Natural Inductive Influence

To summarize, our executive use of tools, essentially to acquire forceful control over problems that we perceive within our selves and our local or global environmental context, arises wittingly or unwittingly through the use of another tool. The latter is the rationalistic abstraction of material from immaterial through which we divide nature into definitive categories. If and when we allow ourselves to loosen our grip on this purely conceptual tool and get fluid dynamically real, a vast array of creative, less damaging possibilities for tool use opens up. But for these possibilities to be realized, a very different kind of mental attitude to the relationship of self and other is needed from that prescribed by rationalistic definition. And the conceptual tool needed to bring about such

a transformation of mental attitude is anything but a power tool – if anything it is a humility tool, which enables us to be more sensibly aware of the truth of our natural situation. For that reason it is liable to be blocked out as ‘completely and utterly absurd’ by the space-excluding, concrete pretension of rationalism, which cannot recognise the receptive hollow in the spade’s curved surface as anything more significant than an absence of quantifiable material presence.

Although it is hard to sell a humility tool in a culture addicted to rationalistic notions of sovereign power, should the need for a more understanding relationship with one another and our surroundings be recognised, we only have to admit the involvement of receptive space in the fluid geometry of dynamic natural features in a continuous energy flow. For as soon as that admission is made, there is no way to make anyone or anything a greater or lesser exception from what naturally includes all in dynamic relationship. There is no exceptionality on which to base notions of supremacy and the forceful imposition of power of one over many or many over one because space and matter are mutually inclusive, not mutually exclusive. As William Wordsworth’s poetic imagination allowed him to recognise, even without modern quantum mechanics, relativity and non-linear theory, ‘in nature everything is distinct, yet nothing defined into absolute, independent singleness’. Like leaves on a tree, all are distinguishable, but not discrete from their natural spatial communion with one another. These leaves reside together in the air that they breathe and connected through the channels in the tree’s roots, trunk and branches that supply them with water and minerals from the soil in which their fallen ancestors decompose and release their bodily contents for take up by others including mycorrhizal fungi. The rationalistic façade of bodies of locally confined space, paradoxically conflated with but excluded from material structure, is no more and no less than the product of a groundless supposition. There is no supporting evidence or good reason to believe in it other than the pragmatic sacrifice of truth for the sake of authoritarian convenience.

The hard to sell truth, then, appears to come along with the recognition that all the abstractive concepts on which we base our use of tools as instruments of power are

artefacts of definition, essentially anti-natural in their partial construction from purely material local content, which is given precedence over non-local space. These concepts include all notions of objective forces and selectable units as definable entities that are built in to the foundations of many of our current mathematical, scientific, theological and governmental paradigms. For many, especially those whose will to power succeeds in promoting them to executive positions, recognition of the fundamental flaws in such foundational preconceptions is likely to be unpalatable, to say the least. But the truth is, when we unthinkingly apply these groundless preconceptions to our natural situation, the potential for unpredictable repercussions beyond the expectations of our rationalistically restrictive imaginations are strong. If we don't want the chain saw to kick back in our face as it bounces away from the severance we are trying to make in the tree trunk, it may be as well to accept the need to understand the dynamics of our natural situation, not try to force or ignore them.

Efforts to develop conceptual approaches that can facilitate the use of humility tools are already well under way, under the headings of 'inclusionality', 'natural inclusion' and 'natural communion'. Inclusionality can be described, but not defined, as a comprehension of nature as a fluid continuum of mutually inclusive informational (material) and spatial (immaterial) phases in which all form is flow-form, a dynamically receptive-responsive configuration of everywhere in somewhere, with no fixed centre. Natural inclusion is the co-creative, fluid dynamic transformation of all through all in receptive spatial context, whereby unique self-identity arises within the context of, not in isolation from natural neighbourhood. Natural communion is the dynamic continuity of all nature in receptive spatial context, where all can be dynamically distinct and distinguishable, but none defined in absolute, independent singularity.

Here, it is important to recognize that these approaches neither belittle nor deny local self-identity, but seek to understand this as a receptive and responsive, dynamic relational inclusion of its natural evolutionary neighbourhood. Hence this identity is understood as simultaneously a source and receiver of natural energy flow, in much the same way as a hurricane is an inseparable, distinct but not discrete, dynamic relational inclusion of

atmospheric flow, which, in its turn, cannot be isolated from cosmic influence. As such, this identity can neither impose nor be subject to external force, because there is no known or knowable limit, and therefore no definable externality to nature. If there is an ‘unmoved mover’ in nature, this cannot be defined as a material structure, but can only reside in the presence everywhere of receptive space. Such a receptive presence cannot, by its very nature, impose force anywhere – any more than a hole can batter a spade. It draws into itself as an inductive non-local influence mediated through the dynamic local configurations of its responsive informational linings, in much the same way as female relates dynamically with male. Without the involvement of this receptive presence, there can be no true fluidity or co-creative dynamic relationship. Without acknowledgement of this need for involvement, the rationalistic tool-user becomes a rapist, enforcing passivity on all that he might stoop to conquer and devastate.

So when we use tools with inclusional humility, we do so through seeking understanding of the inductive influence that permeates within, through and around our dynamic bodily boundaries. We sustain awareness of how our behaviour simultaneously influences and is influenced by the dynamic context of our living space in ways that cannot be predicted in the long run. We neither pretend that we have no influence nor that our influence extends to being in absolute control of our destiny. We accept a role that is more akin to that of a pilot receptively and responsively guiding his or her craft through a stormy sky or sea, than a driver bent on forcing our way through at all costs. We may use a spade to tunnel our way out through a hole as well as dig ourselves in. We use a knife to work with the grain of the wood not against it. And so on. Inclusional humility doesn’t prevent us from using tools to help us attune harmoniously with our contextual circumstances. It just asks us to use them wisely, always recognizing the dynamic implications of our involvement in nature, not our exclusion from it.

17. Exemplifying Inclusionality - Fluidity Everywhere

Quite frequently, when I am trying to communicate the meaning of inclusionality, people challenge me with their ‘need for an example’, which will ‘convince’ them and ‘others’ of the validity or otherwise of my ‘argument’. Coming literally as it does from the very particular, positivistic kind of mindset and form of enquiry that many of us have become accustomed to through the unrealistically definitive presuppositions of objective rationality I can find this challenge deeply frustrating. I suspect that what is being called for is some kind of indisputable ‘concrete fact’ that can be accounted for inclusionally but not rationalistically. But I also know that the selective identification of indisputable concrete facts that can be predicted and explained by strong theory is a self-fulfilling objective of rationalism, underpinned by incompatible psychological desires for freedom and certainty, not inclusionality.

Inclusionality accounts not only for all explicitly observable, quantifiable and predictable phenomena that are within the province of objective theory, but also for all the unpredictable and evolutionarily creative qualities of nature that positivism wishes away. Examples of inclusionality can hence be found everywhere, including in front of everyone’s noses and up everyone’s nostrils. But a mind focused only on what appears to be concrete won’t and can’t *see* them for what they are, no matter how senseless and incoherent nature appears to be in their absence. So I know that whatever I might try to offer by way of example is liable to be ignored, disputed, misinterpreted or explained away by some magical *ad hoc* invention such as ‘random noise’.

Objective rationality, as the very word *rationality* implies is by its very nature extremely *selective* and hence *partial* in what it *chooses* to consider or ignore. It positivistically focuses only on explicit *positive* presence, that which can be perceived directly through the senses, and sets aside as ‘that which must be passed over in silence’ all whose presence is purely implicit and so can only be ‘felt’ or ‘experienced’ indirectly. What this means, most fundamentally, is that rationalism cannot cope with any presence that *isn’t*

finite in the sense of *being confined to a particular locality*. When it encounters such an unquantifiable presence, rationalism attempts, for the sake of its own convenience and at the expense of truth, to *force* fit it into confinement within or conflation with a measurable, fixed structure. In this way, the cosmic receptive omnipresence of space has been rendered co-extensive either with a ‘bounded but infinite’ 3-dimensional cube, or a ‘finite but unbounded’ curved surface, as in the conventional Euclidian and non-Euclidian geometries respectively. The upshot is a profoundly paradoxical worldview, which is brilliant at predicting, explaining away and technologically exploiting the behaviour of what it has locally self-defined, but hopeless at understanding or predicting the complex dynamics of natural evolutionary systems comprising more than two bodily identities simultaneously influencing one another. Moreover, this rationalistic worldview is a source of deep distress, intolerance and conflict through its mental device of imposing discontinuity and hence opposition between distinctive but mutually inclusive natural partners, most fundamentally, matter and space.

