

"The future has an ancient heart"

CARLO LEVI

Pari *Perspectives*

Ideas in
Science, the Arts,
Spirit and Community

Issue 3 / March 2020

Our Changing World

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Pari Perspectives is a quarterly journal published annually in September, December, March and June by The Pari Center.

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Society
Psychology
Language
The Arts

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By becoming a Friend of the Pari Center you will continue to receive the Pari Center quarterly journal *Pari Perspectives*. We know many of you would like to become more involved in supporting the work of the Pari Center. By taking out a membership at a cost of 30 euros per annum (from the date of purchase) you will be allowing our not-for-profit organization to continue with its established projects and to start new ventures, including this journal.

The *Pari Perspectives* journal will be free of charge to all Friends. In addition, those who have purchased a membership will receive a discount on any events they may choose to attend at the Pari Center within the year.

To become a friend you can register through our website or in person at the Pari Center.

Your membership fee will entitle you to:

- a digital copy of the quarterly *Pari Perspectives*
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A Message from the Editors

Amidst the many depressing examples of poetry and prose written in the 20th century (by Eliot, Auden, Pound, Hughes, Beckett, Orwell, etc.) the following surely ranks as one of the bleakest.

The Second Coming, W.B. Yeats

Turning and turning in the widening gyre
The falcon cannot hear the falconer;
Things fall apart; the centre cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.

Surely some revelation is at hand;
Surely the Second Coming is at hand.
The Second Coming! Hardly are those words out
When a vast image out of Spiritus Mundi
Troubles my sight: somewhere in sands of the desert
A shape with lion body and the head of a man,
A gaze blank and pitiless as the sun,
Is moving its slow thighs, while all about it
Wind shadows of the indignant desert birds.
The darkness drops again but now I know
That twenty centuries of stony sleep
Were vexed to nightmare by a rocking cradle,
And what rough beast, its hour come round at last,
Slouches towards Bethlehem to be born?

William Butler Yeats began writing ‘The Second Coming’ a century ago in January 1919 in the wake of the unprecedented slaughter of World War I, the upheaval of the Bolshevik Revolution, and the political turmoil in his native Ireland in which several Irish Nationalists had been executed in the struggle for freedom against British rule. The poem not only captures the turbulence and violence of the era but the anxiety, disillusionment and despair at a fragmented, broken world. The collapse of civilization could be seen in so many facets of life—the weakening of religious faith, the breakdown of the family, the feeling of alienation, the isolation and bleakness experienced by those living in cities, but most of all fear that the old order had collapsed and there was nothing to put in its place. And, in fact, twentieth-century history did turn more horrific after 1919, as the poem forebodes.

In 2016 the Dow Jones research tool Factiva showed that lines from ‘The Second Coming’ were quoted more often in the first seven months of that year than in any of the preceding 30 years. It was a year of political turmoil: Brexit; Donald Trump became President amid accusations

of Russian interference in the election; and terrorism caused death and destruction in such far-flung places as Istanbul, Burkina Faso, Brussels, Florida, and Nice. The line ‘Things fall apart; the centre cannot hold’ was repeatedly used by commentators to refer to a world suffused in political upheaval and aggression and the awareness of everything perilous in modern life.

Yet each of our contributors, we feel, has a much more optimistic take on the now and the future. In fact the late playwright (and statesman) Václav Havel would say that they are talking not about optimism but about hope, and he is adamant that ‘Hope is definitely not the same thing as optimism.’ Hope as the transcendent virtue. Hope as the opposite of despair. Hope is everything to do with the human spirit.

The kind of hope I often think about (especially in situations that are particularly hopeless, such as prison) I understand above all as a state of mind, not a state of the world. Either we have hope within us or we don't; it is a dimension of the soul; it's not essentially dependent on some particular observation of the world or estimate of the situation. Hope is not prognostication. It is an orientation of the spirit, an orientation of the heart; it transcends the world that is immediately experienced and is anchored somewhere beyond its horizons.

Hope, in this deep and powerful sense, is not the same as joy that things are going well, or willingness to invest in enterprises that are obviously headed for early success, but, rather, an ability to work for something because it is good, not just because it stands a chance to succeed. The more unpropitious the situation in which we demonstrate hope, the deeper that hope is. Hope is definitely not the same thing as optimism. It is not the conviction that something will turn out well, but the certainty that something makes sense, regardless of how it turns out. In short, I think that the deepest and most important form of hope, the only one that can keep us above water and urge us to good works, and the only true source of the breathtaking dimension of the human spirit and its efforts, is something we get, as it were, from ‘elsewhere.’ It is also this hope, above all, which gives us the strength to live and continually to try new things, even in conditions that seem as hopeless as ours do, here and now.

Václav Havel, *Disturbing the Peace*, 1991

Let us be ever hopeful.

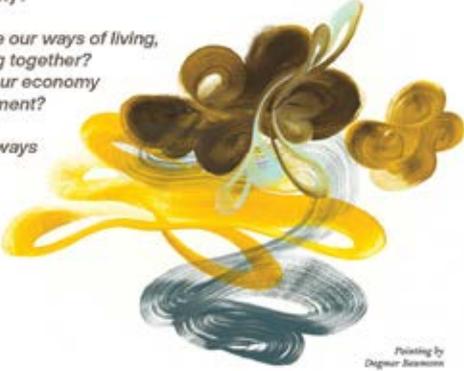
Kristina Aleksandra Janavicius and Maureen Doolan

The Pari Center Events, 2020

Small Changes _____ Weekend among Friends 2020
Making Big Differences

What if it is the amateurs who hold the key to renewal and this transformation?
 In this **Weekend Among Friends** we explore what an era of amateurs could be like and what difference it would make if we all stepped into the 'beginner's mentality'.

- How could this change our ways of living, working and becoming together?
- How could it change our economy or our natural environment?
- How could it influence our relationships and ways of cooperating?
- How could it change our concept of power and being in charge?



Painting by Dagmar Beermann

PARI, ITALY
MAY 7-10, 2020

With Godelieve Spaas, Arne Hendriks, Devon Reid, Frank Kupers



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What is _____ Pari Dialogue 2020
Consciousness?

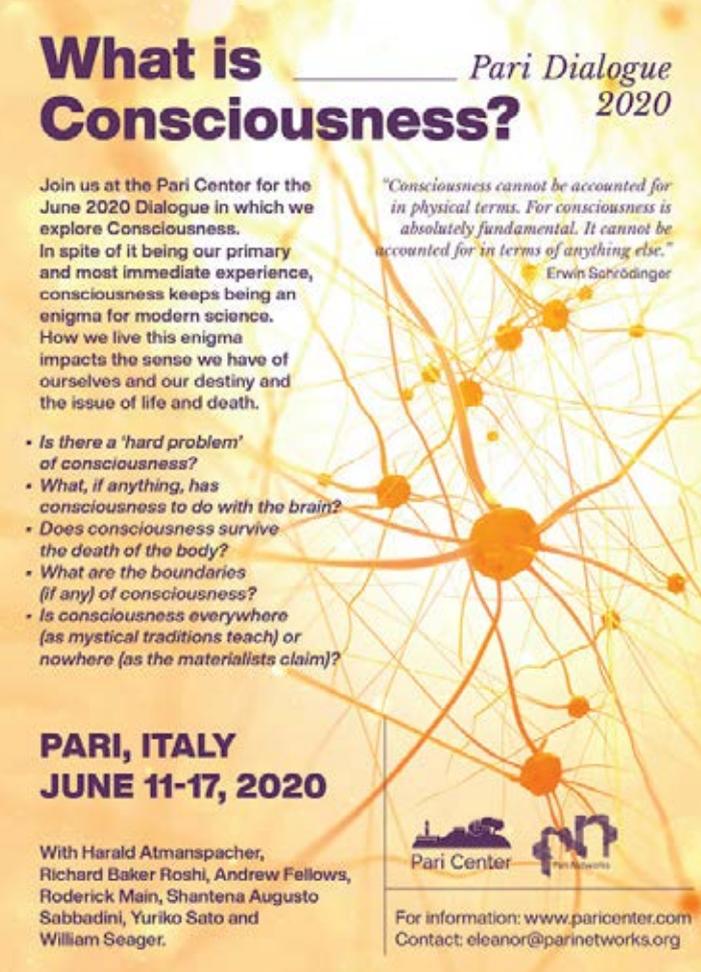
Join us at the Pari Center for the June 2020 Dialogue in which we explore Consciousness. In spite of it being our primary and most immediate experience, consciousness keeps being an enigma for modern science. How we live this enigma impacts the sense we have of ourselves and our destiny and the issue of life and death.

"Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else."
 Erwin Schrödinger

- Is there a 'hard problem' of consciousness?
- What, if anything, has consciousness to do with the brain?
- Does consciousness survive the death of the body?
- What are the boundaries (if any) of consciousness?
- Is consciousness everywhere (as mystical traditions teach) or nowhere (as the materialists claim)?

PARI, ITALY
JUNE 11-17, 2020

With Harald Atmanspacher, Richard Baker Roshi, Andrew Fellows, Roderick Main, Shantena Augusto Sabbadini, Yuriko Sato and William Seager.




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A tribute to The Amateurs

Mat 7-10, 2020

What if...

...amateurs hold the key to a transition towards living well together, in harmony with the Earth?
 ...they like to explore untrodden paths and unknown spaces?
 ...they are driven by passion, curiosity and generosity?

Starting from the point of Not Knowing might actually be a better position from which to rethink our economy, our way of producing and sharing the things we need in life.

New technology is enabling us to produce things by ourselves on a very small scale and close to home.

In the near future, we might be able to produce many of the things we need. Amateurism also creates openings to rethink incumbent power relations—between ages, regions, heritages, the ancient, the modern, and the future world.

What is Consciousness?

June 11 - 17, 2020

- Does 'Consciousness' Exist?
- The Inner Science, Experiential Investigation, and Analysis of Consciousness
- From Other-than-Human Consciousness to the anima mundi
- Mundane and Mystical: A Panentheistic Perspective on C. G. Jung's Late Thoughts About Consciousness, Ego, and Self
- Consciousness, Life and Quantum Indeterminism
- Nothingness which Contains Everything
- The Philosophy of Consciousness of the last Century, or, There and Back Again

Il Processo Pari Dialogue 2020 della Trasformazione

Seminario teorico-esperienziale alla scoperta delle teorie quantistiche di David Bohm e di alcune sue applicazioni.

27-28 GIUGNO, 2020 Con Max Bindi,
Gloria Nobili,
Martina Stolzlechner,
Chiara Zagonel
PARI (GR)

La vita del fisico quantistico David Bohm e lo sviluppo del suo pensiero, la tecnica *metamorfica* riletta alla luce del concetto di ordini di realtà, la connessione tra fisica e senso della vita, e la sperimentazione del superamento della coscienza individuale attraverso il dialogo bohmiano.

"...L'effettiva realtà della conoscenza è un processo vivente... il processo è una genuina realtà per tutti noi, una realtà che possiamo osservare e a cui possiamo dare la nostra attenzione."
David Bohm



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eleanor@panicenter.com

 Pari Center

Il Processo della Trasformazione

27 - 28 giugno 2020

- Fisica e metafisica di David Bohm: la sua vita e le sue idee
- L'ordine implicato a portata di mano
- Mente e materia tra matematica, fisica e concezioni del mondo
- Il dialogo bohmiano

Science, Art, Pari Dialogue and the Sacred 2020

Multiple Universes

Do we exist in different worlds and live parallel lives?

Is the universe we live in unique? Was the process that gave birth to our universe—the Big Bang—a singular event or are universes bubbling up all the time? Join us at the Pari Center and explore the idea of multiple universes (and multiple selves) in science, literature, film, science fiction, art, etc.

A key motive in the evolution of scientific thought has been described as 'jettisoning excess baggage': ideas that were previously accepted as absolute truth (e.g. that the Earth sits at the center of the cosmos) were later seen to be simply a consequence of our particular perspective. Are we today on the verge of another such radical 'jettisoning' by abandoning the notion of a single universe?

"What's at the heart of the subject is the suggestion that what we've long thought to be the universe may only be one component of a far grander, perhaps far stranger, and mostly hidden reality."
Brian Greene

PARI, ITALY
AUG. 27-SEP. 2, 2020

With Bernard Carr, Alison MacLeod, Tim Maudlin, Jocelyne Robinson, Simon Saunders, Paul Tappenden, Jean-François Vézina.
Chaired by Shantena Augusto Sabbadini

 Pari Center 

Information: www.panicenter.com
Contact: eleanor@panicenter.com

Multiple Universes

Aug. 27 - Sept. 2, 2020

- The Multiverse: Linking Matter and Mind and Stretching the Limits of Science
- Literature, Creation and Multiple Worlds
- Quantum Mechanics, the Actual World, and Other Possibilities
- Ad/Dressing the Universe
- The Quantum Multiverse: Everett and Beyond
- Dendritic Quantum Mechanics
- The Hilbert Hotel: A Psycho-philo-poetic Game for Exploring the Multiverse

A Message from the President of The Pari Center, Eleanor Peat

This year, 2020, is the 20th anniversary of the Pari Center.

It started with a meeting at the October Gallery in London organised by David Peat and sponsored by Arts Council England.

In his autobiography my father wrote: 'Following the meeting of artists and scientists in London, an active debate began on the pages of my Website. The discussion turned to the topic of education in general and the future of the universities in particular. Suddenly the possibility of funding another conference was proposed to me. At first I planned to run the conference in London or New York. But then I thought of the building at the top of the village—the former elementary school. Why not hold a meeting in the village of Pari?'

And so in September 2000 Pari's first international conference 'The Future of the Academy' was held with participants from Canada, the USA, Austria, the UK, Portugal, Italy, France, Switzerland, and Australia. Since then we have held conferences, seminars, courses, workshops and dialogues welcoming people from every continent.

I took over as President of the Board in 2017 after my father passed away and have had a great team to support me in finding my feet in this adventure. I want to thank all of the board members, our collaborators, our returning participants, our incredible line-up of speakers and presenters, the people of Pari, and all of our community out there who have continued to stay in touch, exchange ideas, support us by becoming Friends, and who reached out to me when my father died.

Pari Perspectives is one of our new initiatives, a project that my father would have been proud to see happen. He was dedicated to developing the Pari Center library, gathering essays and articles and interviews from colleagues and sharing them on our Website. Therefore, I am very pleased to be part of *Pari Perspectives*, our quarterly journal which has been receiving such appreciative feedback since the first issue was published. I'd like to thank the editorial board and in particular the co-editors Kristina and Maureen for their hard work.

Our conference centre, the Palazzo, is in the final stages of being fully renovated. This includes a large and very beautiful space on the top floor where we will be holding our future events. We have also been given a room dedicated

to our library which will also serve as a workspace for visitors who are part of our residential programme of writers, scientists, artists, researchers, etc. We will be providing more information in the near future once the renovations are completed.

This year we have a full programme of events. May will see the annual gathering of 'Weekend among Friends,' followed by the Berkana Institute who have chosen the Pari Center to hold their board meeting. In June we have our annual conference focussing on Jungian psychology entitled: 'What is Consciousness?' And then a weekend workshop on the work of David Bohm in Italian. In August/September we will be running our annual Science, Art and the Sacred conference, exploring this year's topic of 'Multiple Universes.' We are privileged to have a line-up of eminent speakers for both the June and September events.

As we enter our 20th anniversary year we see an exciting future ahead. We look forward to seeing you all in Pari in the near future and thank you for continuing to be part of our community helping to advance the work that we are doing. In our uncertain world the Pari Center provides us with a quiet space to pause and reflect on the issues that were so dear to David Peat: the values and meaning in society; the role of science and technology; the marriage of science and the arts, ethics, community; the future of education; the impact of global economics on societies; the role of knowledge; and the place of the sacred through Gentle Action.

Looking forward to welcoming you all here.

Eleanor Peat



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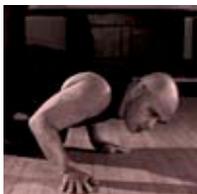
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A 21st Century Renaissance

COLIN TUDGE

I am writing this the day after Brexit became official; the day after the chickens finally came home to roost after the referendum of 2016 in which the people of Britain, or parts of it, voted to leave the European Union. As President Macron of France has pointed out, the referendum was characterized by misunderstanding, misinformation, and downright lies and the result was statistically insignificant but we are, apparently, honour-bound to abide by it.

Those in favour of Brexit, it seems, want either to return to the primary school version of Britain's glorious past from the 16th to the earliest 20th century when we 'ruled the waves' and showed Johnny Foreigner a thing or two; and/or they envisage, in modern, neoliberal style, a future of ultra-competitive, unfettered, high-tech commerce, in which the rich people of Britain will grow ever richer—with the wisely unspoken implication that one day the rest of us will be rich too. All the work will be done by robots, and human beings will while away their days by filling in spreadsheets and selling things to each other, in an ever-rising orgy of prosperity.

All of which is the precise opposite of what the world really needs. Brexit, plus the antics of Donald Trump, Vladimir Putin and others in positions of great power are putting back the hope of real progress by decades—although of course, as everyone who lives in the real world is fully aware, the world as a whole is in deep trouble on every front and we don't have decades to play with.

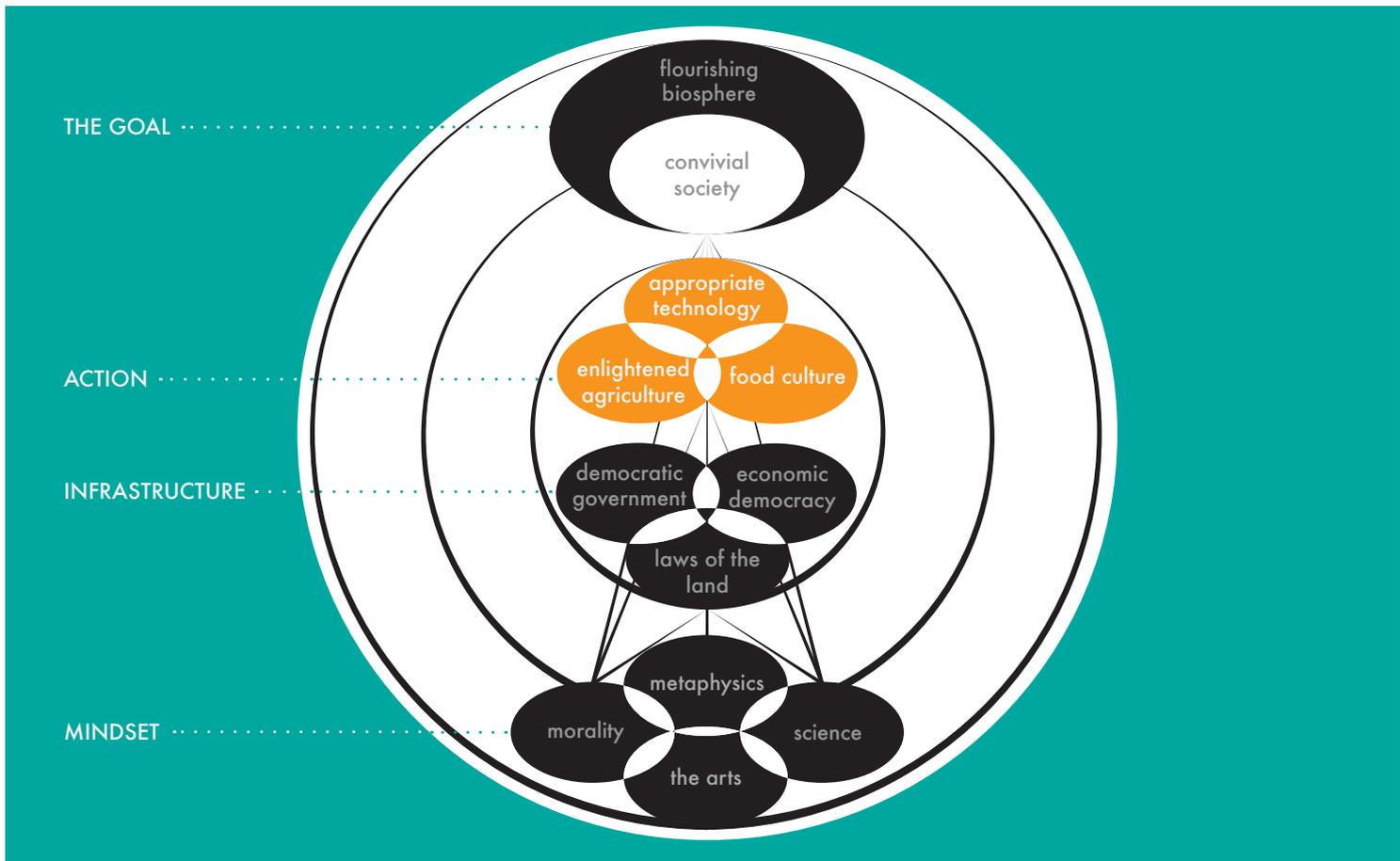
For what we do need right now is a total re-think: a metamorphosis; re-birth; indeed nothing less than a *Renaissance*, even more deep-rooted and far-reaching than the so-called 'Italian' Renaissance of the 15th century *et seq*, which brought the European Middle Ages to a close (up to a point, and for better or worse). *Everything* needs to be re-thought from first principles—although, mercifully, not everything needs to be re-structured. We certainly need to be radical—to get down to the roots—but

not gratuitously so. There is much that is good to build on.

The Italian Renaissance of centuries past was led by bankers, intellectuals, and artists. We need intellectuals and artists of course, and we also need bankers—provided the bankers are on our side and are not trying simply to increase their own and their shareholders' wealth. But it is clear from the current mess—social, ecological, political, economic, moral, religious—that we cannot expect the present powers-that-be to make the changes that are now needed. For the powers-that-be are a coalition of big governments, in turn dominated by leaders who are hell-bent above all on power; plus transnational corporates and financiers who seek primarily to magnify material wealth; all abetted by compliant intellectuals who rely on



Marinus van Roeymerswaelen:
The Banker and his Wife (c. 1493-1567)



their leaders for their livelihoods. This elite seems well satisfied with the *status quo*, or at least prefers to think that whatever is going wrong is not their fault, and they don't want to change.

Truly, then, if we want the next Renaissance to happen, then *we*, people-at-large, Ordinary Joes and Jos, need to make it happen. I start with the premise that human beings are a good thing, highly ingenious and creative and far more disposed to do good than harm—so an Ordinary Jo(e) is a good thing to be. Indeed our main task is to create conditions in which what Abraham Lincoln called 'the better angels of our nature' can safely raise their heads above the parapet.

So how can we make the Renaissance happen? The required strategy is summarized in the diagram above.

As you can see, the diagram shows 12 'balloons' arranged in four tiers—all connected with all the others.

Each balloon represents an area of thought. Between them they cover everything that we need to consider and act upon. Geographers may complain that geography is missing and historians might ask, 'What's happened to history'—but these and others (like sociology) are, I suggest, meta-subjects, that feed into and partake of all the rest. Religion for convenience I am including under

'metaphysics' since its core ideas are mostly metaphysical in nature. *All* the subjects need to be re-thought *de novo*; and—which is the point of the connecting lines—*each individual subject needs to be re-thought in the light of all the others*. To re-think everything in the context of everything else is truly to think *holistically*. It isn't good enough simply to re-think everything and then (as now!) keep all the individual subjects in silos. In particular, I suggest, economics needs to be re-thought not as a glorified exercise in accountancy or indeed in money-changing as the modern neoliberals do but as an expression of moral intent—which indeed is how traditional economists (Adam Smith, J.S. Mill, J.M. Keynes and the rest) regarded it. Science should never be taught without the philosophy of science to discuss its limitations as well as its obvious achievements and to place the whole scientific agenda in its proper, metaphysical context.

In more detail:

The top tier, marked **GOAL**, defines what (I suggest) we should be trying to achieve. Tellingly, although political parties as they vie for government produce sometimes vast and complex manifestoes, they very rarely spell out, succinctly, what kind of world they are really envisaging, or why. Instead they offer slogans, written by PR people:

‘Make America great again’; or, for Brexit, ‘Take back control!’ None of this actually means anything—except perhaps that America or Britain or Russia or whoever should claim or re-claim the right to bully everybody else.

Instead, I suggest, in absolute contrast to the message from on high, we should be seeking to achieve **Convivial Societies** within a **Flourishing Biosphere**. Conviviality means, literally, living together, amicably. This requires *cooperation* underpinned by *compassion*—which, as all the world’s great religions agree, is the greatest of all moral principles. But the human race cannot survive and in any case is morally and spiritually flawed to its core if we wreck the natural world as, right now, we seem to be doing with all possible speed. Note incidentally, the word ‘biosphere’ meaning ‘living world’—not ‘environment,’ which simply means ‘surroundings.’ ‘Environment’ in practice means ‘scenery’ or indeed ‘real estate’: an entirely anthropocentric and materialist concept. We need, as generally espoused by Buddhists and Hindus, to see ourselves as *part* of nature: beholden to it as we are to family. Simply to see the biosphere as a resource, or as ‘natural capital,’ as is now considered ‘realistic,’ is to sign its death warrant. If we are truly to do good, though, we also need know-how; to understand, as far as we are able, how the natural world works. Thus in particular, we—the world—also need the science of ecology.

The next tier down, marked **ACTION**, asks what we need to do to achieve such a world. Of course we need **Appropriate Technology** where technology is defined broadly—every device from needle and thread to the internet—and ‘appropriate’ means that it must work for *us* and for the biosphere. A succession of great thinkers over the past two-and-a-half centuries have asked how we can deploy technologies for our own and the world’s benefit without being enslaved by it, including Jean-Jacques Rousseau, John Ruskin, William Morris, Peter Kropotkin, Leo Tolstoy, Mahatma Gandhi, Ivan Illich and E F (‘Fritz’) Schumacher. As robots threaten to make us all redundant and strategy is decided by computer the discussion is now more urgent than ever.

All technologies are pertinent but the two that need most attention, I suggest, are those of farming and cooking. Specifically, we need **Enlightened Agriculture** and an appropriate **Food Culture**. These are the things we absolutely have to get right, and in practice are getting most wrong. Indeed, present-day agriculture, driven by the perceived neoliberal imperative to maximize and concentrate wealth, is the very opposite of what we really need. Thus, so long as oil is affordable, the agriculture that makes most money most quickly requires monocultures on the largest possible scale with minimum to zero labour—run by big machines and robots with plenty of industrial chemistry, all abetted by biotech. In absolute contrast Enlightened Agriculture (aka Real Farming) is informally but adequately defined as

Farming that is expressly designed to produce good food for everyone without cruelty or injustice and without wrecking the biosphere and traditional cultures

and this demonstrably, is best achieved with maximally diverse (mixed), low-input (organic) farms with plenty of skilled farmers and growers, on farms and holdings that in general are small to medium-sized. Traditional, peasant cooking is geared to what such farms produce and the best peasant cooking, as Raymond Blanc and other leading chefs emphasize, is the basis of all the world’s greatest cuisines. Most great traditional cuisines are *not* vegan but they do use meat sparingly. Traditional Italian cooks use meat for garnish and the bones for stock.

But we will not and cannot act in the ways that we need to without appropriate **INFRASTRUCTURE**. We need enlightened **Government** to install an appropriate **Economy** and frame appropriate **Law**. Many great thinkers including Tolstoy have questioned whether we need government at all—but we probably do need some kind of body for organizational purposes. It’s essential, though,



that government should be *on our side*. As Jesus said (St Mark (10:42-44)):

...whoever would be great among you must be your servant, and whoever would be first among you must be slave of all.

How many governments live up to this—or have ever done so? Most governments in practice operate as elites, on behalf of elites. Democracy is clearly vital but—as the Brexit referendum so clearly illustrates—it is very difficult to get right. Above all, it requires people at large to take a real interest, which few are inclined or have time to do; and uncorrupted sources of information.

The economy we need, as most of the greatest economists have emphasized, must be rooted in moral and spiritual values. The economies that work best—most efficient, and most beneficial—are *cooperative*: people working together for the common good; bearing in mind that ‘good’ is only in part material. The economy that now prevails—the offshoot of capitalism known as neoliberalism—is again the precise opposite of what is really needed: an all-out, ultra-competitive, not to say cutthroat drive to maximize material wealth and power via the allegedly ‘free’ but in practice corporate-dominated global market. As successive British governments have told us, of all political hues, we must above all *compete* to increase ‘GDP’ and to achieve the greatest ‘market share.’ This approach is morally vile and in a finite world is obviously doomed in all but the shortest term but is nonetheless held, by those in power, to be ‘realistic.’ Truly we cannot persist with the *status quo* or entrust the world’s affairs to those who now command the heights.

Finally the law too must be on our side and on the side of the biosphere. The best we can say at present is that sometimes it is, and sometimes it decidedly is not. Often the law seems to have been framed by powerful groups (including the corporates) for the express benefits of those groups. The laws that need sorting out most radically and urgently are those that refer to land ownership and use. Private landowners sometimes do look after the land and the people who live on it as well as can reasonably be envisaged but often they treat it as a personal playground and/or as a commodity to be bought and sold to the highest bidder and as long as that is so, we can never hope to create convivial societies or to keep the biosphere in good heart.

The bottom tier is labelled MINDSET. This is the sum total of all the ideas and attitudes that in large part lie in our subconscious and are taken for granted, but which shape the way we look at the world—including our fellow human beings and our fellow species. We need to drag these hidden drivers out of the basement and see what they are really made of.

The first component is that of **Morality**. To cut a very long story short, we should (as Aristotle said) base our



moral thinking on the concept of *virtue*: ask what modes of thought and behaviour can properly be considered ‘good.’ Here there is a great serendipity for although it is fashionable to argue that morality is merely ‘relative’—since the principles differ from society to society and from religion to religion—it turns out that *empirically*, this is not the case. All the world’s great religions agree, although they may express the matter differently, on the supreme importance of *compassion* (which Christians are more inclined to call *love*). *Humility* too must be seen as a prime virtue: in our attitude to other people, to other creatures, and indeed to knowledge. We absolutely should not assume that we already know everything worth knowing or that such omniscience can ever be within our grasp. Finally—as emphasized in particular by the Eastern religions—we must treat the biosphere and its creatures with *reverence*. Ecosystems *qua* real estate just will not do.

Secondly: **Science**. Suffice to say here that although science is wonderful—a triumph of humankind—and

its insights are vital if we and our fellow species are to survive en masse in the decades and centuries to come, it has been horribly misconstrued and misused and in its current forms, as with technology, it is also among our greatest threats. The insights of science are more robust than most but as Sir Peter Medawar pointed out in the mid-20th century it is not and can never be more than ‘the art of the soluble.’ Scientists address only those questions that it occurs to them to ask and in practice address only those problems that they think they have a chance of solving, up to a point, with the resources available. However wondrous the results of their inquiries they must always leave us far short of omniscience. Science above all ought to teach us humility but instead, the way it is taught, it often encourages supreme arrogance.

Metaphysics, the third balloon in the bottom tier, addresses what have often been called ‘the ultimate questions’; which I take to be:

1. What is the universe *really* like?
2. What is the source of morality—what *is* ‘good’?
3. How do we know what is true?
4. How come?

Question 1 raises the idea of what I would call *transcendence*: the ancient and perfectly plausible idea that behind the material appearance of things there is an intelligence and indeed a purpose. The sense of transcendence, I suggest, is the essential component of what is properly meant by ‘spirituality’; and above all to *a sense of the sacred* which ought to underpin our treatment of our fellow creatures and of the land.

Under Question 2 I particularly like the Buddhist version of *dharma*: the idea that the universe is basically harmonious, and good, and that our task in life is to promote the natural harmony. Contrary to the Dawkins-style ‘selfish gene’ scenario, modern ecology and Darwinian evolutionary theory support the concept of *dharma* at least as well as they suggest, as Tennyson put the matter, ‘nature red in tooth and claw.’

The basic answer to 3 is that we don’t. In practice we must rely on our intuition at least as much as our much-vaunted rationality—and in the end must acknowledge that the universe is not just a series of problems to be systematically solved but is a mystery. We just have to do our best.

Question 4—‘How come?’—includes: ‘Why should the universe be like it is?’ And ‘Why should it exist at all?’ Of course this is unanswerable. But the questions that are unanswerable are perhaps the ones most worth asking.

By asking ‘the ultimate questions’ metaphysics should underpin *all* our contemplation. The outer reaches of science lead us rapidly and deeply into metaphysics (as Pari Center’s founder, David Peat, was wont to emphasize). Yet metaphysics has largely gone missing as in independent

discipline—and this, as Professor Sayed Hossein Nasr of George Washington University suggests, may be the greatest single cause of the world’s present ills. We just don’t think in an orderly fashion about the world’s biggest questions; what we are here for; what we should be doing while we are here. Metaphysics is of course at the heart of the world’s religions but then it is entangled with theology, biography, hagiography, treasured myth, and history, which complicates matters no end.

Finally—last balloon—the **Arts**. Suffice to say here that the arts are the manifestation of human thought and emotion, unrestrained (in theory) by anything other than a desire to express and communicate. Very obviously the arts influence our *attitude* to life and in the end attitude is all—or at least is the *sine qua non*. We need to increase knowledge on all fronts of course but we also need to cultivate attitudes of a helpful kind—which in particular means those that foster compassion and a sense of the sacred.

So what’s to be done? For my part I am co-founder of the College for Real Farming and Food Culture, which aims to explore all the questions raised here in as great a depth as can be managed in whatever time is available. Holistic thinking is the key: everything re-thought in the light of everything else. But it’s essential too that high-flown contemplation should be firmly rooted in practical reality: and so the whole curriculum of the College is built around food and farming, which indeed should be the practical focus of all human activity. To treat farming in the way that governments like Britain’s do—as an economic also-ran to be hived off to big business—is the height of folly, in a world in which folly is the norm. The College website needs re-structuring but it conveys the gist nonetheless (<http://collegeforrealfarming.org/>). The College operates cooperatively, with like-minded organizations—which I hope will include Pari.

Watch this space.





COLIN TUDGE is a biologist by education and a writer by trade with a lifelong interest in food and farming, politics and metaphysics. His published books include *The Variety of Life*, *The Secret Life of Trees*, *The Secret Life of Birds*, *Last Animals at the Zoo*, *Feeding People is Easy*, *Good Food for Everyone Forever*, *Why Genes are Not Selfish and People Are Nice*, and, most recently, *Six Steps Back to the Land*. He is co-founder of the Oxford Real Farming Conference and the College for Real Farming and Food Culture.

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One Step Backward Taken

Not only sands
and gravels
Were once
more on their travels,
But gulping muddy gallons
Great boulders off their balance
Bumped heads together dully
And started down the gully.
Whole capes caked off in slices.
I felt my standpoint shaken
In the universal crisis.
But with one step backward taken
I saved myself from going.
A world torn loose went by me.
Then the rain stopped
and the blowing,
And the sun came out to dry me.

Robert Frost

”

From Certainty to Uncertainty: Thought, Theory and Action in a Postmodern World

F. DAVID PEAT

Introduction

Just as biologists speak of punctuated evolution so too something similar seems to occur within human societies when great evolutionary leaps are made that act to transform the way people think and act. There was, for example, the development of speech, the invention of the Clovis spear, the transformation from hunter-gatherer groups to more settled farming, the creation of towns and cities, the invention of the wheel, the development of writing and the use of tokens in trade.

Within European society there was the sudden appearance of important abstract intellectual tools of the late Middle Ages: the adoption of Hindu-Arabic numerals, the use of double-entry bookkeeping, the discovery of the compass, map making, the more systematic use of logical rules in philosophical arguments and the appearance of mechanical clocks on public buildings that led to the subsequent secularization of time.

More was to follow: the Renaissance and the rise of the merchant classes, the sense that individuals had an interior life (as seen in the monologues of the Elizabethan playwrights) and the beginnings of modern science. In each case, however, there were long periods when the old thinking coexisted along with the new. Indeed Maynard Keynes proposed that Isaac Newton was not only the first modern scientist but also the last of the Magi. After all, his alchemical research appears to have been as equally

important to him as his work on optics, the calculus, gravity and the laws of motion. Likewise, while Shakespeare uses an English that belongs to an earlier era, at times his thought is as contemporary as that of a Samuel Beckett. Maybe paradigm shifts are not as clear-cut as Thomas Kuhn would have us believe, and the old is always enfolded implicitly within the new.

This is particularly true of our present time in which so much has changed—in terms of knowledge, technology, globalization, the limited supply of some natural resources including energy, the serious threats posed by global warming and the increasing complexity of our lives—yet the old ways of thinking persist. We truly do need a new thinking for a new age. In fact some would say that we must ‘rethink civilization’ or ‘re-envision the modern world.’

The Revolutions of the Twentieth Century

If we are to understand the changes that have faced us, and the issues that now confront us, we should go back to that watershed year of 1900. It was in that year that Lord Kelvin, the President of the Royal Society, in an address to the Royal Institution claimed that in principle everything that was to be known in science was already known¹. The combinations of Newton’s and Maxwell’s theories were capable of explaining every phenomenon in the physical

universe. (He did however point to two small clouds that lay on the horizon of physics but had every confidence that these would soon be cleared up. One turned out to be quantum theory and the other the theory of relativity!)

The notion of the unity of knowledge inherent in Lord Kelvin's speech perfectly complemented the overall vision of the new century, at least within Europe and North America. It was to be an era of certainty and knowledge and, thanks to the power of science and technology, a time of limitless progress. After all, within the two years around the turn of the century, radium, the radioactivity of uranium, and the electron had all been discovered, speech had been transmitted by radio and sound recorded magnetically, photographs were being sent over telephone lines, air had been liquefied, alternating current was being generated at Niagara Falls, the Zeppelin airship was constructed, the Model T Ford built, and the Paris Metro opened.

An Era of Transformation

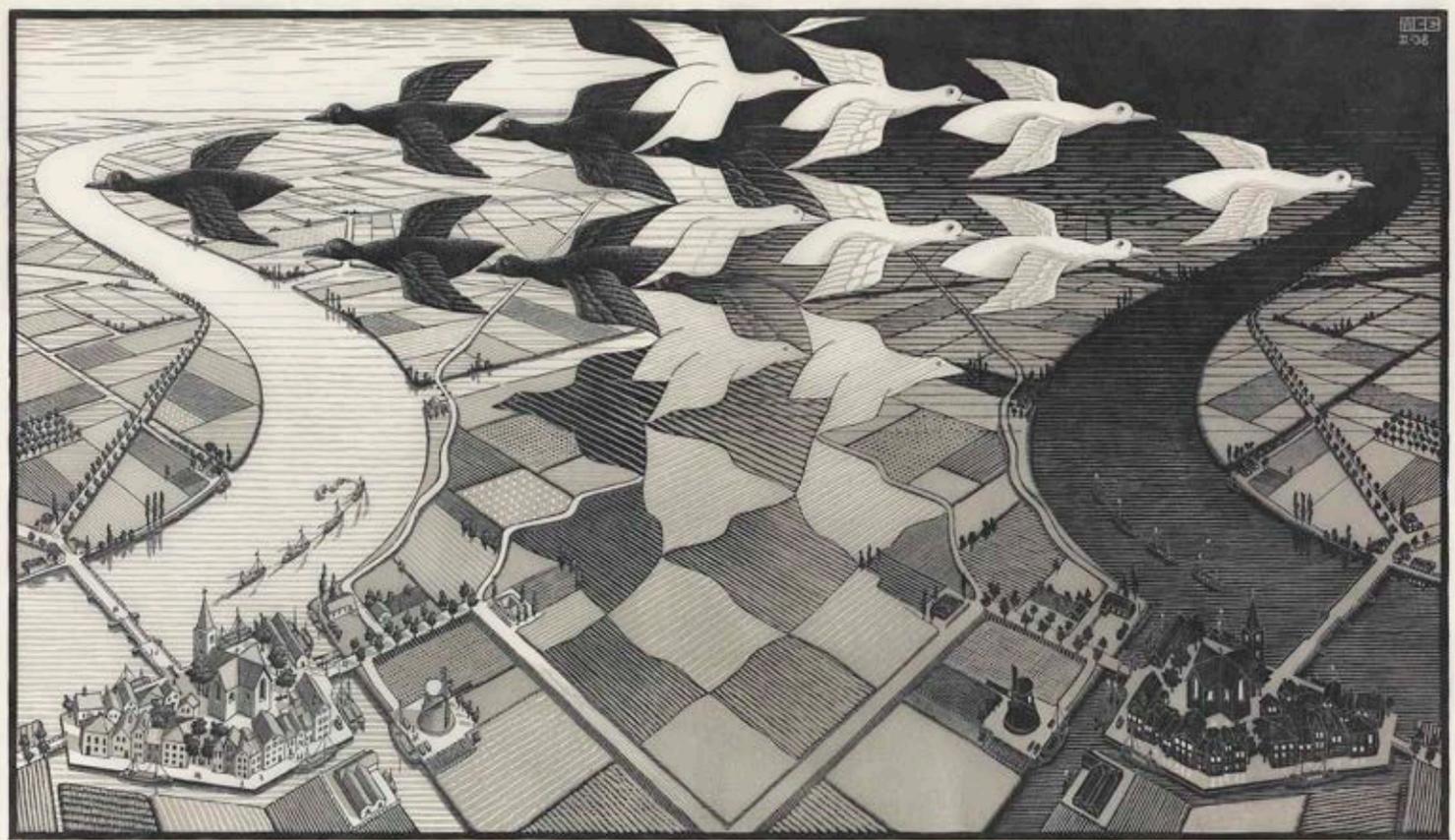
Yet 1900 was also the year when Planck hypothesized the existence of the quantum, Poincaré suggested that chaos

may be hidden within the motion of the solar system and Sigmund Freud published *The Interpretation of Dreams*. Five years later Einstein would present his first paper on the theory of relativity. The turn of the century was certainly a watershed in which so much of what had been accomplished, so much that human beings could feel proud about, was about to be swept away.

To see how radical the issues are that face us today and the need for a change in thinking it is best to start with a brief exploration of just how revolutionary the transformation had been in our theories of the ontology of the world.

In one year, Einstein had transformed the laws of conservation of matter and conservation of energy in favour of the conservation of matter+energy. In an address to the 80th Assembly of German Natural Scientists and Physicians, Hermann Minkowski proclaimed that, 'henceforth space by itself, and time by itself, are doomed to fade away into mere shadows².'

The implications of the theory of relativity were indeed disturbing yet, from another perspective, the theory preserved a significant aspect of the edifice of classical physics, that of the objectivity and inviolate nature of its laws. While Einstein showed that physical phenomena appear differently to observers moving at different



M.C. Escher, Day and Night (1938)

speeds, accelerating or within a gravitational field he also demonstrated that the underlying laws of physics remain invariant for all observers. Relativity may have predicted Black Holes and the Big Bang origin to the universe but, to Einstein, it embraced a universe that was rational, causal, did not admit chance processes and was built out of ‘independent elements of reality.’

Not so for the quantum theory, it demanded a far more radical change; one that even today is not always appreciated in the fullness of its depth. Schrödinger, for example, highlighted the curious circumstance whereby quantum theory allows for the simultaneous superposition of all possible outcomes to any experiment (i.e. linear superpositions of the solutions to Schrödinger’s equation), yet the large-scale observing equipment always registers only one outcome³. Attempts to resolve ‘Schrödinger’s cat paradox’ led to all manner of bizarre proposals, such as the notion that the consciousness of the human observer acts to ‘collapse the wave function’ into a single outcome, or that there are an infinity of possible worlds with a unique solution existing in each of these worlds.

Examples such as the Schrödinger cat paradox expose one of the deep problems of the quantum theory: how to extract a physical explanation from the underlying mathematical formalism. Heisenberg’s original discovery of quantum mechanics involved the use of arrays of numbers, called matrices, some of which do not commute when multiplied together: In other words, $A \times B$ is not the same as $B \times A$. The physical meaning of the matrix A could correspond to the measurement of the position of an electron, while B would correspond to a measurement of the electron’s speed (more properly its momentum). Hence, the measurement of speed followed by position gives a different result from first measuring position and then speed.

Heisenberg interpreted this mathematical result in the following way. For any measurement to be registered, at least one quantum of energy must be exchanged, or shared, between the electron and the measuring apparatus. Suppose we measure the speed of an electron. We next attempt to measure its position, but this involves interfering with the electron using at least one quantum. Hence, this second measurement disturbs the electron and alters its speed in an uncontrollable way. Each measurement disturbs the universe so there will always be a level of uncertainty in determining both the speed and position of an electron⁴.