By contrast, inclusionality is a way of understanding natural phenomena in a self-consistent, non-paradoxical fashion, grounded impartially, i.e. from all available perspectives and without prejudice, in actual observational evidence and human experience. As such, all natural phenomena are examples, from microcosm to macrocosm, as I illustrated in my book, ‘Degrees of Freedom’ (1997) for living systems ranging from molecular to ecosystem scales of biological organization, showing how none of these could be defined as discrete units within fixed boundaries. For example, where does a tree begin and end?

Now, one might ask, OK, so what is it about these phenomena that inclusionality can account for consistently and non-paradoxically, which objective rationality cannot? The answer I would offer to this question is ‘fluidity’ - the capacity for continuous change of shape in impermanent form. To my mind it is impossible to account adequately for fluidity, as a characteristic of all evolutionary/transformational systems, without taking into account the dynamic involvement of space as a receptive non-local presence (and hence inductive influence) everywhere.

So, here is a kind of answer for those seeking a concrete example of inclusionality. Have you ever tried pouring concrete? What could make pouring concrete a concrete possibility?

18. Tolerance: How Inclusional Awareness Can Unblock The Flow of Human Understanding

Drawing Lines – the mythical grounds for objective intolerance

That's the limit! You've got to draw the line somewhere!

How often do we come across such expressions and how often do we use them ourselves? What do they reveal about our thinking and feeling?

Most fundamentally, these expressions say something profound about how many of us have come to view both nature and human nature as realms of fearful possibility that must be contained within acceptable bounds if we are to establish any kind of order to our lives that will enable us to settle down and/or make progress. As Robert Frost put it – *“Nature does not complete things. She is chaotic. Man must finish, and he does so by making a garden and building a wall”*

In other words, these expressions signify judgmental attitudes of intolerance towards anything outside our comfort zone that we deem to be unacceptable or downright ‘wrong’. Oddly, we – by which I mean ‘many of us’ – can take great pride in these attitudes as our way of making the world a better place and one another better people, forging ahead in an ongoing battle of good versus evil, positive against negative, light against darkness, order against chaos, wisdom against stupidity, civilization against wildness, beauty against ugliness, health against disease, etc. We tell ourselves mythical stories about this battle and erect symbolic monuments to celebrate the lives and deaths of those who have won great victories or fallen gloriously in the cause of one against other. We fill the schoolbooks of our children with ticks and crosses so that they can be certain in the knowledge of what's right and what's wrong. We reward those who tick our boxes whilst meting out punishment to those who don't meet the standard criteria we lay

down for what's acceptable. We make it harder and harder not to conform and strike out in new directions from what has gone before.

Underlying these outward expressions of intolerance is a whole system of restrictive logic that has become deeply embedded, over thousands of years, in the foundations of our language, mathematics, science, theology and governance. This is the definitive logic of objective rationality, whose foundations are grounded in a declaration of the independent exclusivity of one thing from every other thing, otherwise known as 'the law of the excluded middle'. By absolute definition, this law has zero tolerance for any form of thinking in which one thing simultaneously includes and is included in another thing. Only the positivistic and dialectic logics respectively of 'one or other' or 'both one and the other in mutually contradictory apartheid' are permitted, and neither of these logics can tolerate the other.

The most fundamental basis for this logic of intolerance is an absolute dichotomy between two kinds of universal presence, 'material' and 'immaterial', such that the latter is treated as a passive physical absence ('nothing') and the former as an active and reactive physical presence ('something'). From this dichotomy, other definitive divisions arise, for example between animate and inanimate, mind and matter, God and Nature, organism and environment, masculine and feminine, order and disorder, positive and negative, etc.

A few moments' reflection reveals that this dichotomy does not and cannot make sense, because a purely immaterial entity would be featureless void, whereas a purely material one would be a dimensionless concrete point. In an observably featured, fluidly dynamic cosmos, material and immaterial presence can only be mutually inclusive, not mutually exclusive. Nature can only be a continuous energy flow of dynamic relational 'place-time', not a split field of discretely objectified matter and space motivated from somewhere ineffable. Matter cannot occupy or impose discrete limits upon space because space permeates matter.

Although this dichotomy doesn't make sense and fails to take account either of our actual human living and dying experience or evidence implicit in modern scientific theories of relativity, quantum mechanics and non-linear dynamical systems, it is still taken for granted and taught as the basis for all rigorous analysis and problem-solving to this day. The dimensionless concrete point mass remains the starting point for all orthodox mathematics. This point underpins the discontinuity of finite material figures from their non-finite spatial background in the arithmetic of discrete numbers and the abstract Euclidian and non-Euclidian geometries that conflate space with a three-dimensional cube or curved surface. How on Earth should we have become so dependent on such abstract nonsense – and is it really as good for us as we lead ourselves to believe every day in every way in almost everything we say and do as educators, politicians, philosophers, scientists, technologists, clerics, managers and advertising executives?

Fear of 'Something Wrong': the Paradoxical Breeding Ground for Intolerant Attitude

Somehow we seem to have made a virtue of intolerant logic as the very grounds upon which we base our enquiries and explanations of nature and human nature. But, wait a minute, don't many of us also think there's something 'wrong' with 'intolerance', some kind of rigid inflexibility that stifles our own and others' creative potential and ability to attune with changing circumstances, whilst bringing us inevitably into conflict with whatever or whoever doesn't agree with us? How is it possible to be gentle and compassionate in our relationships with those in our neighbourhood if we cannot tolerate their presence and actions? The enigma is eloquently summarized by Shakespeare's Hamlet: *"To be or not to be, that is the question: whether 'tis nobler in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles, and by opposing end them?"*

Such is the paradox that has been built in to the foundations of human thought for millennia through the mental dislocation of matter from space – that we preach the

virtues of tolerance at the same time as fearing it will expose us individually and/or collectively to enfeeblement and evil forces. Clearly, somewhere along the line, this paradox arises from the idea that there is something intrinsically *bad* about nature and human nature, which must be kept in check. That we should be capable of having such an idea makes our addiction to objective rationality understandable psychologically, despite the philosophical and scientific irrationality of its abstract exclusion of immaterial presence.

What makes us believe that there is necessarily anything *bad* about what brought us into the world in the first place? To believe this is like railing against our Mother, complaining that we never asked to be born. In the process, we become alienated from nature, desiring to define and eliminate all that's imperfect about it, so as to ensure a pain-free, immortal existence of endless bliss, if not here on Earth, then somewhere else. In that alienation may lie the true story of the Fall, our mythical expulsion from the Garden of Earthly Delights and ensuing insatiable quest for perfect purity that we imagine will somehow allow us to regain our lost Paradise. The logical conclusion of such a quest for purity can, however, only be stasis, not a vibrant life full of passion, but an encapsulation in virus-like Platonic ideal forms of frozen geometry.

It seems all too obvious that what makes us believe something's wrong with our natural origins is the undeniable reality that, as local individual identities, we can suffer and die. We want to free ourselves from that reality and so seek to perfect some form of invulnerable existence that excludes us from it. Our intolerance of painful reality sets in train a desire for exclusivity that alienates 'self' and 'us' from 'other', enabling us ultimately to live paradoxically as if we are independent entities – exceptions from a Nature that in reality can make no exceptions. This desire becomes embedded in the foundations of a logic that tolerates no weakness – a logic that expresses itself in the Darwinian terms of 'survival of the fittest'. We come to perceive ourselves and other life forms as independent 'survival machines', competing for superiority, with no room for compassionate fellow feeling in a 'dog eats dog' culture.

I remember when I was a child I hated being ill, not so much because of the suffering, which could always be soothed by tender loving care, but because my parents said it was because there was something *wrong with me*. I took this literally to mean that somehow my illnesses, of which I had many, were *my own fault*, so that they became a continual source of guilt and shame, a double curse. When I was ill or injured, I wanted to hide away somewhere where no one could see the dreadful evidence of my failure.

When my mother was dying and I had to tell my ancient father that I needed to take him from his hospital bed to see her urgently, he asked, ‘what’s wrong with her then? Later, as I watched tears flowing down my father’s face whilst he held my mother’s hand when a nurse told him that she had passed away, I wondered what solace this perception that she had died because there was something wrong with her could bring to him.