Heisenberg’s example appeared to offer a clear physical interpretation underlying the mathematical equations. Neils Bohr did not agree and adopted a far more radical approach⁵. Bohr pointed out that Heisenberg’s interpretation was based on the assumption that, just as with objects in our large-scale world, the electron ‘possesses’ a speed and ‘possesses’ a position. According to Bohr this is an unwarranted assumption about the nature of quantum

reality. All one can say is that a certain disposition of experimental apparatus will produce a result that can be interpreted as ‘position,’ while another disposition will produce a result that can be interpreted as ‘speed.’ In between making these measurements one cannot properly speak of the electron as ‘having’ such properties.

Bohr went even further⁶. He argued that when physicists wish to discuss the meaning of an equation, they communicate using ordinary, everyday language, albeit spiced with a number of technical terms. Yet as soon as we introduce words such as space, time, path, distance, before, after and so on we are employing terms that evolved linguistically in our large-scale world. In other words, as soon as we discuss quantum reality we contaminate the conversation with unexamined assumptions and concepts about causality, space, time and the nature of objects that apply only to the classical world of large-scale objects. Bohr’s famous statement ‘we are suspended in language such that we do not know which is up and which is down’ places a strict limit on any attempt to create models of the quantum world, and shows why objective descriptions of quantum reality is doomed to confusion and failure. It also negates Einstein’s belief that we can construct our world out of ‘independent elements of reality’⁷.

Another radical change in science has been the development of what is popularly termed ‘Chaos Theory’ (more properly the dynamics of non-linear systems)⁸. While chaos theory does not require a change in our ontology of the world it does place strict limitations on our dream of complete knowledge about a system, as well as on our ability to predict and control the world around us. There will always be missing information about the world and predictions will only be successful under certain limited circumstances. And, just as the dream of endless prediction has to be abandoned, so too that of controlling or directing the systems and organizations around us. Some systems are highly resistant to change and simply bounce back when affected, others will behave in unpredictable ways when we attempt to influence them.

In a sense this puts an end to that Enlightenment dream of conquering the world through pure reason. Yet in other ways that dream had already begun to founder in 1900 with the publications of *The Interpretation of Dreams*. The Enlightenment was founded upon faith in the inherent rationality of human thought, but Freud now claimed that this was an illusion. In part, our behaviour is determined by rational judgment and in part by the promptings of the unconscious. In *Civilization and its Discontents* Freud even argued that true human happiness can never be achieved, for the instincts of Eros and Thanatos (the death wish), are always acting in conflict with each other. An ideal society can never exist, for civilization seeks to repress our deepest instincts and the Enlightenment dream is based upon a fragile illusion.

Hubris and the Will to Power

During the 1940s the theoretical physicist, Wolfgang Pauli, became distressed at what he saw as the rise in ‘the will to power’ among physicists whom he felt were exhibiting the desire to control and dominate the natural world⁹. For him the true meaning of science was that of understanding the wholeness of the world in order to discover the wholeness within. Indeed, he felt that the true spirit of physics should be similar to that of ‘the alchemists of old’ who carried out their work for their own salvation. Ironically this same science has now brought us face to face with the hubris inherent in our desires for complete knowledge, endless progress and control over the natural world.

The hubris inherent in that dream of the universal power of science also showed its face in the search for artificial intelligence¹⁰. A.I. was the dream of pioneers from the very inception of the computer in the 1940s. Marvin Minsky and others even entertained the fantasy that they were the spiritual descendants of Rabbi Loew of Prague who had created the Golem and animated it by placing the Holy Name in the creature’s mouth. In 1956, Minsky, John McCarthy, Claude Shannon and others met at Dartmouth College to draw up goals in the quest for true artificial intelligence. These included building a system of artificial neurons that would function like the human brain, a robot capable of creating an internal picture of its environment, as well as computers that would compose music of ‘classical quality,’ understand spoken language and discover significant mathematical theorems. The date for this achievement, set at 1970, came and went, and despite talk, during the 1980s, of neural nets and fifth generation computers, true artificial intelligence, to its critics, has become an impossible goal.

It is not so much that we are ignorant or incapable of advances in programming and computer design—each year computers became faster, cheaper and have larger memories—but a deeper issue is that that we do not really understand how we humans operate¹¹. The most advanced natural language inference engines simply do not imitate the serendipity that humans apply when coming across interesting facts, using their intuition and ‘sixth sense,’ or making fortuitous connections between different branches of knowledge. Humans also have great skills in making rapid, and very often highly accurate, choices and decisions based on incomplete information¹². We are all capable of highly creative acts without ever knowing how we do these things. Innovative ideas appear out of the blue. Mozart appears to have received compositions in their entirety, while the mathematician Srinivasa Ramanujan claimed that original mathematical theorems were given to him by a goddess. The first stanzas of ‘Kubla Khan’ appeared to Samuel Taylor Coleridge until he was

interrupted by a visitor from Porlock, and Rumi’s poetry was recited when the mystic was in a state of ecstasy, while rotating around a column. In short, we do not really understand what it is to be human, or what it means for mind to be embodied in the natural world, let alone build a device that would reproduce human creativity and behaviour.

The failure of the A.I. program to realize its goals may well be tied to another dream, that of understanding mind and the experience of human consciousness by means of the physical and biological sciences. When physicists such as Francis Crick and Maurice Wilkins moved into the field of molecular biology they brought with them techniques and approaches that enabled enormous advances to be made, from the discovery of the molecular structure of DNA to the completion of the Human Genome Project. Maybe similar advances would occur in theories of consciousness?

Indeed, over the past decades considerable advances have been made in what are termed the neural correlates to consciousness; that is, in discovering the specific brain activity that is associated with particular tasks. One example that has received a great deal of attention has been the discovery of the various strategies employed by the brain to analyse a visual scene. This also had applications in initial stages of developing machine vision. But what is not understood is how these various strategies, located in different regions of the brain, are integrated together to produce a coherent visual scene. Even more outstanding is the problem of what it means for us to have the subjective experience of ‘seeing’ the world. Understanding the meaning of our direct and immediate experience of consciousness is what David Chalmers calls ‘The Hard Problem’¹⁵. Some feel that a fundamental principle remains to be discovered before we can ever understand what it means to have a personal consciousness, others believe that science itself may never resolve the problem. Possibly we have encountered one of Wittgenstein’s famous category mistakes—that the category



Human genome project

of scientific descriptions is totally different from that involved in understanding our experience of the world. Yet again scientific research moved so far until it encountered hubris and a new limit to knowing and understanding.

The Nature of Scientific Theories

So far we have explored particular scientific theories and their limits, but the twentieth century also saw a change in the overall meaning and ontology of scientific theories and the nature of physical laws themselves. In the world of classical physics, the laws of nature existed in some sort of Platonic limbo and, if the world had been created in time, these laws must have in some sense pre-existed, to be imposed on the emerging realms of matter, energy,

space and time. In this sense the laws of nature appear to belong to that domain of 'the eternal' discussed in ancient Chinese philosophy, as opposed to the contingent world of the apparently real and everyday.

Then in the mid-twentieth century scientists began to study what they termed self-organized systems, that is, systems open to the flow of matter, energy or information that spontaneously develop their own structure and behaviours. In this sense, such systems develop their own laws of behaviour. This raises the possibility that the laws of nature themselves are not fixed *ab initio* but could have evolved with the universe, as frozen or fossilized habits laid down during the first microseconds of the Big Bang. In this sense the structure and behaviour of the cosmos and indeed the laws of the universe could be seen as evolutionary and emerging out of the totality of that which exists, rather than being fixed before time.

Yet another change in the status of physical law and scientific theory comes about with what some scientists



*Asher Bilu, M-Theory (2010), acrylic on plywood, string, wooden blocks, masonite.
Approximately 2,000 components, dimensions variable*

have called ‘postmodern physics.’ Traditionally a new scientific theory should lead directly to experiments that seek to confirm a series of predictions, or to some crucial experiment that falsifies (in Popper’s sense) the theory. But theories in the field of superstrings and M-theory refer to energies and temperatures very close to those that existed during the Big Bang origin of the universe. Such conditions will probably never be produced within laboratories and thus the theories themselves will never be directly testable. The best one can hope for is internal consistency, and that within these theories can be embedded other theories, and theories about theories which are themselves testable. So, for the first time in history, science is creating theories about the cosmos that will never be definitively tested.

Closure in Science

Are there deep reasons within the human psyche why we are always seeking closure, the ultimate explanation, the final equation, the most fundamental level, the true theory of everything? I find this particularly ironic since the pleasure of doing science is always in the quest itself and the greatest creative energies are generated when we remain in a state of tension with an open and unresolved question. Yet, despite the lessons we have learned during the twentieth century, some still entertain a dream of attaining complete knowledge.

Possibly this springs from some infantile desire to control the world, or out of our fear of death, that we should create an edifice of knowledge that will persist for eternity. On the other hand maybe it is not so much an inherent human characteristic but a particular European



Annie Spratt, Wells Cathedral, UK



Rumman Amin, Eco-friendly mosque, Cambridge, UK

inheritance about what knowledge means. In Western classical music, for example, a symphony advances through a series of movements involving the resolution of the various themes leading towards a final coda. Likewise the traditional novel seeks, within the final chapter, to resolve the challenges and relationships that face the characters. Renaissance painting embraced objects within the one unifying umbrella of perspective. When we enter a Christian church our eyes are taken towards the central point of the altar, or follow columns upwards towards heaven. In each case there is a tendency to move towards some vanishing point, some conclusion, some all-embracing resolution.

Not so in a mosque. There, there is no vanishing point, no place which has priority over all others. Each worshipper stands at the centre, as did Adam on the day of creation. Infinity is not to be found outside but within. The infinite in Arabic art does not lie beyond but within the arabesques and inner detail. Arabic music continues, as does a stream, without the need for a final goal, likewise the narrated story has no need of a final resolution.

The lesson that has been taught by quantum theory as well as the mystics of history is that we can never hope for a final image or for a true representation. Reality will never be pinned definitively within words and images. Those were all the dreams of a past era, a time when human reason was elevated over the wisdom of the heart.

The End of Objectivity

Despite the revolutions in scientific thinking in so many other areas of life, in particular within institutions, policy planners and so on, the older mechanistic and ‘objective’ ways of thinking continue to hold sway. This is particularly unfortunate, since these are the very elements and players that have the greatest impact on our lives, our security and the future of the planet. Let us make a very brief overview of some of these.

Economics

During the first half of the twentieth century the work of Maynard Keynes took economics beyond the theories of Adam Smith and his notion of the ‘invisible hand’ that kept the market stable. His theories influenced governments to employ fiscal policies designed to ensure full employment and curb inflation. Keynes was also responsible for the creation of the International Monetary Fund and the 1944 Bretton Woods agreement. From now on financial cooperation would operate at international levels, world

trade would be increased, high employment be ensured, financial oscillations damped and funds made available to correct maladjustments in balance of payments.

Later these Utopian dreams began to be questioned. To their critics, they were costly and inefficient and so economics saw the rise of Monetarism, the theories of Milton Friedman and, in the UK, the policies of Margaret Thatcher. In turn these measures themselves were to come under serious criticism.

In the last two decades economic problems have become more serious, for the rise of the Internet enables speculators to transfer enormous sums of money across the globe, and in uncontrolled ways, at the flick of a mouse. Money is no longer tied to goods and services and some economists fear that a global economy is inherently unstable and at some point could go into collapse, chaos or uncontrolled oscillations. In addition, the gap between rich and poor nations continues to increase. While the American Revolution was founded on the principle of ‘no taxation without representation,’ today the poorer nations are excluded from the table when significant economic decisions are made. What is more, some areas of the world have descended from poverty to downright misery. Yet famine, a number of diseases and discontent could well be eradicated with more enlightened global economic policies.

Global Security

While the seeds and nature of terrorism are much debated in the present climate one thing is clear: the world is far less secure than we imagined at the end of the twentieth century. With the fall of the Berlin wall and the dismantling of the Soviet Union, the threat of a nuclear holocaust appeared to have vanished. Yet, today a new generation of small nuclear weapons is considered in some quarters as tactically permissible in warfare, or for use against terrorist organizations. In addition, biological weapons—that attack populations or sources of food—become ever more sophisticated. To this list must be added weapons produced using nanotechnologies. What is truly disturbing is that while the production of the first nuclear bombs required teams of scientists with large budgets, modern weapons can easily be produced by small groups and at low cost.

Environment

The issue of global warming is now seen to be far more serious than hitherto believed. To this has been added the phenomenon of global dimming (industrial emissions provide the nuclei around which tiny water droplets condense and remain suspended in the upper atmosphere,

acting to cut down the amount of sunlight reaching the earth) which is believed to be responsible for changing rainfall patterns and could lead to serious drought and consequent mass famine on the African and Indian continents. A number of alternative (renewable) energy sources have been suggested but studies indicate that they simply could not be implemented quickly enough, or would prove inadequate for present demands, in the short and medium term. Heavy reliance on nuclear power is therefore proposed in some quarters as the short-term solution, yet that brings with it the problems of security and long-term disposal. In short it has become necessary for us to take a hard and serious look at our present civilization and ask if it is possible to continue along its present lines.

Conclusion

If the revolutions of the twentieth century have taught us anything, at least they should have indicated the inherent limits of reductionist and mechanistic ways of thinking. That is, of believing that situations can always be neatly categorized and divided up; or that problems can be clearly identified, isolated and solutions applied. Our complex world simply no longer responds to such an analysis. It does not apply at the level of environmental issues, the march of economic globalization, nor the confrontation of and tensions between social or religious groups.

We can no longer adopt the privileged position of assuming that we lie outside a system as impartial observers who can objectify the world and discover its underlying mechanisms. Rather we are all part and parcel of the complex patterns in which we live, and our thoughts, beliefs and perceptions have a profound effect on the world around us. Ironically, since it was our implicit faith in the power of science and reason that brought us to such a path, maybe we can also draw on the sciences to discover some hint of a way out.

It was Niels Bohr who coined the term ‘complementarity’ for the observation that under certain experimental conditions an electron’s behaviour can be interpreted as the motion of a particle, while in others it acts as a wave. Bohr felt that complementarity went far beyond the confines of quantum theory, for reality is so rich that it cannot be exhausted by any single explication. Bohr’s complementarity applies well to our postmodern condition in which the world is so genuinely complex that we must always be willing to entertain more than one version of a truth, even to the point that, when placed side by side, these truths appear paradoxical or even opposed. If this spirit of complementarity could be brought to the debate between groups, cultures, faiths and the issues that face our world it may open up new possibilities for dialogue.

So often we fall into polarized positions and then attempt to discover some compromise, some intermediate position, some ‘order between’ in which everyone can feel comfortable. What our modern world requires is not that comfort zone in which each of us feels we can still hang on to some essential aspect of our position but rather we must reach ‘an order beyond,’ that is, something that transcends and enriches all positions.

Maybe the time has come in our civilization for a period of creative suspension. True creativity appears when we stay within the tension of a question or issue and do not rush to assuage our insecurity with easy solutions. We are all essential parts of this modern world and must exercise our collective creativity to discover orders beyond, new forms of action and exercise our ability to hold a variety of viewpoints in creative tension and mutual respect.

Pari, Italy. March 2007

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Whenever the ratio of what is known to what needs to be known approaches zero, we tend to invent ‘knowledge’ and assume that we understand more than we actually do. We seem unable to acknowledge that we simply don’t know.

David Rosenhan, psychologist

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Endnotes

¹ For a general discussion see Peat, F. David. (2002) *From Certainty to Uncertainty: The Story of Science and Ideas in the Twentieth Century*. Joseph Henry Press: Washington, DC.

² Minkowski, H. (1952) 'Space and Time,' reprinted in *The Principle of Relativity: A Collection of Original Memoirs on the Special and General Theory of Relativity*. Dover: New York.

³ Schrödinger's paper, along with commentaries and other key papers on the foundations and interpretation of quantum theory can be found in Wheeler, J.A. & Zurek W.H. (Eds.) (1983) *Quantum Theory and Measurement*. Princeton University Press: Princeton.

⁴ A clear account of Heisenberg's quantum 'microscope experiment' can be found in Bohm, David. (1989) *Quantum Theory*. Dover: New York.

⁵ An informal account, admittedly from Heisenberg's perspective, of his conversations with Bohr can be found in Werner Heisenberg (1971) *Physics and Beyond: Encounters and Conversations*. Harper: New York. See also the interview with Leon Rosenfeld in Buckley, Paul & Peat, F. David (1996) *Glimpsing Reality: Ideas in Physics and the Link to Biology*. University of Toronto Press: Toronto.

⁶ See Wheeler, J.A. & Zurek, W.H. (1983) *Quantum Theory and Measurement*. Princeton University Press: Princeton.

⁷ An account of Einstein's discussions with Bohr during the Solvay conferences can be found in Wheeler, J.A. & Zurek, W.H. (1983) *Quantum Theory and Measurement*. Princeton University Press: Princeton.

⁸ For a general overview see Briggs, J. & Peat, F. David (1989) *Turbulent Mirror: An Illustrated Guide to Chaos Theory and the Science of Wholeness*. Harper: New York.

⁹ See for example Lindorff, D. (2004) *Pauli and Jung: The Meeting of Two Great Minds*. Quest Books: Wheaton, IL.

¹⁰ A popular account can be found in Peat, F. David. (1985) *Artificial Intelligence: How Machines Think*. Baen Books: New York.

¹¹ Smith, A. 'Concepts, boundaries, and ways of knowing.' (2005). *Leonardo Electronic Almanac* 13 (9).

¹² Gladwell, M. (2005) *Blink: The Power of Thinking without Thinking*. Little, Brown: New York.

¹³ For a general discussion see Shear J. (Ed.). (2000) *Explaining Consciousness: The Hard Problem*. MIT Press: Cambridge, MA.



F. DAVID PEAT was a quantum physicist, writer, and teacher who founded The Pari Center in 2000. He wrote more than 20 books which have been translated into 24 languages, as well as numerous essays and articles. In 1971-72, he spent a sabbatical year with Roger Penrose and David Bohm, and thereafter his research focused on the foundations of quantum theory and on a non-unitary approach to the quantum measurement problem. Peat continued an active collaboration with Bohm and, in 1987, they co-authored the book *Science, Order and Creativity*.

David Peat died, in Pari, Italy in 2017.

River Art

AHMAD NADALIAN with JOHN K. GRANDE

An interview originally published in *Dialogues in Diversity: Art from Marginal to Mainstream*, Pari Publishing, 2007.

Nadalian is an Iranian sculptor whose life's work involves engendering a respect for living creatures and the natural environment. To achieve this he has established a sculpture grounds in a peaceful environment surrounded by nature and he lives with nature. Water is a living element that contributes to his sculptures, and many of the symbols he engraves and sculpts are derived from ancient mythology and the rituals of pre-Islamic civilizations. Still other symbols express a more contemporary language emergent from the use of new technologies. Nadalian's art is expressed through a variety of media, including rock carving, environmental art installations, ritual art performances, figurative paintings reminiscent of ancient drawings, video art installations, web art works and interactive pieces which require the participation of the public.

Spending most of his time in the mountain region of Damavand in Iran, *River Art* is Nadalian's Haraz River project near Mt. Damavand. Located near the village of Poloor, 65 kilometers from the Tehran-Amol road. Nadalian designs sculptural form direct in nature, and on riverbanks are human figures, hands, feet, birds, goats, crabs, snakes and fish. Symbols of the Zodiac, the sun and the moon surround these designs, reminding the viewer that the images are not merely representations of nature, but symbolic concepts. What Nadalian intends is for the spectator searching for the artwork to perhaps discover something more valuable than his stones in nature. He exhibited at the First Conceptual Art Exhibition at the Tehran Museum of Contemporary Art and his works can be seen in many other countries such as Italy, Finland, Germany, Spain and France.

Nadalian likewise buries many of his carved stones across the world and is preparing a map of their locations for the Web. These mostly show images of fish and human hand and foot traces and animals. For Nadalian earth and museum are equal. Nadalian's art focuses on the most fundamental crises in contemporary world. If there are any audiences in the future, his work will tell them the story of life and humanity. Nadalian presents his works via new media, and utilizes the capabilities of the digital age, such as the Internet.

John K. Grande: Until human beings implicate a blade of grass their so-called great scientific and historical achievements will amount to nothing. You come from a country with a great garden tradition that in turn influenced European gardens. These include Esfahan and Shiraz though many have not survived ancient times, wars and history. Flowers, plants and water fountains, indeed natural rivers

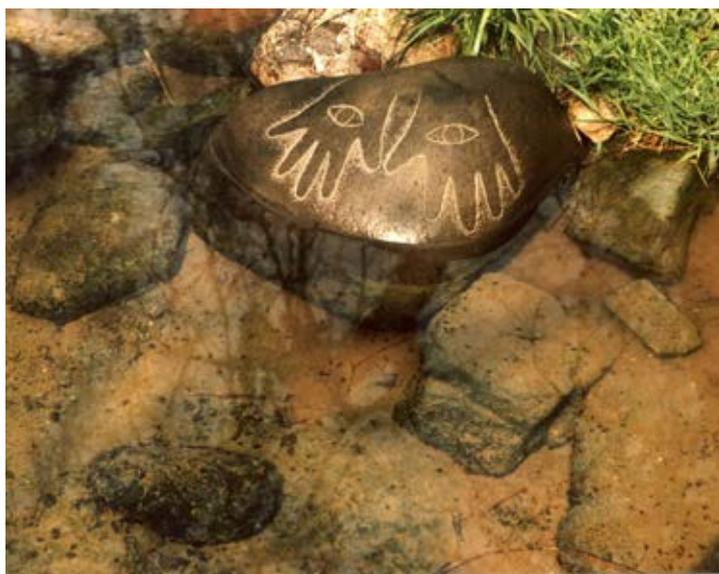


and landforms as well. Is your personal search a search to find a new language of expression within nature, or instinctively a rediscovery of something ancient?

Ahmad Nadalian: Ancient Persian culture and gardens have been a significant influence on my work. But I consider my strongest influences to be on the one hand the nomad lifestyle of my ancestors, their life close to nature, and on the other the bas-reliefs dating back to the earliest Iranian civilizations. Buried deep in the heart of the Iranian hillsides, these carvings use nature as a setting for art. My aim is not to reconstruct a representation of kingly glories and triumphs as depicted in the hillside carvings; I wish to return to the nature I call my own, to be a part of it. My life surrounded by nature, and the harmony I have found there have led to the formation of a language in which both the material and the content are derived from nature.