What if what’s actually wrong is this very perception of what’s wrong that leads us to regard ourselves as not good enough survival machines in need of improvement? What if whatever makes us individually vulnerable is actually vital to our collective ability to live, love and evolve in co-creative dynamic relationship? What then, would be the human cost of seeking material perfection and enshrining this as a condition for individual approval?

The tolerance of natural variability in the evolutionary flow of ‘place-time’

As a keen observer of nature, Charles Darwin was struck by the extraordinary natural variability of life forms. For good reason, he saw this variability as vital for the evolution of diverse species. But he invented a mechanism to bring about this evolution that is perversely intolerant of variety, namely ‘natural’ selection as ‘the preservation of favoured races in the struggle for life’.

Implicit in this idea of selection is the notion that natural variability arises as a set of noisy deviations from an optimal standard, which can be weeded out progressively until

only the most competitively exclusive remains. It is clearly underpinned by a perception of ‘something wrong’ with natural variability, which is sorted out by the imposition of a death penalty on all those most vulnerable and so not good enough to succeed in gaining the favour of a forceful judgmental authority. The linkage of such perceptions to the intolerance of objective rationality and its manifestation in a huge variety of abusive human behaviours, from setting one another ‘exams’ to genocide and world war is also clear.

But what if natural variability was understood not as a basis for competing in gladiatorial combat to see which discrete individual entities are most fit to occupy a fixed arena, but instead as an expression of the tolerant room for possibility vital for evolutionary co-creativity with an ever-changing environmental context? Not only might we be more able to tolerate one another’s idiosyncrasies and vulnerabilities, but we could recognize that these latter actually sustain the tolerance of natural fluid flow, which enables local obstructions to be dislodged, transformed and circumvented. When we contemplate, for example, the swirling flows of rivers, oceans, atmospheres and galaxies, we cannot fail to notice the endless variety of evanescent appearances that, like our individual selves, emerge and submerge as distinct but not discrete local expressions of currents that can have no discrete beginnings or endings. If we were to single out and reproduce only particular variants as examples of ‘best practice’, what kind of flow could they add up to?

To gain this understanding requires, however, a much deeper understanding of the real meaning and origins of tolerance as a vital quality of all nature as a continuous energy flow that includes human beings. It involves much, much more than just passively putting up with what we as individuals might regard as a ‘necessary evil’, which simply perpetuates the idea of something wrong with nature and human nature. It requires the reclamation of what objective rationality has alienated from its exclusive logic as a source of vulnerability and uncertainty, but which is also vital to the flow of evolutionary creativity: the receptive omnipresence of space everywhere as a dynamic inclusion of matter in the continuous ‘place-time’ of natural energy flow.

Tolerance cannot remove suffering because it naturally entails suffering. But with its deeper understanding comes recognition that what brings suffering also brings the life and love in which our individual lives and deaths are naturally included not as extinguishable objects but as dynamic relational flow forms in continuous communion. We can come to understand the vital contribution of our individual natural inclusion in an evolutionary process of co-creative, fluid dynamic transformation of all through all in receptive spatial context. This is no monotonous solo ‘survival of the fittest’ in splendid isolation, but a continually improvising orchestration of many voiced harmonies ensuring the ‘sustainability of the fitting’. Evolutionary creativity doesn’t naturally perfect isolated individuals – it sustains their dynamic relationship in an ongoing relay of receiving and passing on.

Opening Channels

With deep tolerance comes the possibility of transforming the ‘dead line’ that isolates one thing exclusively from another into a vibrant communication channel of each including other in the continuous flow of many that includes one and one that includes many in dynamic relationship. Here, there is nothing fundamentally wrong with nature or human nature that needs to be excluded or can be excluded, because nature does not and cannot make exceptions from the receptive influence of space everywhere. But intolerance of this reality can, in the long run, only compound, not end suffering, through the opposition of one against other that naturally include one another in the evolutionary communion of their common space. It is our rationalistic intolerance of immaterial presence, not what we might call the sea of troubles, which needs to loosen up if we are to get out of the fix that draws us into civil war with our natural neighbourhood.

19. Making Allowances for Evolutionary Creativity: The Autocatalytic Influence of Receptive Space

From Restrictive Imposition to Receptive Invitation – The Deletion and Induction of Natural Variation

Even some of its strong advocates have recognized a profound logical difficulty with Darwin's concept of 'natural selection' as 'the preservation of favoured races in the struggle for life', in that such a restrictive mechanism cannot in itself be evolutionarily creative (e.g. Briggs and Walters, 1984; Rayner, 1997). This fundamental difficulty has, however, neither prevented the almost complete acceptance of the concept within the biological sciences nor the extension of its underlying principles throughout all kinds of academic discipline, economic and social governance, educational curricula and peer review systems based on the rationalization of natural energy flow into discrete units. With the added impetus provided by selfish gene theory (Dawkins 1989) and sociobiology (Wilson, 1998) there has been an increasing tendency to perceive and manage people and organisms simplistically *as if* they truly are competitive survival machines (Curtis 2007). In this process, it may well be that what is truly vital to human and natural creativity is being suppressed and neglected, resulting in deep misunderstanding, environmental damage, human distress and conflict (Rayner 2003, 2004).

As an ecological resolution of this difficulty, Rayner (1997) suggested the need for a fluid dynamic concept of 'niche' as what he then called a 'selection vacuum' or 'opportunity space', which induces continual evolutionary transformation. Here, environment and organism continually and inseparably include and shape one another as outer context and inner content of the same variably resistive dynamic system or energy

flow, in much the same way that landscape features simultaneously shape and are shaped by the erosive flow of a river. The flow of informational content in the system itself is made possible and locally reduces and increases resistance through the opening up and reinforcement of spatial channels for further flow in an autocatalytic process of change begetting change. The evolution of a tree creates an opportunity for a climbing plant. The accumulation of sand by annual plants at the front of a sand dune system creates an opportunity for a succession of perennial plant communities and associated animals, fungi and microorganisms to establish and follow in one another's wakes, culminating in forest. Earth's biosphere expands out from oceans to land and sky – and from microbes to people capable of venturing beyond the immediate confines of the planet's atmosphere.

Instead of a rigidly prescriptive process in which individuals or their genes as objectively discrete units of selection are forced to fit or adapt to the constraints of predetermined environmental settings or 'end goals', a co-creative, improvisational, dynamic relationship occurs between content and context. Indeed the 'content' is 'contextual', i.e. an inseparable dynamic inclusion of the 'context' like a river in its basin, a river basin in a landscape, a tree in a forest, a forest in biosphere, a biosphere in cosmos, without ultimate limit. Each reconfigures in *complementary*, simultaneously receptive and responsive dynamic relationship with the influence of the other. Correspondingly, each by *making allowances* as a dynamic inclusion of the same, variably resistive but continuous energy flow *inductively* invites the other to transform in a richly creative and ultimately unpredictable dance. This interplay continually adds new variations on an evolving theme that includes all simultaneously responding receptively to all in what can become an extremely complex and diverse communion, albeit one based on very simple fluid dynamic principles. It is quite unlike the predictable linear progression of conventional evolutionary theory, which grinds towards a singular fixed end on what has been called an 'adaptive peak' through one *forcefully* restricting the expression of the other until all possibilities for diversity and innovation are competitively excluded (e.g. Futuyma, 1986).

Dynamic Boundaries

For the creative interplay just described to be possible, the informational interfacing or dynamic relational boundaries of all forms of living organization themselves have to be fluid and hence indeterminate to varying degrees, not absolutely rigid and sealed. This variable fluidity allows them to attune in an energetically sustainable way with heterogeneous local conditions within the common space of their ultimately limitless natural neighbourhood. Under energy-rich conditions ('abundance'), processes of 'self-differentiation' bring about the proliferation of relatively permeable, deformable informational boundaries in highly branched or subdivided formations. Under conditions of energy shortage ('scarcity'), processes of 'self-integration' minimize boundary formation through processes of sealing, fusion and redistribution, which conserve and recycle energy in relatively undivided or networked survival, channeling and explorative structures. Examples of the reciprocal dynamic relationship between informational boundary differentiation and integration amongst organic forms of life on Earth can be found from molecular to ecosystem scales of organization, but are perhaps most explicit in the heterogeneous growth forms of fungi. The developmental versatility of indeterminate organization in fungal mycelia as they expand and encounter one another in spatially and temporally varying conditions of resource availability in their natural habitats has enabled some of them to attain vast sizes, measurable in square kilometers, and ages of thousands of years (Rayner, 1997).