My work differs from the ancient reliefs in that my carvings draw on their environment to generate meaning; the surroundings become part of the artwork. Without the motion and sound of the rushing water, my work has little meaning. The river has been transformed into art. The work's meanings depend upon the cosmic order. The rising of the water level in spring and the lowered level in autumn gain significance from the life-affirming rituals that are part of the philosophy of ancient Iranian mysticism.

Of course my influences are not limited to ancient cultures and civilizations. American and European environmental artists and Land Art have left a strong impression. But the difference lies in the scale and construction methods—my work does not draw on huge dimensions and industrial machinery, nor is it ephemeral like Andy Goldsworthy's short-lived artworks. Vision plays an important part in my approach.



I want my work to emphasize both the obsolescence and decay of nature, and a utopian ideal that speaks of its renewal. I didn't choose to work with nature; it chose me, it mesmerized me and taught me how to re-present what seemed irretrievably lost. The choices may have been instinctual; maybe I was seeking my lost paradise, the paradise of my childhood memories, a longing for the ways of my ancestors. But my allegiance is not restricted to the past. I don't wish to defy present realities, I don't deny the beauty of the present. I have a very positive relationship with new technology, especially informational technologies, and I feel that new media complements and completes my work. My voice may have gone unheard without new media. The future awaits us. I would like to preserve and retain the beauty of the past for the present and the future.

I also think about the future. I have deliberately buried many of my carvings in their natural settings. These burials are secrets I share with the earth, an exhibition for later generations. These pieces highlight the value of the earth, the cradle of humanity and its civilizations.

JKG: Our civilization is facing an ecological crisis of incredible proportions, and this changes the way we conceive and approach notions of art. Your approach is as much about letting nature have its own voice within a landscape as to integrate personal expression. Can you comment?

AN: Maybe we can no longer speak of a single civilization in the world today. Many societies are fully equipped with new technology, and they are the real force behind the environmental crisis. Artists and scientists in developed societies are fully aware of the implications of this crisis, thus it is debated in academic and scholarly circles, and strict laws are passed. This is not the case in developing and Third World countries, where they are either still struggling to gain access to advanced technology, or it has been imported already. But the sensitivity to environmental issues that should accompany these advances is still lacking.

In the past, ritualistic beliefs stipulated that elements such as water and earth remain pure; to pollute them was a sin. Today the descendants of those ancient societies have neither retained their divine beliefs nor gained the necessary knowledge to combat the ecological crisis.

I agree with you, in any case, it's no longer a question of whether we live in a small village or the global village. We live in the age of new technologies and capabilities. These resources have created new difficulties and crises. History has never before witnessed such destruction brought upon nature. Environmental crises and the need to resurrect a pure environment call for a new art form. Environmental art can play an important role. Art is capable of illustrating the crisis, critiquing its conditions, and describing a utopian world. Polluted environments are



the result of polluted emotions, thoughts and attitudes; a pure world belongs to a pure being. The pollution of nature comes from the pollution of the human soul. We may be wrong in thinking we can work to save the environment; we have to realize that we too are part of the environment. All we need to learn is to stop polluting it any further. This awareness will help us humans more than anything else.

JKG: Can you tell me something about your River Artproject in and around the Haraz River near Mount Damavand and not far from Poloor?

AN: The village of Poloor is my ancient homeland, the summer camp of my ancestors. I lived in the city during my years as a student, and then I spent seven years out of the country. I returned to Iran after finishing my studies. I was trying to escape an environment that was polluted in every way: environmentally, politically, and morally. Even artists are reluctant to waste their lives swamped in bureaucracy and traffic jams. I wanted to return to good health, to a paradise. In this polluted world, untouched nature can be a paradise. But it turned out that the paradise of my childhood was, and still is, rapidly disappearing. There were no more rushing rivers. The dwindling streams were full of plastic bags and trash, which had replaced the fish. No one prayed for rain anymore. The sky had turned away from us. People no longer believed in the divinity of water, of the elements. I wanted to visualize that lost paradise for myself. The fish that I carve are alive for me. But technology doesn't even allow imaginary fish a space to live. The story continues. I carve fish, and then the bulldozers move in to make way for new villas and highways, and my fish die. We now have a cemetery with fish carved on all the headstones. But I haven't lost hope. I believe in standing strong until the end.

I sometimes walk several kilometers along the riverbed, cleaning the dirt of my carved stones and cleansing them with my own hands. It has become a ritual for me.

JKG: Your sculptures and reliefs are literally engraved in the land, beside rivers, in rivers. Are they questions as much as answers about our place in the natural world?

AN: The carvings depict fish, crabs, birds, goats, snakes, human handprints and footprints, and snail-like spirals. They could be read as representations of the surrounding environment. The first question is artistic intent, what I intend them to be. Why I have returned to nature may also be the answer. This is the revival of a ritual, the belief that nature should be celebrated and the rushing sound of water should be listened to. The question raised by the carvings is this: why have these creatures, that once made a home in and around the rivers, disappeared, and why have they now reappeared as virtual forms? Why this fossilized existence? How will future generations read these images? The work is also an expression of my hope that nature remain in its natural form. I want to ensure the continued flow of life. I feel that my work maintains a symbolic layer of stories, eternal legends and endangered symbols.

JKG: The symbols are ancient. What do they represent?

AN: Nearly all of the forms I use are ancient Iranian symbols. They represent creation, fertility and various natural forces. The fish and the goat represent fertility. They also highlight the ancient relationship between symbols and the zodiac. The aim was to re-envision the heavens on earth. The female form I use is the goddess of water and fertility. I have a specific interest in ancient Iranian mythology, in which Anahita was worshipped as the goddess of water and fertility; it was believed that she purified the waters and the milk of nursing mothers. Myths of creation spoke of how the earth died in the winter and was reborn in the spring. This features in my work through the fish, alive in spring, and even the moss growing on the carved rocks. I'm delighted by the sight of the fish beneath the water surface. When they are dry and above the water in the colder months, I feel this to represent their death.

But the meaning of the symbols is not merely tied to ancient beliefs. They are intended to be eternal and lasting. I believe an artwork can be interpreted differently at different time periods. I see the fish as a metaphor for a human being, and the river, the sea or the ocean are the world that surrounds us. We need a clean environment to stay alive. Perhaps one reason for selecting these symbols is my need to deliberately return to nature. When a human being lives surrounded by nature, natural symbols will appear in his or her work. Many of my carvings

show the female figure combined with a fish or moon symbol. Female figures were water goddesses and fertility symbols in ancient cultures, and the fish and moon also represented rain and fertility. In an age of increasing water pollution, the water goddess symbolizes a conscious reference to the concept of holiness, perhaps a way to raise awareness and escape the present ecological crisis.

JKG: These fish, goat, crab, snake, hand, and eye symbols have universal Potent. You integrate them like details we discover within the land. Were they inspired by ancient myths?

AN: These forms are seen in many different cultures and refer to symbolic meanings. The signs of the zodiac are familiar to many nations and are global symbols. The goddess of water is also respected in many cultures, especially in Iran's neighbouring countries. As I previously mentioned, I don't insist on a *unifique* reading for my works; viewers who encounter them through different mediums won't necessarily read them the same way. Art's attraction for me is its infinite capacity to expand. But I do feel that the image of a fish carved on a rock in a river is understandable to anyone. In the rural areas where I work, even the shepherds and farmers who can't read are able to understand them.

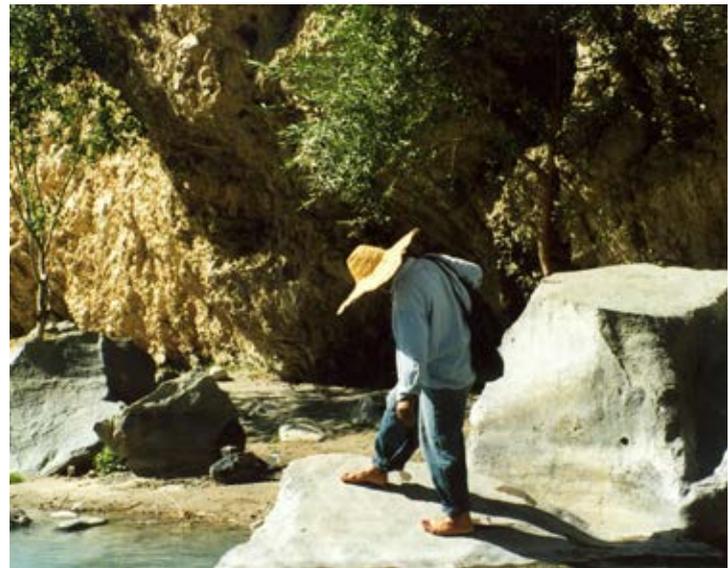
JKG: And what do the hand images represent for you?

AN: The handprint is one of the earliest forms testifying to the presence of humans in prehistoric times and primitive societies. We can use our hands to create beauty in harmony with nature, or to leave the mark of ugliness upon our surroundings. I personally felt that the handprint, when combined with the simple image of an eye, describes a sort of prayer, a holy communion. It may however be more meaningful when read in the context of Iran's religious culture.

In the Islamic era, the image of a hand has come to symbolize the sacrifice of one of the most prominent Shiite; a holy figure who lost his hands bringing water to thirsty children during a battle. The symbol is displayed where charities are distributed and during religious ceremonies. It may relate to my work in the connection between the ancient holiness of water and the symbolic gesture of offering water to the needy.

JKG: Can you tell me something about your project in Mallorca, Spain?

AN: After participating in the Venice Biennale, creating environmental pieces on the island of Lido in Italy, and along the Rhine in Germany, I was invited to show my work at the Galleria Portals in Mallorca of Spain. I had an exhibition there, and also created a set of carvings on the



rocks of the island. The rock formations were different from what I'd been working with before, and there were rock pools throughout the island. I carved fish upon the sides of the pools, and titled the piece *Thirsty Fish*. In this collection water represents life, purity, wisdom and knowledge, while the fish continues to stand for man. I produced another work in Spain, a reference to the purity of water and cleansing the spirit. It showed footprints passing through a pool of water. I was trying to highlight the importance of water in different cultures and religions, how it is a means of purifying the body, as well as the soul.

JKG: Do you believe that there is an earthly paradise and that it is possible?

AN: Many mystics believe paradise is nothing but good deeds. This is what I believe in as well. Descriptions of paradise often use examples of earthly pleasures, therefore heaven must be similar to this earth in some way. Many religions attempt to describe paradise through art. This is demonstrated throughout the history of Iranian art. Iranian tile work, carpets, architectural decorations and miniature paintings are a reflection of the divine. To us artists, paradise can be the depiction of inner beauty itself.

JKG: Yours carvings are very much hands-on, somewhat rough, a direct response to a sense of place and the life that surrounds and is within us. I believe that the experience of living in the landscape is also an influence on your work and influences where you place a detail, or how you integrate a piece. Is that true?

AN: I am familiar with industrial sculpting methods, and I know the possibilities they offer to modify nature.

But when I work in a natural setting, I try to preserve nature as a whole, to make as few overall and overarching changes as possible. This may be seen as respect for the beauties of nature. But this is also how the carvings gain their rough-hewn texture, and there is a harmony between the carved rock and its surroundings. I want my carvings to be small symbols, for people to stumble upon them, to realize that there are things to discover and understand in nature. I would like to keep my viewer as immersed in nature as possible, to make him or her wonder at the simplicity and strangeness of the work, rather than its grandness.

To conclude, I'd like to add that regardless of the outcome of my works, whether they are considered successful or not, what is valuable for me is the process through which they are formed; living a good life. The most glorious moment is when my imagination seizes upon an image in nature, or an imaginary vision captivates me. I believe that once an artwork takes shape, the best possible work has been created in the best possible place, at the best possible time.



AHMAD NADALIAN is known internationally as one of the foremost environmental artists. Born in 1963, in Sangsar Iran he completed his B.A. in Painting in 1988 at the Faculty of Fine Arts in the University of Tehran. In 1990 he moved to France where he spent two years living in Paris, studying aspects of both historical and contemporary arts at various museums and institutions. His research at the University of Central England (UCE) focused on 'The Impact of Mysticism on Art' and he was awarded a Ph.D in 1995. He has largely made his home in the north of Iran, beneath Damawand, the highest mountain in Iran and has immersed himself in Environmental Art. In the past decade, Nadalian expressed this concept through a variety of mediums and techniques, including carved stone, installation, performance, landscape art, video installation and multimedia, as well as interactive works.

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JOHN K. GRANDE is a leading figure in the art and ecology field. He has curated five editions of *Earth Art* at the Royal Botanical Gardens in Burlington, Ontario including for the 2014 PanAm Games as well as at the Pori Art Museum, Finland (2010) and *Small Gestures* at the Mucsarnok/ Kunsthalle in Budapest, 2016. Grande's art and ecology books include *Balance: Art and Nature* (Black Rose Books, 1994), *Art Nature Dialogues: Interviews with Environmental Artists* (SUNY Press, 2007), *Dialogues in Diversity: Art from Marginal to Mainstream* (Pari Publishing, Italy, 2008), *Nils-Udo: sur l'eau* (Actes Sud, France, 2015), *Jason deCaires Taylor* (Museo Atlantico, Spain 2019).



Wholeness and Human Relationship

DAVID SCHRUM

What is it to be whole? What do we mean by wholeness as it is expressed in human relationship? What is relationship with another which is holistic?

Whole has the same root as *hale*, which is to be of good health. We find this meaning in the Latin phrase by the Roman poet Juvenal, *Mens sana in corpore sano*, which may be translated as ‘a healthy mind in a healthy body.’ Similarly, the pre-Socratic philosopher Thales indicates that the man that is happy has ‘a healthy body, a resourceful mind and a docile nature.’

More deeply, the word *whole* is related to *holy*, which is to be spiritually complete. That which is holy is complete in itself; it does not depend on anything other for its value. That which is holy is sacred—to be sacred is to be in itself worthwhile. It is this perception of wholeness which deeply has been the focus of ancient spiritual enquirers such as early Hindus, Buddhists and Taoists, and mystics in the West. Wholeness in this sense derives from relationship in undivided unity.

This writing explores wholeness in this relational and spiritual sense. It contemplates phrases from past cultures the meanings of which are meant to stir in us a sense of wholeness in relationship, and it augments them with perspectives of more recent spiritual explorers and teachers. Our challenge will be that words in their more conventional use, which is to convey a content of thought, do not in this way bring such appreciation. Conveying a sense of wholeness comes about not so much through using words to form well-defined conceptual understanding as it does through language stirring a much freer, heartfelt movement of mind. A sense of wholeness comes not so much through *grasping the content of the thought* generated by words as it does through *participation in the sense, feeling, and attitude* that has generated the thought that we are contemplating. Such an act of appreciation of words

is an act of discovery of an order that is present within them, not so much explicitly as it is implicitly. It is this implicit communication that brings a sense of communion with the spirit of the speaker’s or the author’s intent. Thus, more important about such words than *what* they make us think, is *how*, non-verbally, they stir us.

A sentence of this nature is the ancient Mayan greeting, ‘*In Lak’ech Ala K’in.*’ Its translation is, ‘I am another yourself, and you are me.’ When we say and deeply mean these words, although we may differ from one another in our beliefs, our tastes, our ways of doing things, and in other ways, yet we identify in the other a humanity that is common to both of us. We see and appreciate the other at a depth and subtlety where there remains little difference between human beings in our inner movement, where we all play out essentially the same human programme, although we may express it in our individual ways.



Buddhist Dharma Wheel or Dharmachakra



Terence, Roman poet and playwright

This has been pointed out by spiritual teacher Eckhart Tolle, who notes that ‘Fear is human fear, sadness is human sadness, ...the mind is the human mind. There is nothing personal anywhere. Beyond the sense of *me*, life becomes a sacred thing.’ At this depth of commonality, of union, of communion, we properly appreciate *In Lak’ech Ala K’in*.

These Mayan words are reminiscent of an insight offered by the Roman playwright Terence, who famously wrote, ‘*Homo sum, humani nihil a me alienum puto.*’ (I am human; I think nothing human is alien to me.) Here we have a similar, although perhaps a not-quite-so-intimate understanding pointing to the wholeness of humanity. Terence brings to us a conceptual perception of our likeness to the other. However, the greeting, ‘*I am another yourself, and you are me*’ stirs in us an inner sense yet more intimate when we truly meet its meaning. Here is a perception that goes beyond the concept of *commonality*. It arises as a felt sense of *identity*: *I am you*.

What is this common identity? How are we to understand, not at the surface but profoundly, that I am you?

One approach to this challenge is to look at psyche not merely as a personal phenomenon but more deeply as an expression of a much wider psychological realm. Carl Jung was an inner explorer who pursued such a journey. He realized the importance of going beyond what he called ‘Freud’s purely personal approach and his disregard for the historical conditions of man.’ Jung opened and pursued an exploration into the collective, global dimension of human consciousness.

Jung pointed out, ‘There is an impersonal stratum in our psyche.’ ‘We are not of today or of yesterday, we are of an immense age.’ Similarly, spiritual teacher J. Krishnamurti brings to our attention that ‘Our consciousness is not actually yours or mine, it is the consciousness of humanity evolved, grown, accumulated through many, many centuries...’ What such perception indicates is that, more deeply than we are the personal dimension of our consciousness, we are an expression of human consciousness in its global

movement, a movement with roots in deep time.

When understood more profoundly, ‘my’ consciousness is not merely a stand-alone personal complex developed from an individual history (Freud). At a subtler level, it is an emergent expression that arises from language, from a particular culture, from deep roots in the enculturation of ancient mind, from our animal heritage (Jung). Metaphorically, beyond the personal, I am a vortex in the river of consciousness, thus both in and of the river. In my inseparability from the river, I am the river itself. I am an expression of the momentum of human consciousness as a whole—of a movement that spreads across the breadth of humanity and that reaches into depths of societal and biological time.

How are we to grasp this in a practical manner? From the start, we need to understand that these are not simply matters to read about, absorb as ideas, and in this way comprehend. It is a continuing work of contemplation, exploration, and observation. We may begin by considering these things conceptually, rationally, factually, and we see how it is that the whole framework and process of our thinking is not so much ‘mine’ as we tend to believe. This understanding indicates that, at a subtler level of consciousness than that to which we are accustomed, although each one of us may have his/her own mix of contents and his/her own individual style through which we play them out, each of us is not significantly original as a psyche. As we explore, we discover the fact that we are the operation of thought from a personal centre with its deep past. The action of this centre is that, through the mechanisms of psychological time and measure, it turns the wheel of cause and effect, playing out social conditioning and animal instinct through patterns



C.G. Jung (1875-1961)

of identification, distinction, attraction, aversion, fear, and desire. This is our common human round.

Next—or, better, at the same time—beyond ideas, we meet *what we are* through meditation, through awareness of ourselves and of others in everyday life or in the process of dialogue. We become attentive to these inner movements. As each of us spends time with this, we become more intimate with the ways of consciousness in ourselves and in others. When we attend, our focus begins to be less on the contents of our consciousness, as personal thoughts and feelings, and more on its general process. We can see this process both within the skin and in others through relationship. We begin to discover that, apart from *what we think* (our content)—in which we may differ greatly from another—*how we think* (our process) is very much the same. We are playing the same game, although with different styles. More deeply than the idiosyncrasies of our surface dimension, *the process that we are* is one. In awareness and through attention in a way that is not personal, the mind thus begins to discover this generic movement of consciousness.

This *awareness and attention* that is not personal—which is perceiving the vast, subtle, generic mechanical order of mind of which normally we tend to be unaware; which, through intimacy, is perceiving that immense river of which we are emergent expressions—is a field deeper than that of personal idiosyncratic self in either its individual or its global expressions. This field of perception does not arise out of contents of consciousness, which are fragmentary, which are images. Rather, it participatively embodies the process or movement of these images without being driven by their urgencies, their compulsions, their insistences. *Awareness-attention* is not determined by such energies but moves freely, to express an order of its own. This deeper realm displays—or, more precisely, intimates—itself as it unfolds into an explicate order as insight and creative intelligence. This realm of unfolding (and enfolding) is the liminal borderland between *conscious/unconscious mind*, with its forms and images, and *that which is beyond the grasp of consciousness*.

As we set out on a journey into holistic perception in relationship—and every exploration on such a journey is a new start—perhaps a good place to step off from is the insight that *that which is personal* is bounded, is limited inherently: the personal is *me* defined as in here, *others* as out there. However, that which is whole is undivided and unbounded.

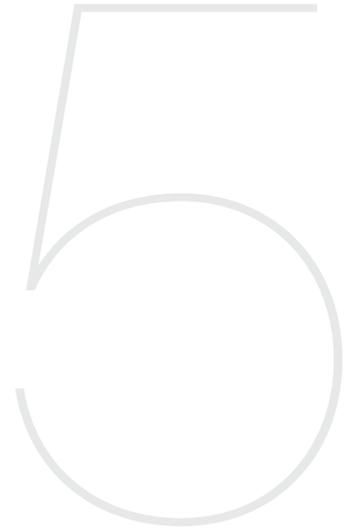
In wholeness is neither separateness nor finitude, so that wholeness can never be personal. When holistic perception arises, it does so spontaneously, without personal effort or choice. This moment of direct, unmediated perception is of both the global level of mind and beyond. Then, *I am another you and you are me—In Lak'ech Ala K'in*—and this ground is one.



DAVID SCHRUM received his PhD in quantum theory from Queen's University, Canada (1971), after which he spent two years in post-doctoral studies with David Bohm at Birkbeck College, London. At Birkbeck, Schrum entered the world of Bohm's creative and subtle philosophical approaches to physics, and of his enquiry into the structure of consciousness and what may lie beyond. He was also introduced to his professor's interest in the philosopher J. Krishnamurti. David Schrum continues engagement in these areas. From 1974 until retirement he taught at Cambrian College, Canada. Present areas of focus: (philosophical) a new approach to scientific enquiry and understanding; (relational) dialogue as a process of shared enquiry into mind in its individual and collective dimensions; (mathematical) relativistic quantum theory derived from a new application of the quantum principle.

Jung on Evil

MURRAY STEIN

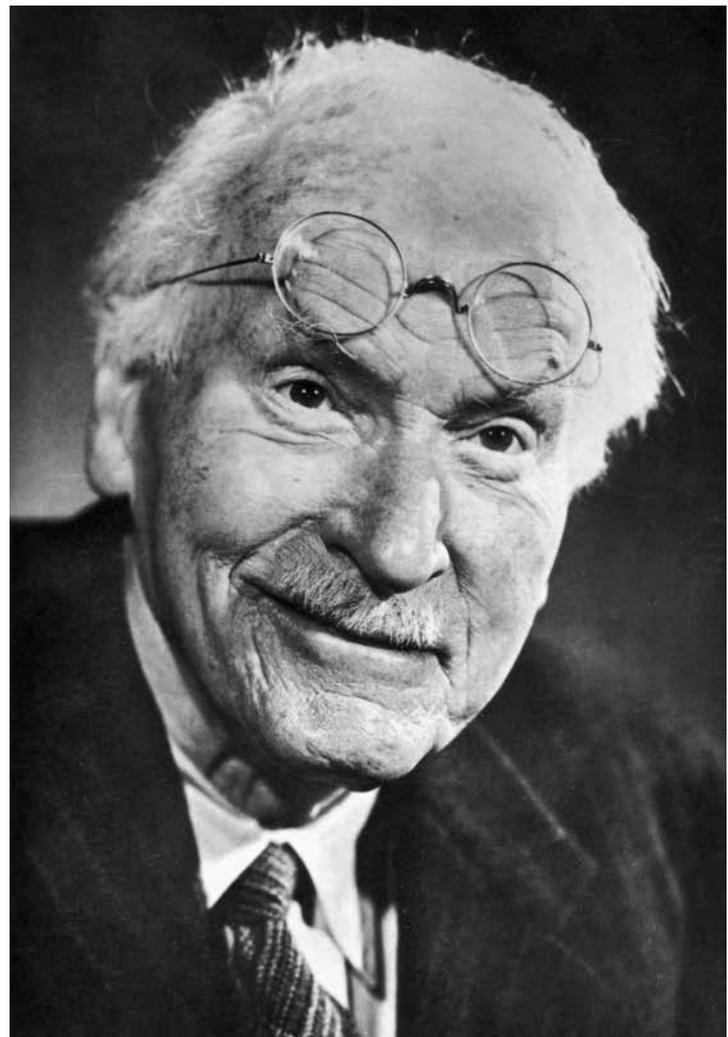


Introduction

We need more understanding of human nature, because the only real danger that exists is man himself. He is the great danger, and we are pitifully unaware of it. We know nothing of man, far too little. His psyche should be studied, because we are the origin of all coming evil.
(Jung 1977: 436)

The problem of evil is a perennial one. Theodicies abound throughout history, explaining God's purposes in tolerating evil and allowing it to exist. Mythological and theological dualisms try to explain evil by asserting its metaphysical status and grounding and the eternal conflict between evil and good. More psychological theories locate evil and in humanity and psychopathology. Probably humans have forever wrestled with questions like these: Who is responsible for evil? Where does evil come from? Why does evil exist? Or they have denied its reality in the hope, perhaps, of diminishing its force in human affairs.

The fact of evil's existence and discussions about it have certainly not been absent from our own century. In fact, one could argue that despite all the technical progress of the last several thousand years, moral progress has been absent, and that, if anything, evil is a greater problem in the twentieth century than in most. Certainly all serious thinkers of this century have had to consider the problem of evil, and in some sense it could be considered the dominant historical and intellectual theme of our now fast closing century.



C.G. Jung (1875-1961)

More than most other intellectual giants of this century, Jung confronted the problem of evil in his daily work as a practicing psychiatrist and in his many published writings. He wrote a great deal about evil, even if not systematically or especially consistently. The theme of evil is heavily larded throughout the entire body of his works, and particularly so in the major pieces of his later years. A constant preoccupation that would not leave him alone, the subject of evil intrudes again and again into his writings, formal and informal. In this sense, he was truly a man of this century.

As indicated in the quotation given above, which occurs in his famous BBC interview with John Freeman in 1959, two years before he died, Jung was passionately concerned with the survival of the human race. This depended, in his view, upon grasping more firmly the human potential for evil and destruction. No topic could be more relevant or crucial for modern men and women to engage and understand.

While Jung wrote a great deal about evil, it would be deceptive to try to make him look more systematic and consistent on this than he actually was. His published writings, which include nineteen volumes of the *Collected Works* (hereafter referred to as *CW*), the three volumes of letters, the four volumes of seminars, the autobiography *Memories, Dreams, Reflections*, the collection of interviews and casual writings in *C.G. Jung Speaking*, reveal a rich complexity of reflections on the subject of evil. To straighten the thoughts out and try to make a tight theory out of them would be not only deceptive but foolhardy and contrary to the spirit of Jung's work as a whole.

While it is true that Jung says many things about evil, and that what he says is not always consistent with what he has already said elsewhere or will say later, it is also the case that he returns to several key concerns and themes time and time again. There is consistency in his choice of themes, and there is also considerable consistency in what he says about each theme. It is only when one tries to put it all together that contradictions and paradoxes appear and threaten to unravel the vision as a whole. We may agree with Henry Thoreau that consistency is the hobgoblin of small minds, but it is still necessary to register the exact nature of these contradictions in order to understand Jung's fundamental position. For he does take a position on evil. That is to say, he offers more than a methodology for studying the phenomenology of evil. He actually puts forward views on the subject of evil that show that he came to several conclusions about it.

It is also extremely important to understand what sorts of positions he was trying to avoid or to challenge. In doing so he may have fallen into logical inconsistency in order to retain a larger integrity. To approach Jung's understanding of the problem of evil, I will ask four basic questions. In addressing them, I will, I hope, cover in a fashion all of his major points and concerns. By considering these



Coppo di Marcovaldo (c.1260), Satan, ceiling of the Florence Baptistery

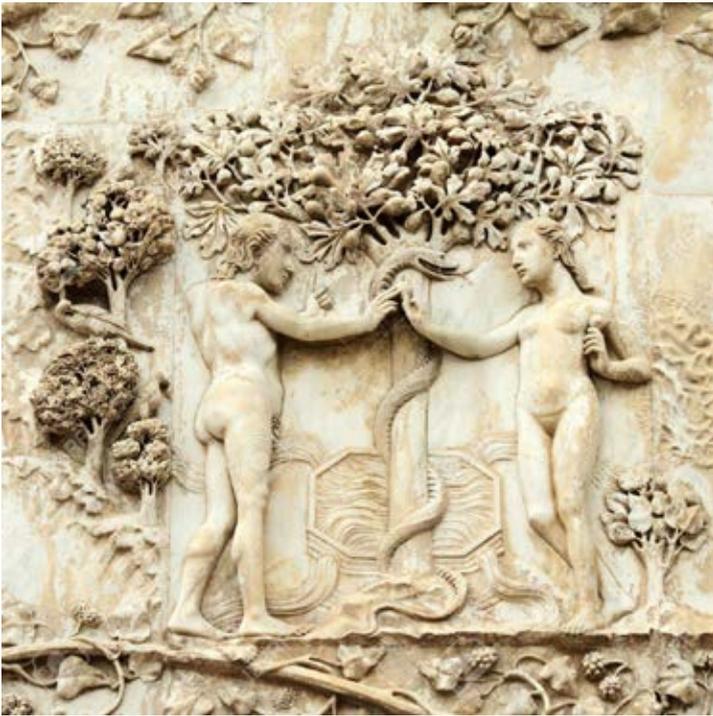
questions I will cover the ground necessary to come to an understanding of Jung's main positions and to appreciate the most salient features of his conclusions. In the order taken up, these questions are:

1. Is the unconscious evil?
2. What is the source of evil?
3. What is the relation between good and evil?
4. How should human beings deal with evil?

These questions represent intellectual territory that Jung returns to repeatedly in his writings. The first is a question he had to grapple with because of his profession, psychiatry, and his early interest in investigating and working with the unconscious. The other three questions are familiar to all who have tried to think seriously about the subject of evil, be they intellectuals, politicians, or just plain folk whose fate has brought them up against the hard reality of evil.

Is the Unconscious Evil?

Jung spent much of his adult life investigating the bewildering contents and tempestuous energies of the unconscious mind. Among his earliest studies as a psychological researcher were his empirical investigations of the complexes (cf. Jung 1973), which he conceived of as energized and structured mental nuclei that reside beneath the threshold of conscious will and perception. The complexes interfere with intentionality, and they often trip up the best laid plans of noble and base individuals and groups alike. One wants to offer a compliment and instead comes out with an insult. One does one's best to put an injury to



Adam and Eve, *Orvieto cathedral*

one's self-esteem behind one and forget it, only to find that one has inadvertently paid back the insult with interest. The law of an eye for an eye and a tooth for a tooth (the talion law) seems to remain in control despite our best conscious efforts and intentions. Compulsions drive humans to do that which they would not do and not to do that which they would, to paraphrase St Paul.

The unconscious complexes appear to have wills of their own, which do not easily conform to the desires of the conscious person. Jung quickly exploited the obvious relation of these findings to psychopathology. With the theory of complexes, he could explain phenomena of mental illness that many others had observed but could only describe and categorize without understanding. These were Jung's first major discoveries about the unconscious, and they formed the intellectual basis for his relationship with Freud, who had made some startlingly similar observations about the unconscious. Later in his researches and efforts to understand the psychic make-up of the severely disturbed patients in his care, Jung came upon even larger, more primitive, and deeper forces and structures of the psyche that can act like psychic magnets and pull the conscious mind into their orbits. These he named archetypes. They are distinguished from complexes by their innateness, their universality, and their impersonal nature. These, together with the instinct groups, make up the most basic and primitive elements of the psyche and constitute the sources of psychic energy.

Like the instincts, which Freud was investigating in

his analysis of the vicissitudes of the sexual drive in the psychic life of the individual, the archetypes can overcome and possess people and create in them obsessions, compulsions, and psychotic states. Jung would call such mental states by their traditional term, 'states of possession.' An idea or image from the unconscious takes over the individual's ego and conscious identity and creates a psychotic inflation or depression, which leads to temporary or chronic insanity. The fantasies and visions of Miss Miller, which formed the basis for Jung's treatise, *The Symbols and Transformations of Libido* published in 1912-13 (later revised and published as *Symbols of Transformation* in CW), offered a case in point. Here was a young woman being literally driven mad by her unconscious fantasies.

On the other hand, however, Jung was at times also caught up in a more romantic view of the unconscious as the repository of what he called, in a letter to Freud, the 'holiness of an animal' (McGuire 1974: 294, see below). Freudian psychoanalysis promised to allow people to overcome inhibitions and repressions that had been created by religion and society, and thus to dismantle the complicated network of artificial barriers to the joy of living that inhibited so many modern people. Through analytic treatment the individual would be released from these constraints of civilization and once again be able to enjoy the blessings of natural instinctual life. The cultural task that Jung envisaged for psychoanalysis was to transform the dominant religion of the West, Christianity, into a more life-affirming program of action. 'I imagine a far finer and more comprehensive task for psychoanalysis than alliance with an ethical fraternity,' he wrote Freud, sounding more than a little like Nietzsche.

I think we must give it time to infiltrate into people from many centres, to revivify among intellectuals a feeling for symbol and myth, ever so gently to transform Christ back into the soothsaying god of the vine, which he was, and in this way to absorb those ecstatic instinctual forces of Christianity for the one purpose of making the cult and the sacred myth what they once were—a drunken feast of joy where man regained the ethos and holiness of an animal. (McGuire 1974: 294)

So, while the contents of the unconscious—the complexes and archetypal images and instinct groups—can and do disturb consciousness and even in some cases lead to serious chronic mental illnesses, the release of the unconscious through undoing repression can also lead to psychological transformation and the affirmation of life. At least this is what Jung thought in 1910, when he wrote down these reflections as a young man of thirty-five and sent them to Freud, his senior and mentor who was, however, a good bit less optimistic and enthusiastic about the unconscious.

In its early years, psychoanalysis had not yet sorted out

the contents of the unconscious, nor had culture sorted out its view of what psychoanalysis was all about and what it was proposing. Would this novel medical technique lift the lid on a Pandora's box of human pathology and release a new flood of misery into the world? Would it lead to sexual license in all social strata by analyzing away the inhibitions that keep fathers from raping their daughters and mothers from seducing their sons? Would returning Christ to a god of the vine, in the spirit of Dionysus, lead to a religion that encouraged drunkenness and accepted alcoholism as a fine feature of the godly? What could one expect if one delved deeply into the unconscious and unleashed the forces hidden away and trapped there? Perhaps this would turn out to be a major new contributor to the ghastly amount of evil already loose in the world rather than what it purported to be, a remedy for human ills. Such were some of the anxieties about psychoanalysis in its early days at the turn of the century. Is the unconscious good or evil? This was a basic question for the early psychoanalysts. Freud's later theory proposed an answer to the question of the nature of the unconscious—good or evil?—by viewing it as fundamentally driven by two instincts, Eros and Thanatos, the pleasure drive and the death wish. These summarized all unconscious motives for Freud, and of these the second could be considered destructive and therefore evil. Melanie Klein would follow Freud in this two-instinct theory and assign such emotions as innate envy to the death instinct. Eros, on the other hand, was not seen as essentially destructive, even if the drive's fulfillment might sometimes lead to destruction 'accidentally,' as in Romeo and Juliet for instance. From this Freudian theorizing it was not far to the over-simplification which holds that the id (i.e. the Freudian unconscious) is essentially made up of sex and aggression. Certainly from a Puritanical viewpoint this would look like a witch's brew out of which nothing much but evil could possibly come. The id had to be repressed and sublimated in order to make life tolerable and civil life possible. Philip Rieff would (much later) extol the superego and the civic value of repression! (Jung 1975: 311)

This is a view often expressed in Jung's writings. Yet evil is an essential adjective, an absolutely necessary category of human thought. Human consciousness cannot function qua human without utilizing this category of thought. But as a category of thought, evil is not a product of nature, psychical or physical or metaphysical; it is a product of consciousness. In a sense, evil comes into being only when someone makes the judgement that some act or thought is evil. Until that point, there exists only the 'raw fact' and the pre-ethical perception of it.

Jung discusses the issue of types of 'levels' of consciousness briefly in his essay on the spirit Mercurius (*Alchemical Studies*, CW 13, paras 247-8). At the most primitive level, which he calls participation mystique, using the terminology of the French anthropologist Levi-Bruhl,

subject and object are wed in such a way that experience is possible but not any form of judgement about it. There is no distinction between an object and the psychic material a person is investing in it. At this level, for instance, there is an atrocity and there is one's participation in it, but there is no judgement about it one way or another. For the primitive, Jung says, the tree and the spirit of the tree are one and the same, object and psyche are wed. This is raw, unreflective experience, practically not yet even consciousness, certainly not reflectively so. At the next stage of consciousness, a distinction can be made between subject and object, but there is still no moral judgement. Here the psychic aspect of an experience becomes somewhat separated from the event itself. A person feels some distance now from the event of an atrocity, say, and has some objectivity about the feelings and thoughts involved in it. It is possible to describe the event as separate from one's involvement in it and to begin digesting it. The psychic content is still strongly associated with an object but is no longer identical with it. At this stage, Jung writes, the spirit lives in the tree but is no longer at one with it.

At the third stage, consciousness becomes capable of making a judgement about the psychic content. Here a person is able to find his or her participation in the atrocity reprehensible, or, conversely, morally defensible for certain reasons. Now, Jung writes, the spirit who lives in the tree is seen as a good spirit or a bad one. Here the possibility of evil enters the picture for the first time. At this stage of consciousness, we meet Adam and Eve wearing fig leaves, having achieved the knowledge of good and evil.

In early development, the first stage of consciousness is experienced by the infant as unity between self and mother. In this experience the actual mother and the projection of the mother archetype join seamlessly and become one thing. In the second stage, the developing child can make a distinction between the image of the mother and the mother herself and can retain an image even in the absence of the actual person. There is a dawning awareness that image and object are not the same. A gap opens up between subject and object. The infant can imagine the mother differently than she turns out to be when she arrives. In the third stage, the child can think of the mother, or of the mother's parts, as good or bad. The 'bad mother' or the 'bad breast' does not suddenly begin to exist at that point, but a judgement about her behaviour (she is absent, for instance) is registered and acted upon. Now the possibility of badness (i.e. evil) has entered the world.

This view of evil—that it is a judgement of consciousness, that it is a necessary category of thought, and that human consciousness depends upon having this category for its on-going functioning—generates many further important implications. One of them is that when this category of conscious discrimination is applied to the self, it creates a psychological entity that Jung named the

‘shadow.’ The shadow is a portion of the natural whole self that the ego calls bad, or evil, for reasons of shame, social pressure, family and societal attitudes about certain aspects of human nature, etc. Those aspects of the self that fall under this rubric are subjected to an ego-defensive operation that either suppresses them or represses them if suppression is unsuccessful. In short, one hides the shadow away and tries to become and remain unconscious of it. It is shameful and embarrassing. Jung provides a striking illustration of discovering a piece of his own shadow in his account of traveling to Tunisia for the first time. From this experience he extracts the observation that the rationalistic European finds much that is human alien to him, and he prides himself on this without realizing that his rationality is won at the expense of his vitality, and that the primitive part of his personality is consequently condemned to a more or less underground existence. (Jung 1961:245)

It is this piece of personality that the cultivated European typically bottles up in the shadow and condemns violently when it is located in others. The magnificent film *Passage to India* depicts such projection of shadow qualities with exquisite precision. Jung would experience the full force of shadow unawareness and projection in the Nazi period and in World War Two. Because the human psyche is capable of projecting parts of itself into the environment and experiencing them as though they were percepts, the judgement that something is evil is psychologically problematic. The stand-point of the judge is all-important: Is the one making a judgement of evil perceiving clearly and without projection, or is the judge’s perception clouded by personal interest and projection-enhanced spectacles? Since evil is a category of thought and conscious discernment, it can be misused, and in the hands of a relatively unconscious or unscrupulous person it can itself become the cause of ethical problems. Is the judge corrupt, or evil? This would require another judgement to be made by someone else, and this judgement could in turn be the subject of yet another judgement, ad infinitum. There is no Archimedean vertex from which a final, absolute judgement on good and evil can be made.

Despite staking out his ground here, which could easily lead to utter moral relativism, Jung did not move in that direction. Just because the categories of good and evil are the product and tool of consciousness does not mean that they are arbitrary and can be assigned to actions, persons, or parts of persons without heavy consequence. Ego discrimination is an essential aspect of adaptation and consequently is vital to survival itself. Ego consciousness must take responsibility for assigning such categories of judgement as good and evil accurately or they will lose their adaptive function. If the ego discriminates incorrectly for very long, reality will exact a high price. In order for consciousness to perform its function of moral discrimination adaptively and accurately, it must increase

awareness of personal and collective shadow motivations, take back projections to the maximum extent possible, and test for validity. Time and time again Jung cries out for people to recognize their shadow parts. Questions of morals and ethics must become the subject of serious debate, of inner and outer consideration and argument, and of continual refinement. The conscious struggle to come to a moral decision is for Jung the prerequisite for what he calls ethics, the action of the whole person, the self. If this work is left undone, the individual and society as a whole will suffer.

As opposed to a theorist who would root the reality of good and evil in metaphysical nature itself and then rely on inspiration, intuition, or revelation to decide upon what is actually good and what is evil, Jung puts forward a theory that places the burden for making this judgement squarely upon ego consciousness itself. To be ethical is work, and it is the essential human task. Human beings cannot look ‘above’ for what is right and wrong, good and evil; we must struggle with these questions and recognize that, while there are no clear answers, it is still crucial to continue probing further and refining our judgements more precisely. This is an endless process of moral reflection. And the price for getting it wrong can be catastrophic. Because Jung considered this to be perhaps the central human task, he ventured even into the risky project of making such judgements about God Himself. Is God good or evil, or both? These are questions that Jung addresses in his impassioned engagement with the Biblical tradition, and especially in his late work *Answer to Job*.

To ask if God is good or evil, or both, is for Jung the equivalent of asking this question about the nature of reality. Is reality good? Yes. Is it evil? Yes. In Jung’s view the criminal remains a member of the human community and represents an aspect of everyone. Those traits one condemns in the perpetrator also belong to oneself, albeit usually in a less blatant form.

One of the goals of a personal psychological analysis is, in Jung’s view, to make an inventory of psychic contents that includes shadow material. Once this is done and the shadow is acknowledged and felt as an inner fact of one’s own personality, there is less chance of projection and greater likelihood that perception and judgement will be accurate. This does not eliminate making judgements about evil, for this category remains in consciousness as a tool for discriminating reality, but it does allow for less impulsive and emotionally charged, blind attribution of evil in cases where serious ambiguity exists. Still, if evil is an adjective, applied by ego consciousness to actions and events in the course of discriminating and judging reality, this fails to explain the source of the behaviour, the acts, and the thoughts that are judged to be evil. What is the source of the deed, the ‘raw fact,’ which one judges to be evil?

For example, war is a common human event that is often judged to be evil. Is war-making native to the human

species? It would seem that war-making is intrinsic to part of human nature. There are mythological figures, both male and female, who represent the spirit of war and the human enthusiasm for it. Human beings seem to have a kind of aggressiveness toward one another and a tendency to seek domination over others, as well as a strong desire to protect their own possessions and families or their tribal integrity, which added together lead inevitably to conflict and to war. Some would say that war is a natural condition of humanity as a species, and it would be hard to dispute this from the historical record. Is making war not archetypal? Does this not mean that evil is deeply woven into the fabric of human existence? It is one thing to say that the tendency to go to war is endemic in human affairs, however, and another to say that evil is therefore also a part of human nature. War is an event, and each instance of it must be evaluated by consciousness in order to be condemned as evil. Conscious reflection upon warfare has found that some wars are evil and others not, or that some wars are more evil than others. Theologians have elaborated a theory of the just war. In itself war can be considered morally neutral, a tool that can be used for good or evil. So while it may be claimed that the source of the behaviour that will later be condemned as evil is an inherent part of human nature, this still does not mean that evil is archetypal.

What is the source of evil?

Going deeper, though, can we frame the question more precisely to tease out those aspects of human behaviour that are universally condemned as evil and ask if they are inherent in human existence? Can it be shown that human beings naturally and inevitably commit acts that would universally be judged as evil? And if so, how are we to understand the source of these acts? How does the evil deed happen? For we know that evil does occur throughout human history and experience.

Jung's own major confrontation with evil on a large scale was Nazi Germany. Much that the Nazis did individually and collectively has been judged as evil. Jung was close enough to the center of this political phenomenon to observe it unfolding right before his eyes, to feel its energy and to know its threat personally. He was fascinated by the mythic dimensions of German Nazism and for a time by its energy. In the early 1930s he wrote things that show he believed that the collective unconscious in Germany was pregnant with a new future. Perhaps, he thought, some good could come out of it, perhaps the unconscious was giving birth to a new era that would lead humanity

forward. Mercurius is ambiguous, and the products of the creative unconscious are sometimes bizarre in their first appearance. Jung most definitely underestimated at first the Nazis' potential for evil. What he did observe by the mid-1930s, however, was a sort of collective psychosis taking hold in Germany, a society-wide state of psychic possession.