The requisite changes in boundary fluidity that allow living systems to attune in an energetically sustainable way with their contextual circumstances can be brought about chemically, through shifts between 'primary' and 'secondary' metabolism in response to internal and external environmental reduction-oxidation potential. For example, the oxidative cross-linking of phenolic, terpenoid, proteinaceous and fatty compounds can harden and seal boundaries through the production of compounds like melanin, lignin, keratin, cutin and suberin. Such hardening and sealing of boundaries in response to the presence of oxygen in the gaseous phase, where molecules diffuse ten thousand times faster than through water, was vital to the emergence of terrestrial life forms, and further

exemplifies how life catalyses its own evolution. Oxygen not only energizes organic life through its consumption during aerobic respiration, but has the potential to destroy the physical and chemical integrity of protoplasm through the production of reactive oxygen species and free radicals. This is due to its receptive spatial affinity for electrons, which it accepts one at a time in the course of its reduction to water. The liberation of oxygen into the atmosphere through photosynthesis was therefore perhaps the greatest challenge and opportunity that organic life on Earth has so far presented itself with in the course of its early evolution. Through the development of chemical means to incorporate the simultaneous threat and promise of oxygen into cycles of growth, death, decomposition and regeneration, life allowed itself hugely to amplify the diversity and scope of its transformation of predominantly solar energy into a myriad forms and processes (Rayner, 1997).

Through inhabiting dynamic interfacial boundaries that cannot absolutely isolate into *opposite* sides – they can only vary the resistance to communication between *complementary* insides and outsides, living systems can never form truly discrete, independent units. Any model of evolutionary process that depends on the selection or singling out of discrete units from their environmental context cannot therefore be truly representative of natural systems and may in some circumstances lead to profound misunderstanding (Rayner, 2000). So, what is the attraction of such models, and why do they persist?

Individualistic perfectionism – the self-preservation of a fixed idea

Psychological analysis of such discourse as ‘selection’, ‘preservation of favoured races in the struggle for life’, ‘survival of the fittest’, ‘competitive exclusion’, ‘selfish genes’ and ‘survival machines’ reveals all the hallmarks of obsession with some kind of ‘ideal being’ or ‘chosen one’ that doesn’t perish. This obsession has been evident throughout recorded human history, associated with notions of sovereignty and hierarchical structure founded on systems of rationalistic logic that divide and close off one kind of existence from

another. These systems are deeply embedded in orthodox mathematics, language, science, theology and governance.

It serves the interests of this obsession to deny or exclude any kind of natural influence or presence that could erode the boundaries of permanent structure. Battle lines are drawn that oppose the ‘forces’ of ‘order’, ‘light’ and ‘right’ with the ‘forces’ of ‘chaos’, ‘darkness’ and ‘wrong’. ‘Positive’ is singled out as ‘good’, which sustains material being, whilst ‘negative’ is singled out as ‘bad’, which takes away from definitive existence. ‘Male’ comes to symbolize ‘positive’, whilst ‘female’ symbolizes ‘negative’. The quest to preserve ‘good’ becomes an ongoing struggle against the ‘enemy’ of ‘entropy’. ‘Sacred’ geometries of ‘perfectly’ closed, symmetrical, crystalline forms are idealized as eternal time capsules. Man declares war on nature and his own nature, seeking to remove whatever makes him perishable. But in so doing, he tries to manufacture a paradoxical reality in which matter is independent from space, capable of evolving in its own right, by force either of its internal will or an external executive agency, an unmoved mover of the kind envisaged by Aristotle, which can move others without moving itself.

Clearly, there is no room when under the spell of this obsession to make allowances for what makes the allowances needed for evolutionary fluidity and co-creativity. There is no room to include the receptive immaterial presence of space everywhere in the absolute Whole of One Alone, whether this is a three-dimensional Euclidian Cube extended to infinity, or the ‘finite but unbounded’ depthless curved surface of conventional non-Euclidian geometries. The ‘wholes’ and ‘parts’, the ‘one’ and ‘many’ of rationalistic ‘holism’ and ‘reductionism’ are excluded from one another by the ‘either/or’, or ‘both-and in mutual apartheid’ unrealistic logical dichotomies of one-sided positivism and pluralistic dialectics. There is no room for consideration of the vital involvement of receptive space in natural energy flow, which eases the passage for responsive and hence necessarily unfixed structure to reconfigure into endless variety. Instead this flow is simplistically reduced from a dynamic relational *flow of space*, that is as a mutual dynamic embodiment of responsive, resistive informational and receptive, yielding

spatial phases in a continuously transforming stream, to an atomized *flow through space* as a stream of discontinuous material entities.

Inclusional neighbourhood – the autocatalytic influence of receptive space

Once stuck in the rut of simplistic definition, which sacrifices truth for the sake of linguistic and arithmetical convenience and a false sense of security and freedom, it can be difficult to get out, for both psychological and pragmatic if not good scientific reasons. But no sooner is the inductive role of receptive space admitted – or re-admitted – into our understanding of dynamic material form, than paths of least resistance open up that allow everything, literally, to flow thermally and gravitationally into continually transforming place. Life doesn't just follow pre-existing paths of least resistance, life creates them and in the process catalyses its own creativity without need for either an internal or external executive force. All becomes understandable in terms of inductive influence, not forceful imposition.

The 'unmoved mover' of Nature is correspondingly not to be found in an executive material agency that acts upon reactive others according to Newton's Laws of Motion, some mystical One Alone figure, which can move the Earth given a long enough lever and somewhere to stand on. But she may be found in the immaterial presence of material absence everywhere that allows the possibility of responsive relationship. She can be heard in silence and seen in darkness and felt in the pit of the stomach, cold sweat and the cockles of the heart, not the shake, rattle and flash of forceful explosion that is drawn into her bodily manifestation. Her influence is implosive, not explosive, and without it no life or death or love or hate or movement or warmth or echo or creativity or destruction is possible. She may have been alluded to in many names, Tao, Buddha Nature, Holy Ghost, Brahman, Kali, Wakan-Tanka, Great Spirit etc, and found in many places, including the corrosive and dissolving presences of oxygen and water, but few perhaps have truly recognized her for what she both is and is not.

The dynamic inclusion of receptive space in natural fluid flow is the basis for the ‘logic of the included middle’ or ‘inclusionality’, which has the effect of transforming the rigid intolerance of objective rationality into a much more permissive and creative view of life and evolutionary process. This receptive space is what Rayner (1997) initially referred to as ‘selection vacuum’ and ‘dynamic niche’, but has now incorporated into the concept of ‘natural inclusion’ as ‘the fluid dynamic, co-creative, transformation of all through all in receptive spatial context’ (Rayner, 2006, 2008). Natural inclusion correspondingly shifts the spotlight of ‘natural selection’ from its focus on the one-way adaptation of discrete individuals or groups to an objectively prescriptive set of external conditions through a process of competitive narrowing down, to a multi-way dynamic relational attunement of each with other in continually co-creative flow. The perfection of individual survival machines in competition with one another is not only incompatible with such flow, it is impossible and meaningless, for what is energetically sustainable in this context is continually changing. Perfection is not a quantifiable property of discrete, self-centred entities; it is a quality of harmonious dynamic relationship that cannot be sustained without involvement of the receptive space that allows boundaries both to perish and reconfigure within its inductive, autocatalytic influence.

With the recognition that it is dynamic spatial relationship, not individual autonomy that is important to the creativity and sustainability of evolutionary processes, a very different appreciation of the true nature of self-identity emerges. Instead of being a purely intrinsic, definable possession of discrete individuals independent from their environmental context, *self identifies with neighbourhood* as a dynamic, co-creative inclusion of one within other. Instead of being regarded as separators of one from another, the bodily boundaries of living organisms and organizations are understood to be dynamic informational interfacing that simultaneously outline inner world and inline outer world as distinct but not discrete contributors to the same complex self-identity (Rayner, 2004). The boundaries become inclusive, not exclusive middles, joins that make allowances not excisions, through the distinction but not isolation of one in another.