In his essay on Wotan (CW 10, paras 371-99) he writes of this phenomenon. An archetypal image from ancient Germanic religion and myth, Wotan was stirring again in the German soul, and this was generating martial enthusiasm and battle-frenzy throughout the population. Wotan was a war god, and the German people were now showing the signs of irrational possession by battle-eagerness that is seen in warriors preparing for battle. This state of possession was disturbing normal ego consciousness among the Germans and their sympathizers to the point of clouding normal moral judgement. Under these conditions the psyche is ripe for releasing behaviour that is primitive, irrationally driven, and highly charged with affect and emotion. Jung predicted that the German people were getting ready to act out a Wotanic possession. What had brought this archetypal constellation into historical reality? The enactment of the Wotanic fury in modern Germany needs to be explained by referring to historical events and patterns: Germany's humiliation after World War One, the national degradation and political and economic turmoil of the 1920s, the compensatory politics of arrogance and revenge espoused by the Nazi leaders and bought wholesale by the populace. The appearance of the Wotan archetype in the collective consciousness of the German nation could be interpreted as a psychological



Wotan—the Germanic god Odin

compensation for a national mood of humiliation and loss of self-worth, the archetypal basis for a sort of narcissistic rage reaction.

In Jung's psychological theory, the regression of psychic energy to primitive levels of the collective unconscious constellates a compensatory archetypal symbol, which galvanizes the will and brings about a new flow of energy into the system, along with a strong sense of meaning and purpose. But this is also often accompanied by ego inflation and identification with primitive energies and impulses. What is created is a 'mana personality' (cf. 'Two essays on analytical psychology', CW 1, paras 374ff.). There are no guarantees that what this archetypal symbol and its derivative notions and energies stand for will bear careful ethical scrutiny and inquiry. The crusader spirit of someone identified with archetypal thoughts and values will argue fiercely that the ends justify the means and will overlook all countervailing considerations. This person may look like a moral leader when in fact what is being espoused is an abdication of moral reflection. The crusader for liberation or equality or moral rearmament may well be advocating at the same time *abaissement du niveau mental*.

A strong influx of archetypal energy and content from the unconscious shades the light of ego consciousness and interferes with a person's ability to make moral distinctions. Now ordinary moral categories and the ego's ethical attainments are easily over-ridden in the name of 'higher' (certainly stronger) values. And when these dubious higher values have become the group norm, individual and collective shadows have found a secure playground. This is how evil is unleashed on a mass scale; it is individual shadow added to shadow and then raised to the square power by group consensus, permission and pressure.

Under conditions like this, which held sway in Germany and other Nazi-dominated areas of Europe between 1933 and 1945, kinds of behaviour that would ordinarily be suppressed and repressed become acceptable. Indeed acts like betrayal of friends, robbery of personal property, lying and cheating and public humiliation of others, which would normally be condemned in civil society, may suddenly become praiseworthy. Now it is allowed and indeed encouraged to murder neighbours, to plunder their property, to rape their women, to take revenge for past slights and present envies. Even if some level of discipline remains in the ranks on the collective level, there is a strong incentive to look aside when individuals are 'carried away' with enthusiasm for the cause or lose control of themselves. Thoughts and actions that were formerly condemned as evil are now condoned or overlooked.

The inflation produced by ideology and propaganda-inspired images creates a collective *abaissement du niveau mental* such that ego consciousness loses its ability to make considered moral judgements. The normal functioning of a personal conscience is interrupted. Everyone



The Aion of Pisces

is swept up in the emotions of the moment, and the air is filled with urgent promptings onward. It is the rare individual who retains a personal sense of good and evil and continues to hear the voice of conscience in the midst of a collective state of possession and archetypal inflation.

The source of what we perceive as evil, then, is a mixture of psychological content (the shadow) and psychological dynamics that allow for, encourage, or require shadow enactments. This is different from saying that the shadow is evil per se. What is in the shadow may well, under certain conditions, be seen as good and useful for promoting human life and well-being. Sexuality and aggression are cases in point. Any archetypal image and any instinctual drive may yield evil action under psychological conditions of inflation and identification with primitive archetypal contents accompanied by social conditions of permission or secrecy. Used under other conditions and governed by more favorable attitudes, these same psychological contents and drives can yield benefit and goodness. The question becomes, then, what inspires their deployment for evil? Is there something in the human psyche that can lead one consistently to choose evil over good?

In his reflections on Western religious history in *Aion* (CW 9/2), published in the aftermath of the Second World War in 1951, Jung interprets the history of Christianity with reference to the astrological sign of the Fishes. In this Platonic Year (the 'aion' of Pisces), which has lasted for two thousand years, there has been an underlying theme of conflict between great opposing forces, which is symbolized in astrology by two fish swimming in opposite directions. As Jung delineates this history, he sees the conflict as raging between spirituality and materialism (spirit vs. body) and a parallel conflict between good and evil. These have been interwoven with the conflict between masculine (as spirit) and feminine (as materia) figures and values.

The ego is drawn by the magnetism of God's need to incarnate His own dark destructiveness. This is the ulti-

mate source of evil, its absolute home. It was this horrifying thought that inspired Jung to write *Answer to Job* and to recognize, in *Aion* (1951), that ‘it is quite within the bounds of possibility for a man to recognize the relative evil of his nature, but it is a rare and shattering experience for him to gaze into the face of absolute evil’ (para 19).

Doubtless there is a logical contradiction in Jung’s wanting to say both that evil is adjectival and the product of conscious human judgement on the one hand, and that the persistent presence of evil in the world is due to God, who is trying to incarnate some part of His divine nature in time and space, on the other. To this challenge I am sure Jung would answer that evil is a paradox. Like the nature of light, if you look at it one way it appears to be a wave, something in the mind of the beholder; if you look at it the other way, it appears to be a particle, something emanating from the ontological ground of being. Both are true, and both are needed ‘in order to attain full paradoxicality and hence psychological validity’ (*Alchemical Studies*, CW 2, para 256) and to give an adequate account of the phenomenon of evil.

What is the Relation Between Good and Evil?

What horrified Jung most was, by all accounts, irrevocable splitting. Perhaps this was rooted in his fear of madness (cf. Jung 1961: 170ff), or in his early childhood experience of strife between his mother and father. At times Jung fell victim of the dark fear that he might be so internally split that he could never find healing and would forever suffer from a psychic Amfortas wound. Whatever the personal motivation may have been, his whole psychology and psychotherapy were aimed at overcoming divisions and splits in the mind and at healing sundered psyches into operational wholes. Wholeness is the master concept of Jung’s life and work, his personal myth.

Thus when it comes to discussing the relation of good and evil it is altogether consistent that Jung should oppose dualism at any cost. This was for him the worst possible way of conceiving of the relation of good and evil, to pit one against the other in eternal and irreconcilable hostility. At bottom good and evil must be united, both derivative from a single source and ultimately reconciled in and by that source. For Jung a dualistic theology would have been anathema, a dualistic psychology harmful.

Never one to shy away from using mythological or theological language, Jung would therefore strongly entertain the notion that good and evil both derive from God, that one represents God’s right hand, so to speak, and the other His left. In the Biblical account of Job, Jung found confir-

mation of this view. Here Satan belongs to Yahweh’s court. Jung sees him as Yahweh’s own dark suspicious thought about his servant Job. In the New Testament, good and evil would become more harshly polarized in the images of Christ and Antichrist, but always Jung would refer Satan and Antichrist back to Lucifer, the light-bringer and the elder brother of Christ, both of them sons of Yahweh. From the other angle of vision, both good and evil are products of conscious judgement. This is as true of good as it is of evil (cf. above). Moreover, at this level of consideration, good needs evil in order to exist at all. Each comes into being by contrast with the other. Without the judgement of evil there could be no judgement of good, and vice versa. Good and evil make up a pair of contrasting discriminations that is used by ego consciousness to differentiate experience. A complete conscious account of any situation or person must include some employment of this category of good-and-evil if it is to be a fully differentiated account.

Jung’s insistence that one cannot have good without evil was a thorny point of contention between him and his theologically minded friends. Theologically educated students of Jung’s psychology, such as the Dominican Father Victor White, would take strong exception to this view. For them it was not inconceivable to postulate the existence of absolute goodness without evil, since this is after all the standard Christian doctrine of God. Good does not require evil in order to subsist any more than light needs darkness in order to exist. But for Jung this was highly debatable. Pure light without any resistance or darkness could not be seen, and therefore it would not exist for human consciousness. Since he looked upon good and evil as judgements of ego consciousness, it would be impossible in his view for real persons to name such a thing as light or goodness if they had never experienced darkness or evil.

Because Jung was basing himself on a psychological view of evil—i.e. that it is a judgement of consciousness—there were endless misunderstandings with philosophers and theologians who wanted to think about the nature of evil in non-psychological terms. This could have been clarified easily enough if Jung had not also wanted to maintain the other end of the paradox about evil, that it is rooted in God’s nature, in the nature of reality itself. At this end of the discussion Jung would put forward a theory of opposites: psychic reality is made up of ordered patterns that can be spread out into spectra of polarities and tensions like good-to-evil and male-to-female. Without the energetic tensions between the poles within entities like instinct groups and archetypes, there would be no movement of energy within the relatively closed system of mind/body wholeness. It is the tension within these polarities that yields dynamic movement, the fluctuations of libido in the psychic system. Jung argued that the same is true of the flow of energy in physical systems.

Evil within the psychological realm is equivalent to

entropy in the physical realm: it is the tendency within a system to run down and to disintegrate, a flow of energy toward destruction. Good, by contrast, is equivalent to negentropy, the flow of energy in the opposite direction, toward building systems up into greater levels of integration and complexity. Both forces are at work in the psyche and in nature, and both are needed to produce the kind of reality we know in life and study in science. Like Whitehead, Jung saw reality as a process, an interplay of forces in a dynamic and constant stream of activity that build up and dissolve structures. Remove any force or tension in this process, and you have a different system and probably one that does not work as well or at all.

At this somewhat conspicuously metaphysical level of speculation, Jung would affirm that good and evil need each other in order for either one to exist at all. It is not here only a question of conscious discernment and judgement but a question of reality. Psychic and physical and spiritual life as we know them can best be described as constant flux, continuous transformation and change, perpetual movement. Nothing stands still for very long. And this restlessness is generated by the tensions within and among opposites such as good and evil. Structures arise and dissolve in endless transformations, as the forces congealed in their organizations allow themselves to be contained for a time and then move on. This perception and conviction on Jung's part helps to account for his extraordinary fascination with alchemy and its account of the continuous transformation of elements.

How Should Human Beings Deal With Evil?

Jung was critical of moral crusaders, Albert Schweitzer being a case in point (cf. 'Flying saucers: A Modern Myth of Things Seen in the Sky,' CW 10, para. 783). He felt that people who become too identified with a particular cause or moral position inevitably fall into blindness regarding their own shadows. Would Schweitzer consider the shadow of his mission to the Africans? Jung was doubtful.

The first duty of the ethically-minded person is, from Jung's psychological perspective, to become as conscious as possible of his or her own shadow. The shadow is made up of the personality's tendencies, motives, and traits that a person considers shameful for one reason or another and seeks to suppress or actually represses unconsciously. If they are repressed, they are unconscious and are projected into others. When this happens, there is usually strong moral indignation and the groundwork is laid for a moral crusade. Filled with righteous indignation, persons can attack others for perceiving in them what is unconscious

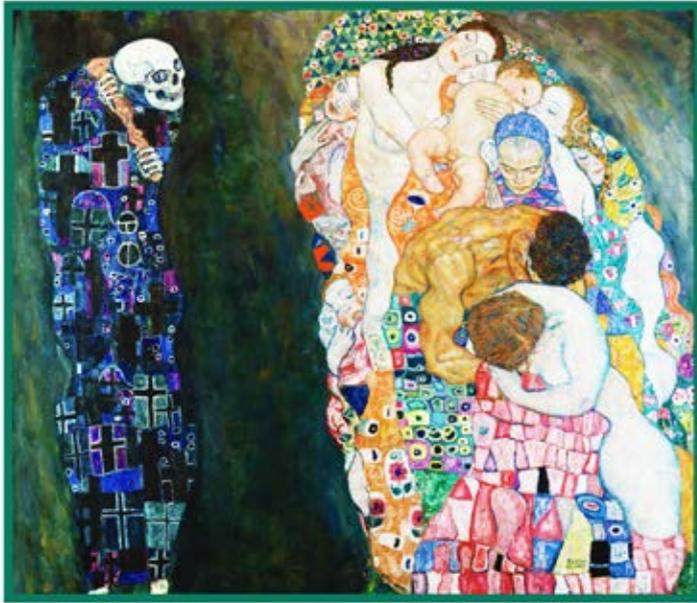
shadow in themselves, and a holy war ensues. This is worse than tilting at windmills, and it ends up being morally reprehensible in its own right.

A careful examination of conscience and of the personal unconscious is therefore the first requirement if one seeks seriously to do something about the problem of evil. This self-examination is itself an exercise in moral awareness. To see one's own shadow clearly and to admit its reality requires considerable moral strength in the individual. It also requires the prior attainment of moral consciousness, of the ego's ability to make moral discriminations. This is not a given. There are individuals who do not reach this level of development, and there are in each of us as well areas of unconsciousness that function in a similarly blind fashion when it comes to questions of good and evil. The capacity to make ethical judgements and the willingness to make them about oneself as well as others are prerequisites for further moral action.

Even leaving aside serious psychopathology, i.e. psychotic and debilitating neurotic conditions, the human being has a great capacity for self-deception and denial of shadow aspects. Even persons who are otherwise giants from a moral point of view can have gaping lacunae of character in certain areas. Religious and political leaders who become famous for their far-reaching moral vision and ethical sensitivity are often known to fall into the hole of acting out instinctual (for example, sexual) strivings and desires without much apparent awareness of the moral issues involved. Their acting-out may be conveniently compartmentalized and hidden away from their otherwise scrupulous moral awareness.

For the psychopath or sociopath Jung would recommend attempting to raise the level of conscious functioning to the moral level. Whether or not this is possible after a certain age has been attained or a certain level of commitment to a hardened counter-position has been made are open questions. It may well be the case that if moral conscience is not cultivated in the early years of development there is little likelihood that it will ever manifest in a fashion other than as compliance. Learning the language of moral discrimination may be a lot like learning other languages: after the age of thirteen or so it becomes increasingly difficult to learn them very well, and eventually for some it may be impossible altogether. One must begin moral education at an early age.

With respect to others who are more or less normally developed to a level of moral discrimination, further shadow realization is a matter of applying consciousness and discrimination to sectors of experience that have been walled off. These sectors generally have to do with the instinct clusters: eating, sexual behaviour, addictions to activity, to reflection, or to creativity. Wherever human behaviour becomes driven by unconscious needs, desires, or wishes, shadow gathers and usually remains unexamined. The missionary who destroys one culture in order to



Gustav Klimt: Life and Death, 1915

create another, the political prophet who cannot stay away from prostitutes, the feminist who suffers from an eating disorder are all familiar examples.

As a psychologist and a psychotherapist of individuals, Jung would begin addressing the practical question of what to do about evil by confronting the individual with his or her own shadow parts and areas of underdevelopment of consciousness. After this work has been started, the psychological task would become one of integrating the shadow. Integration is a term that refers to a process different from differentiation but not its opposite. Differentiation has to do with making distinctions and becoming conscious of differences, the differences between good and evil for example. Integration is a term that refers to the psychological act of ownership: that is myself! With respect to integration of the shadow, and of the evil that it contains, this means that the evil of which I was formerly unaware in myself (and probably found in someone else, a projection-carrier) I now can locate within. Moral awareness is brought to bear upon an area of attitude, thought, or behaviour that had before lain in darkness.

Sometimes a whole culture will suddenly make a shift and begin looking in a new moral light at behaviour that had easily passed as acceptable or harmless only a short time earlier. Sexual harassment in the work-place is one such area in recent times. The sexually explicit invitation or comment, the off-colour joke or insinuation, the casual hug or pat are now suddenly regarded with a kind of moral awareness that would have been considered prudish or in bad taste only a few years ago. This is more than a change in taste and social personas: it is an expansion of moral consciousness into new territory. Suddenly the boss who

grabs is not someone to be humoured but someone to be prosecuted.

Obviously such moral discriminations as these can fall into the hands of unscrupulous individuals who will unethically take up a cause or make a charge for reasons of personal gain or advancement. The secretary who is about to be fired for incompetence and a poor work attitude cries foul on grounds of sexual harassment in order to forestall her unemployment. This does not mean that the advance in collective moral awareness is a mistake, but only that less morally developed individuals can always find a way to use situations to their own advantage.

Society cannot bear the full responsibility for moral consciousness or the lack of it, however. For Jung, the emphasis always returns to the individual. Rules and laws may be passed with the intention of legislating moral behaviour and eradicating evil from the social system as far as possible, but moral education must still be aimed at the individual. For an unscrupulous individual can always use the system to evil ends. A good tool in the wrong hands is a dangerous weapon, was a concept often expressed by Jung. Yet, too, from his experience with Nazi Germany, Jung would have to confront the shadow within the larger structures of society. The ways in which a society is set up, through its laws and customs, has a lot to do with how evil is handled and perceived within its precincts. 'Moral man and immoral society,' a concept of Reinhold Niebuhr's, would not have been foreign to Jung's consciousness after World War Two. Many scrupulous and well-intentioned individuals within the Third Reich ended up serving the Devil by being good and obedient citizens.

There is Jung's work a strong appreciation of collective shadow as well as individual shadow. Once the work of shadow awareness and integration has been to a large extent done by the individual, therefore, the work of confronting evil and dealing with it continues, but in the wider area of society and politics. Jung was not a quietist about evil in the larger world, in politics, in economics, or on the stage of world affairs. Perhaps his Swiss upbringing and citizenship played a role in moving him toward a position of neutrality with regard to intervening in other people's affairs, but Jung was no pacifist with regard to confronting the evils of totalitarianism. He feared, perhaps wrongly, Communism more than Fascism in the Europe of the 1930s, and his anti-Communist and anti-Stalinist feelings were strong and often stated. He felt deeply that fanatical ideologies of any sort were demonic because they depended for their existence upon identification with archetypal images and upon grandiose inflations, which crippled individual accountability and destroyed moral consciousness. Such ideologies should therefore be confronted by psychological interpretation, which would have the benefit, if successful, of restoring consciousness to its proper human dimensions. The ideologue depends on drawing archetypal projections to

himself from the populace, which in turn robs the populace of its authority and certainly robs individuals of their integrity as ethical human beings.

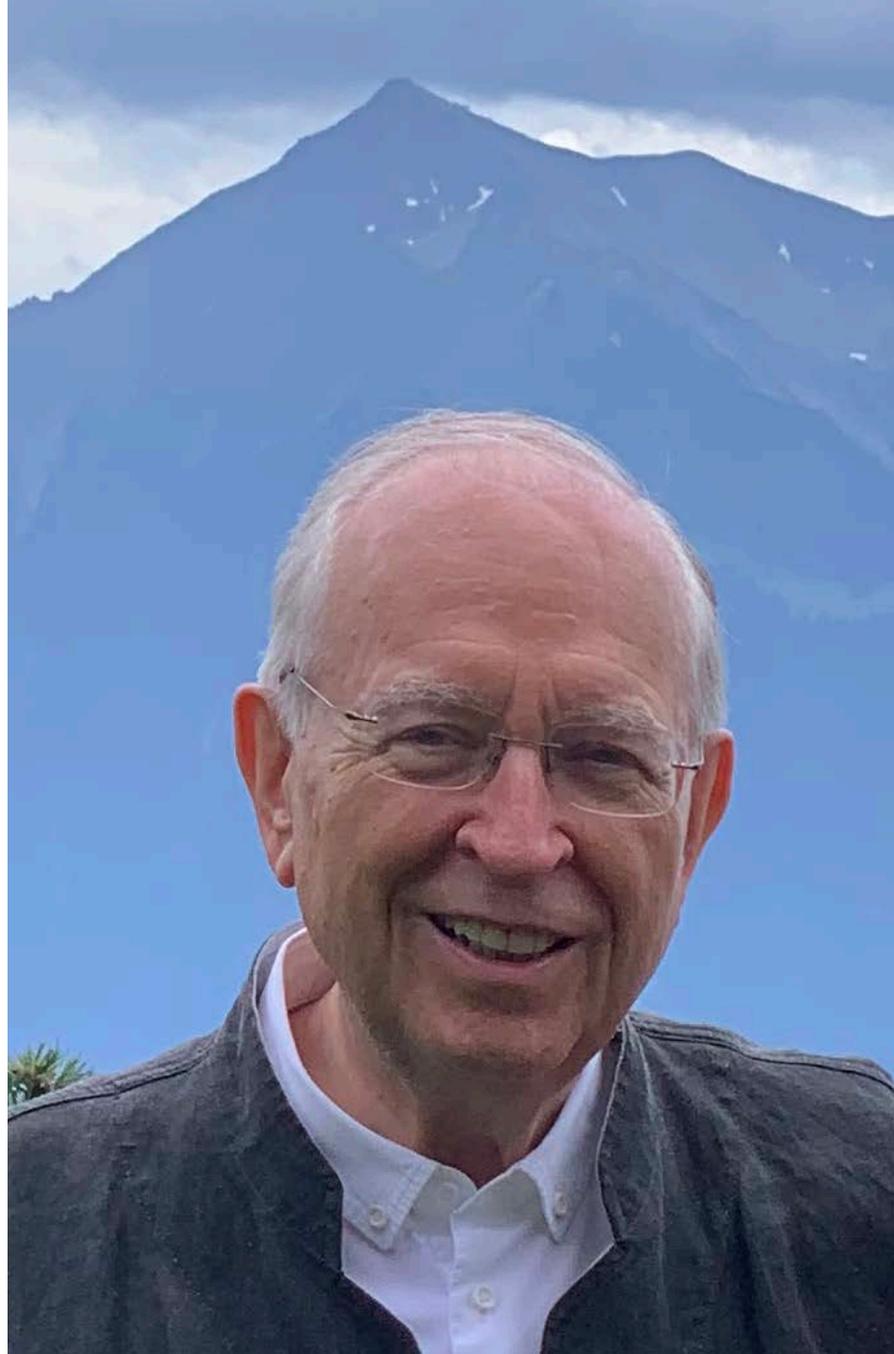
In principle, then, Jung would advocate a form of political activism that would bring psychological interpretation to bear upon collective human affairs. This would be to carry a version of psychotherapy out of the clinical setting into the world.

Jung himself began this kind of work, applying his psychological theory and hermeneutic to history and Western culture, in the last several decades of his life. He became, in effect, the psychotherapist of Christianity in his voluminous writings on its history, theology, and symbols (cf. Stein 1985), and in his other numerous writings about culture, art, and modernity he addressed the ills of the age. In this fashion he was engaging the issue of evil in the world at large.

Because of his view of the inevitable presence of shadow in human affairs, Jung could in the final analysis by no means be considered a utopian or a social idealist. 'Every bowl of soup has a hair in it,' was a favorite Swiss aphorism of his. Reality, God, as well as the human individual have shadow wrapped tightly into the warp and woof of their very being, and there is no means to remove it surgically. While it is important for consciousness to throw its weight on the side of good, of life, of growth and integration, it must be recognized that this is a struggle without hope for final victory. For victory would be stasis and so would spell defeat anyway from the point of view of evolution. The evolution of reality depends upon the dynamic interplay of forces that we call good and evil, and where the evolution of consciousness and spirit is finally headed is still beyond our knowledge. The best we can do is to participate in this unfolding with the greatest possible extent of consciousness. Beyond that we must reconcile ourselves to leaving the outcome up to the Power that is greater than ourselves.

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God, Science, and Dual-Aspect Monism

Conversations on the Leading Edge of Knowledge and Discovery

PETER B. TODD with JEFFREY MISHLOVE

Recorded on date for the New Thinking Allowed Foundation

Jeffery Mishlove: Today we'll be exploring the philosophy of mind and in particular the theory of dual-aspect monism. My guest is Peter Todd, who is a Jungian psychotherapist based in Sydney, Australia. He is the author of *The Individuation of God*. Welcome Peter, it's a pleasure to be with you once again.

Peter B. Todd: It's a pleasure to be with you as well, Jeff. We're talking about some profoundly important subjects, even with respect to their implications for the future of the world.

JM: I know many people don't pay a lot of attention to the philosophy of mind, but dual-aspect monism has been very important in your thinking for a long time. Let's begin by defining the term.

PBT: Essentially it asserts that mind is as much a fundamental feature of reality in the cosmos and evolution as is matter itself.

JM: How does dual-aspect monism differ from what is known as dualism?

PBT: Well it is a form of dualism, but dual-aspect monism establishes an epistemic split between mind and matter, which emerges via symmetry breaking from an under-

lying holistic reality known as the *unus mundus*—in the Jung/Pauli scheme.

Or the 'implicate order' in the thinking of David Bohm, Paavo Pylikkanen, Basil Hiley and their colleagues. But monism refers in both cases to an underlying primordial holistic reality which transcends space, time and causality.

JM: Now I know a number of philosophers who have reacted against metaphysical materialism—consider themselves dualists: Sir John Eccles, Karl Popper. John Beloff is another one. How would you distinguish dualism from dual-aspect monism: it would seem as if dual-aspect monism is postulating this third principle that you've referred to as *unus mundus*?

PBT: Or the implicate order in the David Bohm scheme. Both of those refer to an underlying primordial holistic dimension in which there is not as yet any split between mind and matter. So in the Jung/Pauli scheme we could say that the material is approached by a quantum nonlocality and the mental by Jung's collective unconscious. And they emerge by symmetry breaking, measurement, or decomposition into the epistemic split between mind and matter.

JM: There is still the question that puzzles people: How do mind and matter interact with each other?

PBT: Well can I refer to a statement by evolutionary biologist Sir Julian Huxley. His position, together with that of Teilhard de Chardin, is that with the emergence of *homo sapiens* endowed with a reflective consciousness,

the universe has evolved a mirror to reflect upon itself, a mirror in which its very existence is revealed.

We now have human beings directing the whole future of cosmic evolution or, to quote Niels Bohr, ‘human beings as actors, not mere spectators, in the cosmic drama.’ So it’s through our consciousness and our reflection that we actually get to determine the future direction of evolution, at least on this planet.

JM: Which is very important, of course, not only for the future of humanity but for the evolution of consciousness. The question that every philosopher of mind has to address one way or another is: Does mind actually have an influence upon matter or does mind simply go along for the ride?

PBT: Let me quote physicist Wolfgang Pauli on that very question. You see he referred to the schism between science and religion which had existed for four hundred years. One of the things he’s noted to have said is that the repression of psyche after the Enlightenment led to a metaphysical materialist view of the cosmos. However, the repressed would perhaps return in the form of thermonuclear explosions. And, of course, thermonuclear explosions are a result of very intense scientific work on behalf of human beings.

As to your question about elevating human beings too much, while I think it’s true that individual as well as collective human consciousness is instrumental in determining the future of evolution and of life on this planet, it also needs, as Jung put it, to be ‘resacralized’ and to acknowledge a numinous dimension of becoming that is otherwise known as God. And, of course, we’ve talked about Jung’s transcendent God archetype, so I think it’s not just human beings but human beings co-evolving with God in a process of co-creative divinization of the world.

JM: Yes, it seems as if there is a real distinction between the God of religion—the socio-cultural projections that are called God—versus what one might call the God of the philosophers.

PBT: I use the term *deus implicitus*. The transcendent numinous principle is actually implicit in cosmology and evolution and evolving with it and with us and, as I said a moment ago, co-evolving and engaged in co-creative divinization of the world. Jung was very alarmed about the future of the world and of humanity and he wrote very poignantly of a need to resacralize the world. I think we are very much part of that process and perhaps lessening the likelihood that we’ll destroy it through our materialism.

JM: Now earlier when I asked how mind can influence matter, you used the example of nuclear weapons as a way in which human consciousness affects the physical world.

But I think there are physicalists—materialists—who would say that the physical world operates according to its own laws; a mind isn’t even necessary. There aren’t any physical theories, even those of Wolfgang Pauli, that have a good definition of consciousness. So it still begs the question I think, Peter, of how it is that our consciousness is able to do the simplest things, like I can raise my hand if I choose to do that, by an act of will, an act of consciousness. I would think that dual-aspect monism resolves that question because both mind and matter, although not reducible one to the other, are both part of this underlying monistic reality—the *unus mundus* or *implicate order*.

PBT: Yes, I absolutely agree. That’s why I am actually suggesting that they are both fundamental features of reality rather than there just being a monistic, materialistic dogma about the nature of reality. And I think that’s why Pauli quipped that the danger of materialism was that what was repressed might return in the form of thermonuclear explosions which, ironically, of course are creations of reflectively conscious human beings.

JM: People who hold a monistic position, whether it’s materialism or idealism, both feel that it’s possible in the case of materialism to reduce mind to matter; that everything basically boils down to atoms and molecules and neurons. People who are monistic idealists believe that you can reduce what we think of as matter to consciousness because we would have no experience of matter at all if it weren’t for consciousness. But in dual-aspect monism, the notion is that neither mind nor matter are reducible to the other and, I presume, that’s the position to which you subscribe.

PBT: It is, and I think the irreducibility is contingent upon the relationship of complementarity between mind and matter. Two or more descriptions of a phenomenon are complementary if they mutually exclude one another and yet are together necessary to describe the phenomenon exhaustively. The Jung-Pauli archetypes are analogous to Bohm’s active information, providing a bridge between mind and matter in a relationship of complementarity.

JM: We see complementarity in many other forms. In physics we have the complementarity of waves and particles in quantum physics, for example. People also talk about matter and energy as being complementary to each other but in effect they are convertible to each other. I think—matter and energy—one can be reduced to the other.

PBT: Yes, but not in the position of dual-aspect monism or ontological idealism because as I said, if you accept Pauli’s definition of complementarity and also the related notion of entanglement as describing the relationship between mind and matter, they’re irreducible to one another and



Baruch Spinoza (1632-1677)

therefore both remain fundamental features of Reality with a capital R.

JM: Let's get into the Jungian perspective on this. You talked a minute ago about the importance of God in all of this. Where does God fit into dual-aspect monism, because I don't quite see it. You've got matter, you've got mind, you've got *unus mundus*. Are you suggesting that *unus mundus* is God?

PBT: I think my position, reflecting that of Jung and David Bohm and his colleagues, and Roderick Main of course at Essex University, is that there is a transcendent, a numinous dimension of evolutionary becoming to which we can apply the label God. But we need to hold in mind the easy tendency to fall into conflating that notion of a *deus implicitus*—a God implicit in cosmology and evolution—with the old external interventionist God which has been an irrelevant hypothesis since Newton.

JM: Where would this deity fit in?

PBT: Well I think it is implicit in cosmology and evolution and manifests itself, as Jung put it, in the intersection of the divine and the human in the notion of the continuing

incarnation of the divine in and through humanity. I mean there's no doubt that human beings, going right back to the earliest appearance of our species, have had a fascination with the divine or with the numinous; that there is something more to reality than that which we ourselves, and indeed even this world, embody.

JM: I'm going to push you a little bit on this if I may, Peter, because I'm puzzled. It would seem to me that if you're talking about dual-aspect monism, you have mind, you have matter, you have *unus mundus* and you're suggesting that God is implicit in all of these?

PBT: Well I should perhaps explicate *unus mundus* as referring to Jung's collective unconscious while the realm of the archetypes refers to cosmic ordering and regulating principles. As Jungian scholar Roderick Main suggests, no number of primordial images of God can actually exhaust the reality of the transcendent numinous reality that we refer to as God.

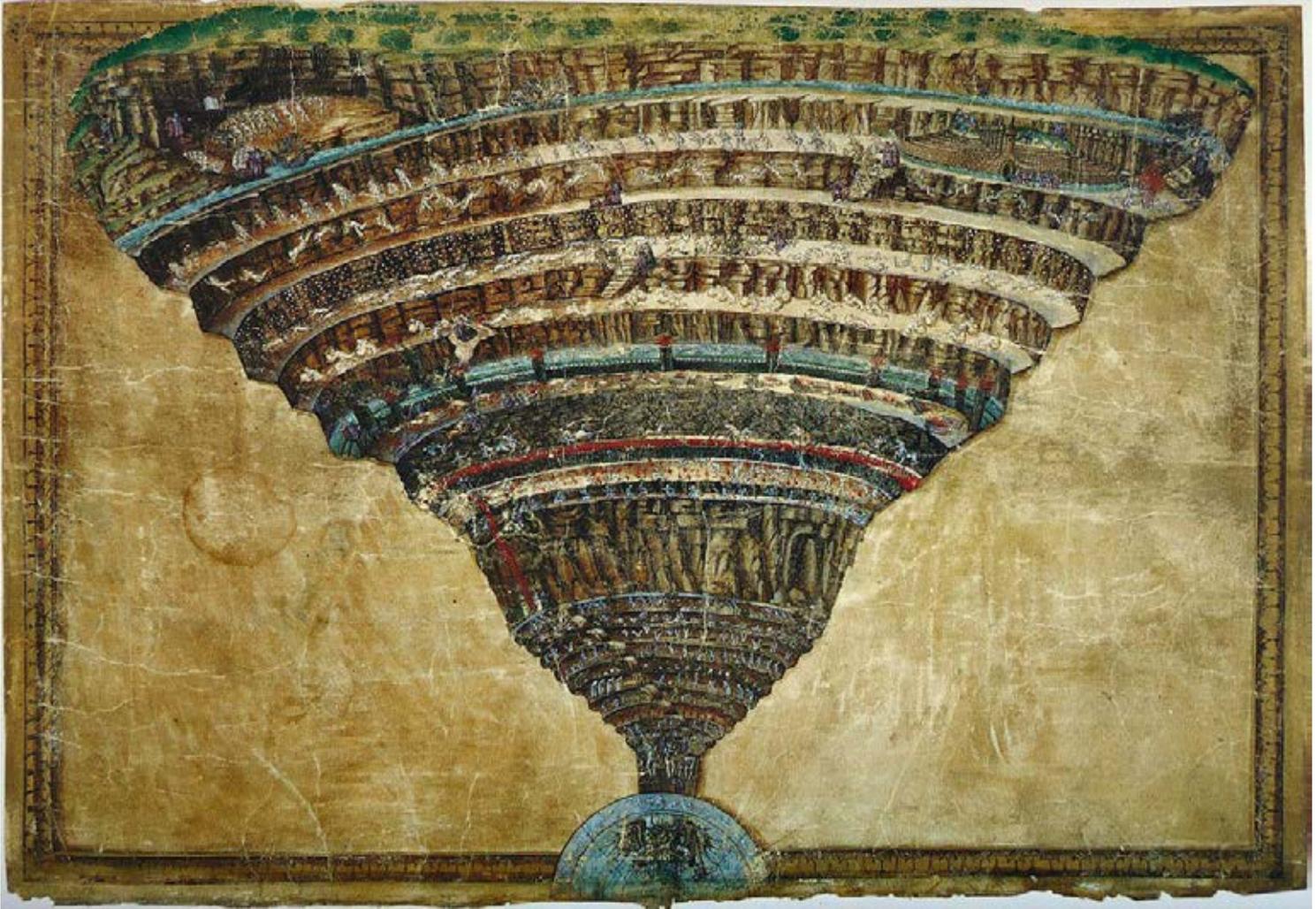
JM: Surely you would agree that the images of God are not the same as God.

PBT: Absolutely not and that's why Roderick Main made that very good distinction between the primordial images of God—archetypal images of God which are manifest in dreams and humanity's various religious traditions—and the ultimately unknowable transcendent God archetype which is timeless, eternal and coextensive with the cosmos. That's not the God that people go and pray to in church on Sunday

JM: It seems to me Peter that what you're describing is consistent with the vision of Spinoza, who I understand was also another dual-aspect monist. Spinoza saw God, I think, as being the unity that existed out of which the universe itself was created.

PBT: Yes, I agree. Spinoza of course, in the work of Pauli, Jung and David Bohm, is the prototypical dual-aspect monist thinker—although he's sometimes been regarded as being an idealist, which I think is an error. It would imply rejection of the continuing incarnation of God to which Jung referred in his book *Answer to Job*. Spinoza's definition for his time was fairly close to Jung's notion of the God archetype manifest to us in dreams and symbols but not reducible to those symbols.

JM: Of course, unlike Jung, Spinoza lived in an era which didn't have any of the insights of quantum physics; he was working in the 17th century. I suppose all philosophy is disadvantaged by the historical circumstances in which it appears. Do you foresee those same kinds of limitations are affecting us today?



Sandro Botticelli: The Map of Hell, c. 1485. From the illustrated manuscript of Dante's Divine Comedy

PBT: Limitations, meaning...?

JM: Limitations of history. That we're trying to discuss such large questions of cosmology and philosophy, psychology and even quantum physics, but we're limited by the knowledge that's available to us now in the 21st century.

PBT: Well, a number of people have noted, and I'm in total agreement with them, that the quantum revolution and its emphasis upon holism and nonlocality was the beginning of the end for the philosophical atomism which characterises the classical physics of Newton. That was the only model of acceptable science right through the 19th and well into the 20th century. In fact it persisted beyond the quantum revolution until, in more recent years, the shortcomings of that and the importance of holism are being more acknowledged—where holism again involves both mind and matter or consciousness and matter.

JM: Do you see God as distinct from consciousness and matter or transcendent of our space-time reality or do you see God as being immanent, or both?

PBT: I see God as being both immanent in evolution and cosmology and within us. But also there is something more—which we refer to as the transcendent nature of God or the God archetype—which is not completely knowable by human beings with their finite intelligence and ego consciousness.

JM: And is there anything more particular that can be said about unus mundus? How does unus mundus, for example, differentiate itself from mind or matter, or God?

PBT: Well unus mundus—or one world, in the Jung/Pauli framing—is analogous to David Bohm's implicate order. It's a primordial, holistic reality in which mind and matter have not yet emerged in any kind of epistemic split. Such

a split occurs via symmetry breaking—of the original primordial holistic reality of the *unus mundus*. In the Bohm scheme the epistemic split occurs by unfoldment of an ultimately enfolded implicate order.

JM: You've used a number of terms that I'd like to define for our viewers. Let's start with the epistemic split. What do you mean by that?

PBT: ...that mind and matter are separate aspects—dual aspects—of reality.

JM: Symmetry breaking. How is symmetry breaking related to the epistemic split?

PBT: Well it's via symmetry breaking or measurement that the *unus mundus*—with its collective unconscious and the archetypes—actually becomes knowable to us as mind and matter—as distinct aspects, dual aspects, of an underlying primordial reality.

JM: It sort of reminds me a little bit of the parallel between how a fertilized egg starts out as a single cell and then it splits and becomes two, and it splits and splits and splits until you have an organism such as a human being like you and me with a hundred trillion cells in our body and two hundred different kinds of cells and many organs interacting with each other, usually in a perfect manner.

PBT: And it's quite a mystery how that very complex organism of the brain, with all those trillions of neurons and synaptic connections, could actually give rise to a mental reality such as reflective consciousness; or the notion that consciousness—or in Eccles terms, or in Popper's terms that the self—could possibly act upon the brain or even direct the future of cosmic evolution as Niels Bohr believed. And I'll refer back to his famous quote: Niels Bohr stated that human beings are actors not spectators in the cosmic drama. But what does that term 'actors' mean? It means that we act upon the world; that action is mediated by reflection in conscious thought. It's through our actions that we direct the future of cosmic evolution, at least on this planet.

JM: Well on this planet right now we are going through a major extinction. I think some people call it the sixth extinction that's occurred in the history of this planet and it's an extinction largely caused by our own behaviour—so certainly we are affecting planetary evolution in a very negative way right now.

PBT: In a very destructive way and I think that is why Jung and the post-Jungians and many philosophers with a theological bent, like Roderick Main at Essex University, for example, are calling for the resacralization of the world

albeit, for instance, in some such form as an evolutionary panentheistic theology. If the world is resacralized—if you really respect it rather than seeing it as a resource to be exploited—there's perhaps a lesser likelihood that we will actually end up destroying it through consumption, let alone through thermonuclear war.

JM: I've got to ask you to define another term, if I may—panentheistic.

PBT: Panentheistic is simply a term made up of three Greek words really. *Pan* meaning all. *En* meaning in. And Theism deriving from the Greek word *theos* meaning God. It means literally God in all. And we'll refer to this later in our interview about Teilhard de Chardin. The very last entry in his diary about Maundy Thursday, 1955 was *En pasi panta theos* 'that God may be all in all.'

JM: All in all.

PBT: A nice summary of panentheism.

JM: And it suggests a sense that everything is permeated by the divine.

PBT: Yes, everything is permeated by the divine and we are intersected by the divine, at least in panentheistic theology, through a process of continuing incarnation. Even Meister Eckhart was onto that in the Middle Ages—onto this notion of continuing incarnation.

JM: It suggests that people who hold this view, like most mystics, come to an understanding of the unitary nature of reality as a whole and the idea, for example, that humanity is one whole. That all humans of every race, creed, ethnicity and religion are essentially one. We're all aspects or cells in the body of this great humanness. I think in Kabbalah they refer to it as Adam Kadmon—the one being of all humanity

PBT: And an aspect of the mystical visions of the acknowledged mystics as well as people like Teilhard, who we'll be discussing, is that of evolving a sense of the interconnectedness and sacredness of all human beings and of the ecosystems that support them.

JM: I think it's very important, it's one of the conclusions I come to in practically every interview I do. We come around to that issue of oneness and yet I run up against people all the time who... may theoretically embrace that issue but in practical terms they don't like the idea of having to consider themselves at one with certain other people. Sometimes it's the Catholics, sometimes it's the Jews, sometimes it's the rich, sometimes it's the poor, but it seems as if there's a natural tendency—in this world of duality in which we

live—that people are seeking an enemy and the very notion of having an enemy strikes me as antithetical to the theology that you're espousing. Am I correct?

PBT: Yes I agree, and I think there's a grave danger implicit in unconscious projection of archetypal shadow qualities onto other peoples and groups and demonizing them, and therefore feeling entitled somehow to eliminate them or to usurp their countries' resources. And then I might say that in this context a lot of these differences are based upon a quasi-religious devotion to various ideologies and ideological differences—even nationalism, which I see of course as quite anachronistic in a world with an Internet. You and I are talking thousands of miles apart, the information travelling at the speed of light. I mean it's very difficult not to see such a world in holistic terms—we are so interconnected even through such discussions as this.

JM: And yet I talk to people, for example in my own psychotherapy practice, who have an abhorrence for crime, for evil, for murder, rape, incest. These things seem horrible and the people who commit these acts seem horrible. It seems like it's part of human nature not to want to have anything to do with people of that sort and, in fact, I generally don't want to have anything to do with the people who dislike people of various sorts. I think the philosopher Karl Popper put it this way: He said if you want to have a tolerant society you must be intolerant of intolerance and that seems very paradoxical to me.

PBT: I agree and of course, as you'd be well aware, Popper not only colluded with Eccles in the book called *The Self and Its Brain: An Argument for Interactionism*, he also wrote another book called *The Open Society and Its Enemies* and my understanding of what that's getting at is the dangers implicit in our unconscious yet collective archetypal projection onto others of shadow qualities which again can be used to rationalize the elimination and destruction and, at the very least, the consumption of their resources for our own greed.

JM: Well, do you see dual-aspect monism or even the theology that you're developing for the third millennium as more than an antidote but actually a tool that can be used in some way to elevate the condition of humanity away from this sort of unconscious projection?