Acknowledgment of interdependence thereby supersedes declarations of independence, so that loving care for natural neighbourhood no longer seems an irrational negation of genetic survival needs, but makes common sense as a vital inclusion of sustainable self-identity. The very basis for conflict, as a product of opposition between one and other, is removed as the loving influence of receptive space is restored to primacy, not as sickly sentimentality but the very heart of what it means to be truly human and natural, deeply painful as it is to admit the individual vulnerability that this necessarily entails. This is not to say that individuals can't or shouldn't express aggressive, resistive and protective patterns of behaviour, since these are vital to the differentiation and sustainability of natural diversity. But it is to say that these expressions should not be regarded as the inevitable product of enmity between independent beings striving to gain from one another's annihilation.

Inclusional Catalysis: From Forced Fit to Induced Fitting

It has long been recognized that the chemical transformations needed to sustain organic life on Earth would be impossibly slow without the assistance of these transformations' own catalysts – enzymes. Enzymes are proteins that catalyze not only such fundamental processes as respiration and photosynthesis, but also their own synthesis via their dynamic informational relationship with the 'genetic code' contained in the sequence of triplets of purine and pyrimidine bases along the length of molecules of deoxyribonucleic acid and ribonucleic acid (DNA and RNA). The importance of receptive space in this dynamic relationship in many ways epitomizes the co-creative synergism between content and context, and between differentiation and integration that is expressed in diverse ways and at different scales throughout nature. First of all there is extremely close correspondence between the way the genetic code specifies particular kinds of amino acids and the way these amino acids relate spatially with one another in proteins such that the latter function optimally as catalysts. Secondly, this function is dependent on the configuration of what is known as the 'active site' of enzymes but might more aptly be called the *receptive space* where chemical compounds known as 'substrates' are brought

into correspondence in such a way as to facilitate their association and dissociation with and from one another to form ‘products’.

For a long while, the relationship between enzyme and substrate was thought about rationalistically in much the same way as niche and organism, that is, as ‘lock’ and ‘key’. For the key to operate the lock, it had to fit precisely the prescriptive specifications of the active site of the lock, as defined by the informational structure of the protein, which is defined in turn by the sequence of amino acids which is defined by the sequence of bases in DNA and/or RNA. Studies of the actual dynamics of enzyme catalysis eventually showed, however, that this highly restrictive, hard line mechanism is inadequate to account for observation, and a more fluid, dynamic relational process is involved, known as ‘induced fit’. Here enzyme and substrate make allowances for inclusion of and by the other, through changes in their spatial configuration.

The transformation from ‘natural selection’ to ‘natural inclusion’ as a basis for understanding evolutionary process, in many ways involves relaxation from a rigidly objective lock and key model to a more accommodating ‘induced fitting’ relationship between organism and environment in which each dynamically includes the other. Instead of randomly generating a set of independently variable genetic ‘keys’ that are individually tested for their ability to meet environmental specifications, and discarding those that do worst in favour of those that do best, there is opportunity for ‘content’ to co-evolve with ‘context’ in mutual dynamic relationship.

Such a transformation might not only help us to deepen and enrich our understanding of how the ‘Law of the Jungle’ continually reconfigures its evolutionary boundaries instead of setting them in concrete. It could also help us to relax the creativity-stifling, pain-aggravating definitions we are prone continually to impose on human individuals and social formations, through adherence to rationalistic standards of judgment.

Encouraging co-creativity by making allowances in human organizations

The occurrence of restrictive practices based on definitive theory is evident throughout modern human culture and organizations. The rules and regulations of structures and strictures that impose unnaturally discrete limits on natural energy flow abound. In many ways we have allowed ourselves to become driven by abstraction of matter from space into conformity with time schedules, job descriptions, action plans, legal constraints, educational curricula, financial imperatives, administrative boundaries and hierarchies etc, that force us to become deeply alienated from one another and our natural neighbourhood. This alienation disrupts our improvisational ability to attune harmoniously with changing contextual circumstances, which is the essence of ecological and evolutionary sustainability and creativity. It renders our inapt self-definition as competitive survival machines into self-fulfilling prophecy, a dystopia of psychological, social and environmental abuse and devastation, lacking any kind of natural coherence or kindness that enables us simply to live, love and be loved, in reasonable comfort and with sufficient stimulation to keep our minds and muscles active.

But there is no obligation for us to live in this unsustainable way of forced fitness – indeed there is every requirement for us to stop teaching ourselves to do so if there is to be hope for the evolutionary sustainability of humanity in the long run. We can instead learn, or re-learn, the improvisational ways of ‘induced fitting’ through co-creatively making mutually encouraging allowances that come from accepting and acknowledging the diversity of our natural inclusion in receptive spatial context. As these ways are brought increasingly into dynamically receptive and responsive forms of human organization and truly educational practice, so too can increase the possibility of living enjoyable, caring and fruitful lives, freed from self-inflicted poverty, addiction, conflict and oppression. But for this possibility to be realized, we have to give up the quest for the holy grail of self-preservation, which holds us to ransom in paradoxically seeking individual perfection as autonomous beings in an inescapably variable and unpredictable energy flow. This flow can never be an eternally level playing field for us to compete to be best on, until and unless all warmth is withdrawn and what some may imagine to be Hell freezes over. Then we really will have succeeded in being preserved forever in

crystalline geometry, running on the spot like frantic Red Queens atop adaptive peaks of most fit, not most fitting through making allowances in dynamic relationship!

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20. The Exclusional and Inclusional Making of Circles and Spheres

Nothing could be more natural than circular and spherical form. We encounter such forms, along with their spiral, elliptical and tubular progeny, everywhere in the natural world, from sub-atomic to galactic scales. But when we come to reflect on the origin and relationships of these forms, we encounter a very profound problem. This problem is, quite simply, that the way circular form arises naturally is the inverse of the way it is conventionally treated mathematically. In a nutshell, whereas natural circular form primarily arises inwardly, that is via energy flow from everywhere around into a dynamic receptive centre or focal space, like that at the eye of a hurricane or within a bubble, conventional mathematical form is constructed outwardly from a fixed central control point. In other words, natural form arises as a dynamic relational *hole*, balancing energy inflows and outflows via informational interfacing between inner worlds and outer worlds that are distinguishable but not isolable from one another. By contrast, conventional mathematical form arises as a *whole*, paradoxically isolated from its environmental context and so *completely* self-contained – as when a circle is constructed via the rotational transformation of a radial straight line using a set of compasses.

At the heart of this contrast is the dislocation of matter from space, which is embedded in the incorrigibly discontinuous foundations of classical and modern mathematics. With this dislocation, the possibility of including the inductive influence of receptive space in natural energy flow is lost, such that all representations of physical form and process are based on material information alone, externally or internally forced into action and reaction by some ineffable agency. Space is either excluded altogether or conflated with a definitive structural framework, whether this is the three-dimensional cube of Euclidian geometry, or the depthless curved surface of conventional non-Euclidian geometries.

As long as fixed mathematical form does not correspond with dynamic natural form, the use of mathematical models and arguments to explain, predict or indeed manage nature

and human nature is liable to be misleading and damaging. So, the question arises as to what kind of mathematical foundations could more adequately represent natural form and processes.

To begin with, realistic mathematical foundations need to include space as an omnipresence, throughout nature, which can neither be excluded from nor conflated with fixed structure. Correspondingly, space is infinite and therefore immeasurable at any and every scale. Only pure, finite, material information would be quantifiable in discrete units – this being the basis for conventional mathematics – but since space and matter are naturally mutually inclusive as a continuous energy flow, no measurement can realistically be referred independently to a single scale. Comparisons made between ‘greater’ and ‘lesser’ forms, as if they are discrete objects inhabiting a ‘level playing field’ are therefore intrinsically *unfair*, because natural fluid dynamic geometry is heterogeneous, all-inclusive and many-scaled, not uniform. Every form is a marriage of local, finite information with non-local, infinite space, unique in its local situation but in communion with all others through the omnipresence of space, which both includes and is included by all. Infinity cannot be a singular, discrete entity with fixed location, nor indeed many discrete entities combined into one. Infinity is all space, which includes and comprises many spaces or ‘relative infinities’, which in turn comprise the habitats of locally unique flow-forms as ‘somewhere including everywhere’ nested over all scales from macrocosm to microcosm.

Here, it needs to be appreciated that space as an omnipresence would be formless in the absence of any informational content. It therefore makes no sense to talk about the influence or otherwise of space as an independent entity. This is why purely material-based explications of nature treat space paradoxically as a passive absence, which can conveniently be ignored, not an influential presence, which cannot. But no sooner are space and information understood to be distinct but mutually inclusive in natural energy flow, not independent or conflated, than the possibility emerges of recognising a receptive-responsive synergistic or co-creative relationship that dynamically involves both. This is the foundation for what has been called ‘transfigural mathematics’, which

includes rather than excludes the inductive influence of receptive space as a dynamic inclusion of responsive information in natural energy flow.

Transfigural mathematics correspondingly considers the informational implications or *folds* of focal points of receptive space in natural energy flow. These focal points are known as *zeroids* (from *zero identities*), which are fundamentally unlike the dimensionless point masses and infinitesimals of conventional mathematics and physics, in that they are *breathing points*. Like tidal seas, they are capable of *volumetrically* taking in and emanating energy flows from and to the relative infinity of their immediate neighbourhood, which in turn is a dynamic inclusion of the oceanic neighbourhood of everywhere. They are points with characteristics of lines ('pointlines') and lines with characteristics of points ('linepoints') that ebb and flow as local informational spheres and channels of non-local spatial influence.

21. Where I am – inclusionally speaking

I speak with you as a scientist who has never given up on the feeling that I experience as ‘love’. I think that no science can begin to be comprehensive or comprehensible that does not include this feeling in its account of nature and human nature.

It is for this reason that I view objective rationality – which unrealistically excludes the receptivity of space everywhere from its static local definitions of discrete units of material, time and energy – as damagingly simplistic and inadequate to account for the fluidity of natural form. Correspondingly, I identify what I and others have called ‘inclusionality’ – by way of the inclusion of ‘receptive space’, i.e. ‘limitless openness’, throughout natural energy flow – as a far more apt approach to understanding life, cosmos and people.

By excluding or confining receptive space from or within fixed structural frameworks, objective rationality effectively excludes or confines loving influence beyond or within a discrete boundary limit. It hence confines attention within a ‘subjective self’ that cannot extend to an ‘objective other’ and so becomes intrinsically ‘selfish’, in conflict with the needs of its neighbourhood. Life becomes a competitive ‘struggle for existence’, with one’s very ‘survival’ at stake. Such is the all-too-familiar story that we have been telling our selves and teaching to our children with gathering ferocity as human cultures have transformed from being aboriginal inclusions of ‘Mother Nature’ to becoming sovereign states vying for power and autonomy.

But the truth, so far as I can tell, is that it’s not possible to isolate space within or outside a discrete boundary limit. For this to be possible, matter would have to be free from space – as is indeed the fundamental presupposition of objective rationality and all the scientific concepts, from Newtonian ‘force’ and ‘mass’ to Darwinian ‘selection’ that arise from it. But for matter to be free from space – just try to imagine it – what would it be like and what would it matter? Yes, that’s right, it would have to be a dimensionless point or

‘isolated singularity’ of the kind that Euclid used to found his strangely abstract geometry of width-less lines, depthless planes and three-dimensional solids that can stretch to infinity and yet still have corners set at right-angles. And the dimensionless point that remains at the centres of conventional non-Euclidean geometries, set on the finite surface of a sphere. Or the dimensionless point that cosmologists imagine to have been the origin of the Universe, before a ‘Big Bang’ suddenly got it to expand out of nowhere into somewhere. Or the dimensionless point that Newtonian mechanics assumes to be fixed in the heart of all material bodies as their centre of operations through which every action begets an equal and opposite reaction, and continues in its state of rest or uniform straight-line motion unless acted upon by a force located somewhere outside of itself.

What kind of heart would a dimensionless point be? Not, for sure, a warm heart with room for inclusion of other in itself. Only a cold, objective heart, detached from the reality of natural energy flow, with no feeling for what it means to be involved in the thick of what is circulating. This is the heart of an excluded observer who renders all outside itself as an ‘object’ that forcefully acts upon or reacts to the ‘subject’ in its midst. As it was for Albert Einstein when he described the ‘environment’ as ‘everything that isn’t me’, and contrived the bossy kind of objective-subjective ‘relativity’ that John Wheeler described in terms of how ‘matter tells space how to curve’ and ‘space tells matter how to move’. As it is for every judge that judges – and every scientist that quantifies – the quality and behaviour of others as if this was independent of the contextual circumstances that include all in one and one in all. This is the unkind kind of judgement and quantification that excludes all that is vital to a true and deep understanding of nature and human nature in favour of easy accountancy. And it begets cruelty, in a vast array of guises and disguises.

Objective rationality pins this *fixed point* to the centre of each and everything as a Newtonian body, like a local stake in the heart that can be referenced to a *fixed frame*. This yields a fully secure picture of *where it is*, as a *fixed locality*, either caught in the act of moving or being moved by some purely internal or external force from one segment of the frame to another, or stationary, with all else revolving around it. The nature of the

body itself, having been staked out in this way, is of no further concern as a vital inclusion of the dynamic it is inescapably involved in, and so can conveniently be left out of the equations.

Yet we have only to reflect on our own vulnerable flesh and blood to recognise what a merciless reduction this is – how we gain illusions of freedom and security at the expense of appreciating the flows of energy that sustain our bodily inclusion of everywhere in somewhere that continually transforms yet retains a distinct identity. There is no way in which we can have such an appreciation without acknowledging the receptive space at the heart of our responsive bodily appearances. And there is literally no *place* for a dimensionless point in any such appreciation.

The *turning point* from the objective rationalization of our bodily identities correspondingly arises when we stop confining our self centres to *fixed localities*, and open the possibility for flow into and out from the *dynamic localities* of our receptive-responsive hearts. By its very nature, a dynamic locality cannot be pinpointed, and vitally includes the non-locality of space everywhere within its fluid boundaries, fulfilling the creative potential implicit in the receptive influence that this space can bring into local bodily expression. We can hence transfigure the abstract ‘point-forces’ and ‘point-masses’ of rationalistic mechanics, into the ‘point-influences’ of inclusional energy flow.

So, where I am, inclusionally speaking, is a local-non-local, dynamic relational *place somewhere*, continually transforming yet always uniquely situated as a vital inclusion of natural energy flow, inspiring and expiring.

22. How the ‘Nature-Nurture’ debate robs gifted individuals of what truly makes them special

There is a game that people like to play whenever someone’s unique talents bring them to public notice and acclaim: how much of this person’s success, the question is asked, can be attributed to their genetic inheritance or internal ‘nature’, and how much to their environmental circumstances or external ‘nurture’? It seems an innocent enough question, even a fundamentally important one, which has been at the focus of an enormous amount of intellectual discussion and scientific experiment over the years.

But something vital gets lost in the cross-fire between these two alternatives – the unique influence of the person’s self-identity as a dynamic integration of each in the other. One way or another, credit is taken away from the person and bestowed on something he or she can have no responsibility for. And with that loss can come also a loss of love and respect as the person is reduced to no more than some kind of purely self-interested, competitive calculating machine. And with *that* loss comes also a source of deep human distress and conflict. No matter how light-hearted the game might seem to be superficially, it has deadly serious implications for the way we view our selves, one another and our surroundings.

The inconvenient truth that the game-players overlook is that it is based on a false premise, which opposes what is inside a person to what is outside a person. This is the same false premise that leads to the Darwinian depiction of life as a ‘struggle for existence’ in which the name of the game is ‘survival of the fittest’. It is also the same false premise that led Nazi politicians to strive for possession of living space as an occupying force, dead set on engineering the ascendancy of a master race by a process of selective elimination.

The truth is that it is not possible – without putting it into eternal suspended animation – absolutely to cut off the inside of a person from the outside of a person, because each is

spatially continuous with and flows out into as the other flows into it. This is what it means to be a living, breathing identity that inspires as its outside expires and expires as its outside inspires. All of us are dynamic local expressions of an indivisible, infinite omnipresence everywhere that we tend to regard objectively as if it amounts to ‘nothing’, an absence of material presence, but which is really a presence of material absence. As dynamic bodily inclusions, not exclusive occupiers, of this receptive ‘mother space’, we can live, love and be loved as a kind of natural communion of all within all, self-sustaining for a while, but not self-containing for ever.

Our bodies are dynamic relational flow-forms, not singular objects. We are receptive and responsive natural inclusions of our environmental context as a natural energy flow, just as our genes are dynamic natural inclusions of our bodies and atoms are dynamic inclusions of our genes, *ad infinitum*. To debate the merits of one as opposed to the merits of the other upon which it depends for its expression is not only meaningless, it can seriously damage our personal and environmental health. But the damage can be healed – and need never occur in the first place – through acceptance of the loving influence of receptive space, which lies at the heart of what has been called a natural *inclusional* evolutionary understanding of ‘self as neighbourhood’.

23. Opening The Whole – *Intro-Ducing the Incorporate World of Inclusionality*

There seems to be a very widespread tendency amongst us human beings to view Nature and our Selves as if we consist of a complete set of ‘Parts’ and ‘Wholes’. This has led to two alternative forms of philosophical and scientific enquiry into both Nature and Human Nature, which differ in whether they choose to focus on ‘One’ or ‘Many’ as their object(s) of selective attention. What has come to be called ‘reductionism’ seeks to differentiate ‘One’ into ‘Many’ fundamental or elementary constituent parts or particles, based on the supposition that once these latter are fully understood as independent ‘building blocks’, they can be re-assembled into a complete picture of the form and workings of what they were derived from. What has come to be called ‘holism’, on the other hand, seeks to understand the ‘One’ as an integral whole with ‘emergent properties’ beyond the sum of its parts due to the interconnectedness between these latter, which hence cannot be understood as fully independent entities. Correspondingly, we may view our individual selves either as ‘one out of many isolated entities’ – free but in competition with numerous others – or as ‘part of a collective whole’, like an interlocking piece of a jigsaw puzzle with a very particular space to occupy – secure alongside yet constrained by and set apart from the other pieces. In neither case is there any possibility for one to flow into or out from the other in mutual dynamic relationship.

This tendency has set the scene for a philosophical opposition between ‘individual’ or ‘group’, and ‘one’ or ‘other’, that has contributed to human conflict and environmental, social and psychological damage for millennia. Such opposition is evident throughout modern human life and culture. It underpins all scientific and religious beliefs in the existence of some internal or external executive ‘force’, which is enshrined in the definitive logic of the ‘excluded middle’ – the contention that ‘one thing cannot simultaneously be another thing’. This premise of discontinuity is deeply embedded in

the foundations of conventional mathematics, upon which rationalists seek to formalize the ‘Laws of Nature’ as unchanging rules that enable us to divide and predict the ‘future’ from the immediate ‘past’ – defined as a complete and prescriptive set of ‘initial conditions’. It limits the creativity of all rationalistic systems of governance, education, research and personal decision-making and in spite of its intentions actually makes us *more* vulnerable to the *uncertain* influences that *invariably* get left out of the equations used to calculate our best laid plans. It leads us to speak of what ‘drives’ and ‘determines’ our behaviour and appearances, and to question how much this can be attributed to internal ‘nature’ (‘genes’) or external ‘nurture’ (‘environment’), as if we could measure the contribution of a thrown stone and a pond to their mutual co-creation of a ripple. It makes us equate ‘evolution’ with ‘natural’ selection, what Darwin called ‘the preservation of favoured races in the struggle for life’ – an adversarial mechanism that in itself can, like cancer, only eliminate, not generate the ‘diversity in community’ of evolutionary life and Earthly ecosystems.

Such grounds for human conflict can never dissolve as long as we accept, without question, the validity of Hamlet’s question:

‘To be or not to be, that is the question: whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles, and by opposing end them?’

Here, in stark relief, are etched the tragic implications of an attitude of mind that imposes discrete limits upon the provenances of ‘one’ and ‘many’ as opposing whole objects whose only alternative to existence is non-existence (annihilation or extinction). There is *no room* here, literally no *receptive* ‘space’ here, to accommodate the possibility of evolutionary flow of one into other because each is defined as a completely self-contained whole. One can thereby only be *entirely* subsumed into many and many can only be entirely subsumed into one through the loss of its or their capacity to vary their dynamic relational identity in correspondence with their neighbourhood. They can only be fit or not fit, not vary their fittingness as circumstances change.

But this *whole* story is obviously a fiction, premised on the notion that space – defined rationalistically as a void ‘absence of material presence’ or ‘gap’ – can be edged out from or edged into a *finite* location. In other words, the story is based on an absolute dichotomy between ‘material’ fixture, which constitutes ‘something’, and ‘immaterial’ void, which constitutes ‘nothing’. For this to be true matter would have to exist *independently* from space and space would have to be *divisible* into discrete segments. But matter without space could only occupy a dimensionless point without size or shape (which is indeed the ‘starting point’ for deriving Euclid’s ‘idealized’, three-dimensional geometry that draws a cubical box around infinity, as well as the so-called ‘non-Euclidian’ geometries that confine themselves to a depthless curved surface). And space alone would be formless, without any edge that could enable it to be cut into pieces, however subtle the knife one might try to apply. The inescapable conclusion is that material and immaterial are mutually inclusive finite and infinite presences, not mutually exclusive presence and absence. Moreover, in a cosmos that doesn’t stand still forever and everywhere, receptive space is vital for the responsive movement of *fluid* material interfacing, not concrete material fixture, which gives it dynamic and varied local form as a natural energy flow.

So, what on Earth could have possessed us to try to place absolute limits on the inward and outward extent of discrete parts and wholes, allowing our lives to become so confined and driven by idealized – one might say idolized – concrete abstraction? It clearly cannot be something as sensible as rationalists assert and seem to believe. Maybe it has something to do with the way with the way we are predisposed cognitively to view and apprehend the world about us as omnivorous terrestrial primates with opposable thumbs and binocular eyesight. The latter help us to grasp and separate out things within a seemingly detached field of view that doesn’t include ourselves as observers. Without pause for contemplation we may therefore overlook the fact that what we are looking out at actually includes us. Maybe the resulting illusory exemption of our selves from our ‘objective’ field of view, which makes us feel fixed at the centre of our own universe, then gets reinforced by something more deeply psychological, like the fearful desire for self-preservation that associates with feeling threatened by the prospect of death, viewed

as annihilation. If so, this truly is a fear to fear the utmost – the fear that seeks the refuge of certainty at all costs. It feeds its own suppositions by trying both logically and physically to wall out or wall in and so gain local dominion over the non-local, infinite omnipresence of material absence everywhere that cannot really be contained entirely within the whole or part of any structure as a fully definable entity. As Robert Frost put it:

“Nature does not complete things... Man must finish, and he does so by making a garden and building a wall”

This is the fear that fuels a vicious cycle of conflict between what is perceived as ‘good’ and ‘bad’ for self-preservation, a war of opposites between ‘light’ and ‘darkness’, ‘male’ and ‘female’, ‘predator’ and ‘prey’, ‘strong’ and ‘weak’. It makes the objective perception of life as a loveless, cold-hearted ‘struggle for existence’ a self-fulfilling prophecy.

Something, or rather *somewhere vital* gets overlooked when striving to preserve life by encapsulating it, whether in some integral whole or in the set apart part that implies the existence of such a whole. What gets overlooked is that there can be no real life – only a suspended animation of the kind transiently present in dormant ‘survival structures’ like spores, cysts, seeds, bulbs, corms and hibernating animals – without opening up to the possibility of natural energy flow.

We cannot live without breathing. Yet in opening ourselves up to natural energy flow we also lose some of the local self-definition that would otherwise isolate our insides from our outsides as discrete objects. And with this loss, through which we gain life and a capacity for loving our neighbourhood as a vital inclusion of our self-identity, comes also the inevitability for us to suffer and perish in the short or long run as we take in and pass on energy supplies in an endless circulation. We *relay* energy through one to the other in a human race that is far from being naturally competitive or even co-operative, because its members are not and cannot be absolutely self-contained. We are neither absolutely

divided off from one another nor from our environmental neighbourhood that sustains our dynamic local manifestation.

What is needed, therefore, to escape the confinement of whole and part that holds us to ransom, in opposition to one another and the world and cosmos about us, is a more naturally representative, fluid form of logic and geometry that opens our individual identity to the inclusion of neighbourhood in and as a vital aspect of self. Instead of envisaging ourselves as exceptions from or even as parts of Nature *as a whole*, there is a need for us to open up the imaginary boundary limits that we have been so prone to impose on existence, which deny our dynamic relationship with one another and Nature *as all*. Most fundamentally, we have to include the meaning of infinity and zero in our comprehension of the dynamic relational nature of 'self as neighbourhood'.

This 'opening of the whole', whether individual or group, to the infinite omnipresence of receptive space in natural energy flow is the basis for an understanding of nature and human nature that has been called 'inclusionality'. Inclusionality helps us to transform the 'whole' into a dynamic relational 'hole'. Hence we can understand the body of individual, world and cosmos as less like a rigid, bunged up bottle that preserves its contents forever, and more like a cup or grail with elastic walls, a dynamic natural inclusion of receptive space. This cup is like an open heart, a responsive receptacle that expands as it fills with and contracts as it circulates the life blood, the natural energy flow of its dynamic neighbourhood. With receptive space permeating everywhere, within, beyond and throughout its dynamic interfacial boundaries, it yields what it receives in equal measure in a natural *communion* of one in all and all in one, without end. In the words of John Lennon and Paul McCartney, the love it makes is equal to the love it takes, whether Christian, Jewish, Muslim, Buddhist, Taoist, Hindu, Pagan, Atheist or whatever else it might call itself. Far from being an exclusive corporate body, it is an incorporate body, truly spatially continuous and not just materially contiguous (interconnected) with its natural neighbourhood. It fluidly includes the *influence* of other in its self and the influence of its self in other's identity. It has no need to oppose what ultimately and inescapably includes itself, open to endless creative evolutionary possibility.

24. The Sexual Cosmos – Where Creativity Really Comes From in the Inclusional Flow of Open Space

Pregnant Pause

Adults often laugh when their offspring carry on as if they've just invented sex. Perhaps the cosmos laughs in the same way when biological scientists seriously contemplate how sex might have evolved, and what its implications are for the survival prospects of selfish genes. Could anything be more ridiculous? What planet do they think they are on? How on Earth could anything, let alone a selfish gene, come into being without the receptive darkness that brings love to life in light? But so neglectful and fearful of spatial receptivity has our do-it-yourself positivistic culture become, that any consideration of what Lao Tsu called 'the mysterious valley' is rejected beyond the bounds of material definition and we are left wondering how concrete makes love! And light, the truly inexplicable, is left to co-create nature on its own, whilst darkness looks on impassively.

Where Not To Start – At the Point of No Return

The trouble begins at that very moment when we assume that anything has to begin at a certain point in time, as if it must either be a fully fledged cosmic chicken or a newly laid cosmic egg with no prior history – a 'magical something out of nothing'. Within this point lies the deepest superstition embedded within so-called 'rational' and 'objective' thought, a paradoxical, dimensionless 'peg' on which to hang the Emperor's hard-lined clothes that cover up his vulnerable birthday suit.

Here is where any rationalist can be found wanting, no matter how much he may protest the sound reason and hard evidence on which his case for the prosecution of the spirit is founded – for the reason is paradoxical and the evidence a convenient figment of imagination that obscures truth and suits his objective purpose. Any child who hasn't been caught in his spell can point this out, by drawing attention to the fact that it doesn't make sense to dissociate the infinite 'openness' of 'space' from the finite 'substantiality' of matter in a world of energy flow that doesn't stand still forever. A purely material

world, without space, would indeed be a dimensionless, lifeless ‘point’, a discontinuity or singularity of the kind Euclid used magically to construct his abstract, three-dimensionally boxed geometry of width-less lines, depthless planes and space-cornering solids. A world of pure space would be featureless void, the very thought that scares the life out of rigidly imposed structure. The ‘real world’, as far as our human consciousness can allow us to discern, is neither dimensionless nor void, but is continually in flux, as Heraclitus recognised long before others insisted on confining it within fixed frameworks, the magical boxes that breed illusions of absolute individual freedom and collective security.

So, the trouble begins with what can only be regarded as an act of misogyny of the deepest kind – the declaration of a war of independence from the receptive space that permeates and eases the passage of all. From here on, life becomes ‘a struggle for existence’ in opposition to the continual threat of annihilation by ‘other’, now perceived at best as ‘devouring mother’. Nature is said to ‘abhor a vacuum’, as if space had no place in her creative heart. Hamlet reflects on the threshold of his human tragedy:

*‘To be **or** not to be, that is the question: whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, **or** to **take arms against a sea of troubles**, and by **opposing end** them?’*

The opposition of one against other, is eloquently depicted in the following excerpt from C.S. Lewis’s ‘Screwtape Letters’ from a senior to an apprentice devil:

*“The **whole** philosophy of Hell rests on a recognition of the axiom **that one thing is not another thing**, and, specifically, **that one self is not another self**. My good is my good and your good is yours. What one gains another loses. Even an inanimate object is what it is by excluding all other objects from the space it occupies; as it expands, it does so by pushing all other objects aside or by absorbing them. A self does the same... ‘To be’ means ‘to be in competition’. Now the Enemy’s philosophy is nothing more or less*

than one continued attempt to evade this very obvious truth. He aims at contradiction. Things are to be many, yet also one. The good of one self is to be the good of another. This impossibility he calls love, and this same monotonous panacea can be detected under all He does and even all He is - or claims to be. Thus He is not content, even Himself, to be a sheer arithmetical unity; He claims to be three as well as one, in order that this nonsense about Love may find a foothold in his own nature... The whole thing, in fact, turns out to be simply one more device for dragging in Love."

The 'axiom that one thing is not another thing' is known as 'the Law of the Excluded Middle', which arises from the exclusion of space from matter that is embedded in the foundations of definitive logic upon which objective rationality depends. As Screwtape recognised, its very success depends on the divorce of reason from emotion that excludes the possibility of Love in a material, de-spirited cosmos, leaving us left to ponder one-sidedly on 'the evolutionary origin of sex'. How, then, could we humanly avoid being drawn into – and how might we release our selves from – this rationalistic trap of the 'point of no return'. Perhaps the art will lie in discovering, within our hearts, the receptive space of 'the point of all return', the **turning point** that 'breathes love into light' through the dynamic inclusion of darkness.

The Mystery of Light as an Inclusion of Darkness in Natural Flow-Form

Although to a rationalistic mind, the notion of limitless space, perceived as infinite, indivisible void, may seem mysterious and decidedly inconvenient, perhaps the deeper mystery lies in understanding what comes naturally to configure this non-local omnipresence 'everywhere' into the locally unique expressions of natural flow-form of 'somewhere' distinctive. The latter 'informational' presence is what is vital, to paraphrase William Wordsworth, to render everything in natural energy flow distinct, yet nowhere defined into absolute, independent singleness. It is the very 'stuff' that materialists regard as 'all there is' to account for in a precise, demystified, quantitative depiction of the cosmos as an exact numerical system. Yet as soon as such accountancy imposes imaginary limits on the openness of space, the point of no return is reached where trouble and paradox begin.

In reality, we can only describe, we cannot explain this dynamic source of natural distinction: it just is as it is. But we can certainly misunderstand it profoundly by divorcing it from ‘the love of darkness’ that is a vital inclusion of its creative potential. This creative potential lies in an inexhaustible centre of continual renewal through the cycling and recycling of energy flow – what might justly be called the ‘primordial womb of the cosmos’, the receptive space that welcomes light into the dynamic correspondence that gives birth to natural flow-form. A centre distributed everywhere amongst dynamic localities that form in the hearts of every unique identity in the natural communion of one in all and all in one. A point of all return in an endless circulation, which transfigurally includes zero and infinity in its numbering of one and many, pooled together in receptive space. Where informational figure naturally includes spatial ground and spatial ground includes informational figure in the sensible, co-creative evolutionary relationships of a sexual cosmos, not the senseless alienation of independent sovereign states.

Five pointers to the point of all return

1. Space, as limitless, eternal openness that cannot be cut, pervades matter/energy, not vice versa
2. Regions of space free from matter/energy appear dark and feel intangible to sensors of all wavelengths (not just light visible to the naked eye) of electromagnetic radiation
3. Matter/energy cannot exist independently from space, unless confined to an inert, dimensionless point.
4. All distinguishable (to our senses) form is local-in-nonlocal flow-form, a dynamic inclusion of space in matter/energy
5. Time cannot exist independently from natural energy flow as a dynamic configuration of space.