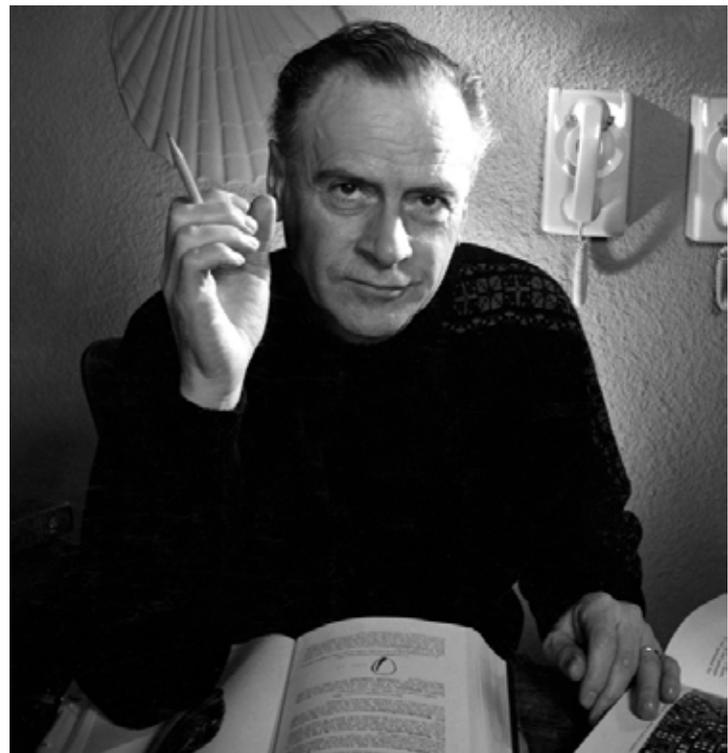
PBT: Well I think one of the functions of programmes like yours is their potential to actually promote this understanding, this mystical understanding of the holism of the world and the interconnectedness and sacredness of all beings and the ecosystems that support them. Teilhard referred to this holistic consciousness as the noosphere superimposed upon the biosphere.

JM: I've often thought that we are building an electronic network that is now encompassing the entire planet. It's like it's an extension of our nervous system. One might even say that we are constructing a new organism.

PBT: Well a famous writer, Marshall McLuhan, as you may well know, referred to media as the extensions of man. So I think what you were saying is that the development of ever more refined ways of communicating with people across the planet—using interviews like yours as a medium—to help facilitate the resacralization of the world, is profoundly important. And I hope you see the value of your own work in promoting ideas of holism and the need to acknowledge the sacredness of all people as an extremely valuable asset to humanity. I think your contribution is magnificent in that respect.

JM: I interviewed one scientist who said this is the new world order in effect. But I can tell you I have many viewers who, if you use the phrase 'new world order,' they think it's diabolic. They think that it's some sort of an imposition by the planetary elite for the purpose of controlling individuals, forcing values upon them that they don't want, and forcing them into a consumerist culture that is damaging to the whole planet.

PBT: I quite agree and I think that highlights the danger of totalitarian, authoritarian systems of thought—whether



Marshall McLuhan (1911-1980), Canadian philosopher

it be the dialectical materialism of Marx or fundamentalist religious ideologies. These are the antithesis of Teilhard's noosphere and his energies of love uniting human beings. You know I was raised as a Catholic and I'm still a very progressive Catholic. But I'm appalled by what the Roman Catholic church has done through the centuries to people who were dissidents, rather than promoting love and compassion and interconnectedness, or even mysticism. There's a huge discrepancy between the mystics and saints and some of the power-hungry authoritarian bureaucrats at the helm as it were.

JM: In fact, I sometimes wonder if it's even possible for a person to live a mystical life and also pursue political or economic power.

PBT: I think it's difficult to live a mystical life if one is actually addicted to an ideology—a quasi-religious ideology that promotes consumerism, whether it be Marxism, or Catholicism, or any other ideology. You see, Jung made a very astute statement, and I never cease to be in awe of his intuition, when he actually said that religious dogma



William Blake: The Song of Los, 1795

is fossilized, dead mystical experience. Religious dogma tends to kill off the possibility of having any authentic mystical connection with the divine or with the world. Theology has been all too much in the head, too cerebral.

JM: Well it's rather paradoxical in the sense that pretty much every religious dogma was initiated by an individual who I think we would agree had authentic mystical experiences.

PBT: Yes. Yes. And they are very important sources to read, first to understand the nature of mysticism. But unfortunately what the Church and churches have tended to do again, you see, is to almost deify the mystics or their teachings and to fossilize the experience into dogma to be believed rather than an experience in the heart. Or as Jung would say, in the realm of feeling and emotion.

JM: It's sort of like talking about the wonderful steak dinner I had yesterday.

PBT: Yes, and trying to describe to people who wouldn't have any idea what that meant, describe the steak dinner in terms of which people have little comprehension.

JM: Indeed. An understanding of dual-aspect monism could really help to liberate people, I suppose, from the constraints, one might even say the bondage, that people are in, people who are addicted, as you've suggested, to other viewpoints, particularly materialism.

PBT: I absolutely agree and I think that that addiction, that quasi-religious devotion, to various materialist ideologies is a menace to the planet.

JM: There's also the question of addiction to religious ideologies as well that have lost touch with the authentic mystical inspiration that gave birth to them in the first place.

PBT: Absolutely. In the name of religious ideologies, both Catholic and Protestant, people have been subject to inquisitions, persecuted and murdered. In the name of the dialectical materialism of Marx, dissidents have been murdered by the millions. Under Mao alone, as you probably know, forty million people were murdered for thinking differently. It doesn't really matter much what the ideology is. It's the quasi-religious devotion to it that is the problem, almost as if the ideology were the numinous reality itself, thus justifying the persecution of dissidents.

JM: So if dual-aspect monism were to become universally accepted, it would face the same risk. It could become a tool in the hands of authoritarian leaders, used to persecute and punish people.

PBT: Well I would certainly hope not and the reason I believe that probably would not happen is that if you take dual-aspect monism seriously, it actually encompasses both mind and matter and the anima mundi—the world soul of Jung. So there's an implicit degree of sacredness in the ideology, when taken to a deeper level, that might be a safeguard against it being used as an ideology to persecute people. But I think Popper was right: we need to be very careful of any totalitarian systems of thought that create closed societies rather than open ones.

JM: I would agree with Popper about that, but I do take issue with him about 'If you want to be tolerant then you must be intolerant.' I have trouble with that. I tend to think that a little bit of tolerance of intolerance might be a healthy thing—as opposed to intolerance, because that just creates people knocking their heads against each other.

PBT: The way I'm understanding what you are saying is the tolerance of the human freedom to have dissident viewpoints, to have different ideas, rather than being persecuted for those ideas. Or as happened with poor Teilhard, being silenced by the Vatican for daring to introduce any concept of evolution that differed from the theology of the day.

JM: The Catholic church has always been supposedly centred on the sacred person of Jesus Christ and yet, in the name of that sacred being, atrocities have been committed and great thinkers, such as Teilhard and Galileo, have been persecuted by the church. Why would dual aspect monism have a different fate?

PBT: I prefer to think of evolution and cosmology as processes of numinous becoming which we partake of and participate in, almost as a form of communion, Eucharistic communion, figuratively speaking. If we use dual-aspect monism in that way, there's less danger of it being used to silence dissenters. And, of course, there are dissenters who call themselves ontological idealists and I think both groups really need to be a little more tolerant of the others.

JM: You know on this programme I try to be tolerant of materialists and physicalists and conventional dualists. One of the things that I've come to understand—in exploring the philosophy of mind, which was never part of my own academic training—is that pretty much every philosopher who ventures into this area comes up with their own unique twist, or unique version of it. So I suspect that, for example, the implicate order of David Bohm is not exactly



Omega point

identical to the unus mundus of Jung and Pauli. I'm not quite sure how Teilhard would have phrased it but I think each of these thinkers, including Spinoza, has a slightly different version of the theory.

PBT: Absolutely. Individual variations.

JM: I think Teilhard added a unique twist to it himself when he talked about the Point—that there was something driving the entire universe toward a final point, the Alpha leading to the Omega.

PBT: Yes, the Omega Point or divine focus of mind for all human beings.

JM: So, Peter, on that note let me thank you for this discussion. I know we've covered many, many points far afield from the original focus on the philosophy of mind and yet for me that's where the energy was. So, I'm glad we did that.

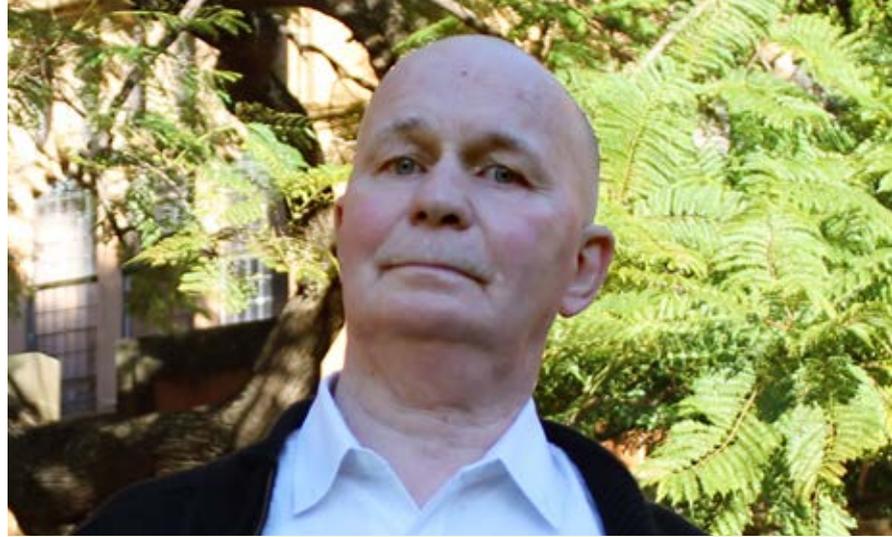
PBT: Yes and I think it's a bit unusual to introduce into philosophy of mind concepts from quantum physics which are directly applicable to understanding the relationship between mind and matter, concepts such as complementarity and entanglement, which imply that neither of them is reducible to the other. For four hundred years, however, the only permissible view of reality was materialistic and any notion of mind, psyche or soul was to be regarded with suspicion or handed over to the theologians.

JM: We're entering into a new era, I think, where the whole question of consciousness, the whole question of God and spirituality is now open to scientific investigation.

PBT: And rightly so. Science itself is a pathway to the divine.

JM: Well, Peter Todd, once again thank you for being with me.

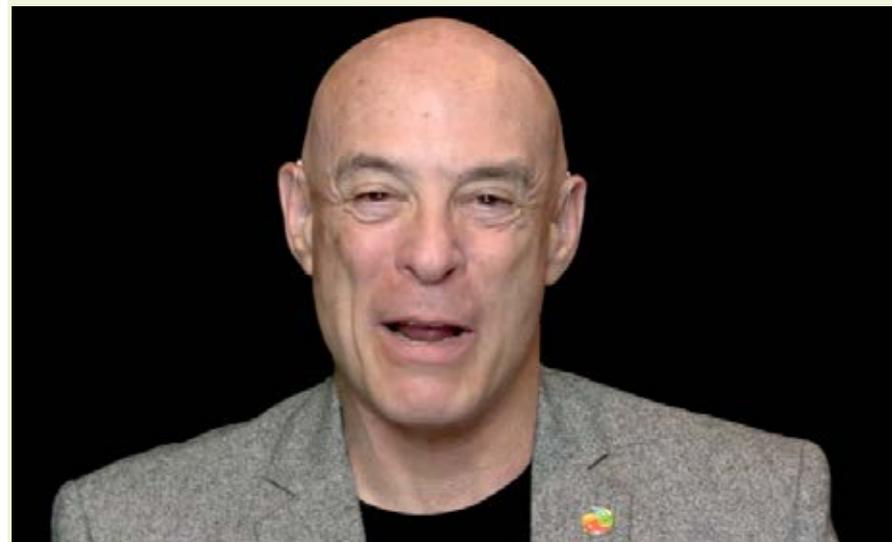
PBT: My pleasure.



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The Numen of Matter

CEDRUS MONTE

We have reached the edges of a world that is directed and dominated almost solely by abstraction, logos, mind and top-down hierarchical structures. While in themselves not necessarily negative expressions of our humanness, their prominence in our world view has led us to existential imbalance: Our lives and the lives of our fellow species are endangered; our planet is virtually on fire, desiccated to the level of tinder that at any moment could spark our mutual demise.

There is a critical need to integrate a counterbalancing energy. The author proposes this can be done by embracing as equal the valence of both eros and natural instinct. This would entail exercising a radical creativity that includes respect and equality of voice for and from all forms of life and a turning toward the wisdom to be found at the somatic, instinctual dimension of our consciousness, where the numen of matter can be found.

According to Jung, the experience of the numen is primary to healing.

Because of the nature of matter, as seen through particle physics, molecular biology and physiology, matter can also be a source of the numinous experience; this, in particular reference to the matter of the body.

Numen of the Body: Overview

The numen, according to Jung, is that which offers healing. Following Jung's lead, I propose that the flesh, the *materia* of the body, contains its own capacity for generating the numen, and therefore the experience of healing.

The numen arises out of the matter of the body as a direct result of the very nature of matter itself. In other words, there is no split between spirit and matter. Every natural system has an inner life, a conscious centre, from which action is directed. The body, the *materia* of the flesh, is one of these natural systems.

The Matter of the Body

The collective unconscious contains not only the residues of human evolution but also of animal evolution. Coming to terms with the unconscious—that is, becoming conscious—requires, therefore, a coming to terms with one's instinctual, animal nature.

Though Jung was deeply concerned with the question of instincts, the body itself was and continues to be largely marginalized in psychoanalytic practice. (Wilhelm Reich, colleague of Freud and Jung at the turn of the last century, was the only real proponent of analytical somatic inquiry, of working with the psyche directly with, on and through the body; but his work was summarily rejected by the psychoanalytic community at that time. Since then, it has gained only marginal acceptance within that same community, but has in its own right revolutionized the understanding of the psyche/soma connection.)

Considering the negative, pathological effects generated by the relative split of body and mind, it feels important if not imperative to offer skilful ways and means of affirming the irrevocable and harmonizing relationship between the instinctual, animal body and the archetypal, spiritual impulses of mind. To begin this task, I first offer a brief discussion on the nature of numen and matter.

Numen

In his letter dated August 20, 1949, Jung says it is the numen which offers ‘the real therapy, and inasmuch as you attain to the numinous experiences you are released from the curse of pathology¹.’

Jung refers to the numen as ‘a dynamic agency or effect not caused by an arbitrary act of will. On the contrary, it seizes and controls the human subject.... The *numinosum*—whatever its cause may be—is an experience of the subject independent of his will.... The *numinosum* is the influence of an invisible presence that causes a peculiar alteration of consciousness².’

In addition to the qualities listed above, the experience of the numen carries with it a fateful sense of meaning. It is not just a random or superficial experience but, as with the phenomenon of synchronicity, there is an understanding that the experience carries particular and personal meaning. One gains insight, often profound insight. Most frequently, insight and numen are one. Both are accompa-

nied by experiences of surprise, shock, wonder, awe; both leave us feeling different in our skin.

Perhaps the visitation of the numen is most often understood as a descent of the Spirit to humankind, a transpersonal visitation from ‘above’ that floods the body and mind with its presence.

In contradistinction—not opposition—to this view, I propose that the numen is contained by and released from the flesh itself; that the numen is a *presence within* and *present as* the material body. The flesh, the body, is not only the receiving vessel of the numen but, by the nature of matter itself, the body is also the generator for the experience of the *numinosum*. By addressing the body, *through* the body, we can experience the ‘peculiar alteration of consciousness’ that is available to us when we are grounded in somatic experience and informed by the numen of the flesh. We have the opportunity to free ourselves from the ‘curse of pathology’ and to further our course of individuation through the consciousness of the body itself.



dreambody/earthbody, ParaTheatrical Research. Antero Alli

The Nature of Matter, The Nature of Flesh

Glimpse I: The Electron

What is it about matter, including the matter of body, that would inspire such thinking, inspire the notion that the numen is contained in and released from matter or flesh?

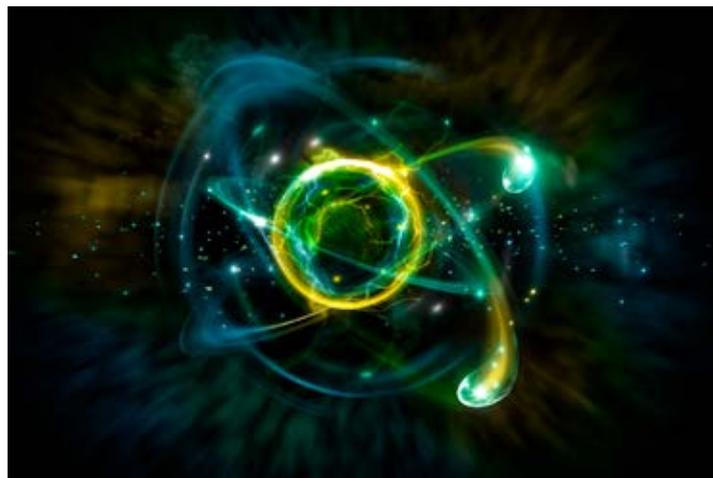
In his masterwork, *The Unknown Spirit*, physicist Jean Charon attempts to answer such physical and metaphysical questions. Charon's work has guided us to the discovery that all life, including our own bodies, is made up of electrons. In this electron space-time continuum, there is a memory of past events that continuously and endlessly empowers and enriches not only what we call our mind, but every single cell of our being. It is in the very electrons that combine to make us who and what we are.

To this end, Charon explains that electrons, examples in particle physics of the 'building blocks' of life, are able to exchange informational or spiritual content with each other in the ever-continuous flow of life's evolution. He portrays the electron as a veritable micro-universe in which phenomena take place with what is called increasing negative entropy; electrons continually *increase* their informational or spiritual content. In Charon's words:

As time flows, Spirit increases its order within each electron. It has no choice in this: it consists of a space in which order cannot decrease... The electron does not consider this constant increase as an aim in itself, in other words the object of evolution, but as a means of discovering the objective of evolution.... Each electron is like ourselves: as it increases its memorized information, it begins to perceive a new objective and to mould its actions accordingly.... That is why we can speak of the spiritual 'adventure' of the universe, since Spirit chooses to exist through constantly increasing awareness³. (Emphasis mine)

Charon cites as further proof for the spiritual character of the electron the ability of the electrons to form systems with other electrons without any external help, as well as to develop hierarchical orders of ever higher complexity through increased information. Charon claimed that his research into the physics of elementary particles showed that electrons have the ability to store information; that they have a system of remembering and retrieving such information and that they communicate and cooperate with other electrons to create and operate complex systems.

In Charon's view, it is the electron that seems to provide the wordless link and language between all creation. 'An electron feels the electrostatic influence of another



electron whatever the distance between them.... Similarly, spiritual interaction between two electrons will be possible whatever the distance⁴.'

Two quantum objects, therefore, once they have been in contact with each other, may be separated by light years, yet if one of the two objects reacts to being measured or observed, the other one, even though light years apart, instantly knows of the transaction and reacts by exhibiting a similar reaction. This fact has been called 'inseparability of the quantum object' and has been experimentally verified beyond any doubt.

Finally, Charon believes the electron's journey is our journey, and that this journey goes out into infinity. 'We usually call this principle of infinity or eternity, God [the Infinite].... So, for the electron populating the universe, and also for us, the spiritual adventure of the universe is a search for God⁵.' In the language of this presentation, we might say the very nature of matter, the very nature of flesh itself, is the drive for the experience and expression of the numen; here making a direct link between 'God' and the *numinosum*.

Glimpse II: The Cell

The following comments, Glimpse II: The Cell like the ones just previous, are of necessity abbreviated. *I am not offering scientific evidence, rather a scientific metaphor.* To that end, the second example suggesting the numen as a presence indigenous within and as the material body is found in Deane Juhan's classic book, *Job's Body: A Handbook for Bodywork*, where he reveals the enormously complex physical and extra-physical systems of the body and the relationship to the psychodynamics of psychospiritual health.

Juhan cites recent research made by contemporary biologist Candace Pert. Her research on cell receptors

has launched the ongoing discovery of a wide variety of cell membranes whose function it is to take in and release information. This information dramatically alters the internal activities of the cell and its functional relationship to the rest of the body⁶. The discovery of cell receptors completely changes the understanding of cell function. It is now understood that rather than merely substances exchanged between cells, there is information (or spiritual content) exchanged as well.

Pert has called these receptors ‘tiny eyes, or ears, or taste buds,’ sensory apparatus that provide the cell information for proper action in relation to the organism’s needs. The receptor transmits information ‘from the surface of a cell deep into the cell’s interior, where the message changes the state of the cell dramatically... and can translate to large changes of behaviour, physical activity, even mood⁷.’

The bonding of particular receptors with cells initiates the experience of a certain feeling state. Moreover, research shows that if the cells of an animal which has experienced a certain feeling state is injected into another animal, the same feeling is incited. These affects include sadness, disgust, anger, joy, fear, surprise. They all appear to have their individual and respective receptors. Pert asserts that these affects are not just the more familiar ones such as fear and anger, or states of pain and pleasure, hunger and thirst. In addition to these measurable and observable emotions and states, she also includes intangible and subjective experiences such as spiritual inspiration, awe, bliss, wonder and other states of consciousness

of which we have all had some experience but that have not been physiologically explained up till now⁸.

This suggests that there are specific receptors which stimulate or correspond to numinous experiences. Within the cells of flesh, there exists a physical, instinctual dimension which corresponds directly to the archetypal experience of the numen.

Receptor cells, then, can communicate the numen in the form of bliss, awe, wonder and other similar states of consciousness. In addition, within the cells, within the flesh, is the experience as well as the ability of the experience to ‘transmigrate,’ to be communicated from one separate entity to another. These are the instinctual dimensions of the archetype mediating the arising of the numen, coming not from ‘above’ but from within, and in direct exchange with the material, vegetative substance of life.

‘What is also fascinating is that the effects of the receptors are not...exclusively human. All mammals, in fact all species so far observed, have exactly the same ... molecules. They are present in creatures that do not even have nervous systems, and indeed are the messengers that even single cell populations use to communicate with each other and to organize the collective activities of the colony. Perhaps this is why so many people achieve such a deep and evidently mutual emotional connection with a pet... and why some individuals have such immediate rapport with creatures of all kinds⁹.’ We share with all of creation, the instinctual impulse to exchange information, including that of the ecstatic and awe-inspiring.

Electron, Cell and Numen: A Summary

In the examples of electron and cellular receptor we have the essence, the activity, the conductor and the delivery of the numen. In other words, it is the nature of matter itself to embody and transmit the numinous experience. The numen is within the flesh as the flesh, and accessible to us if we allow ourselves the opportunity to discover it. What we might call spiritual content or information, and what is referred to as the infinite, is accessible directly through and as the physical body.

Because it is the nature of the electron to continuously increase in consciousness, the nature of matter itself is the desire to be opened to the influx and integration of the unconscious, of the Unknown. It is the nature and desire of matter, and therefore of the body, to conduct the Infinite. When the body is understood in this way, it can unfold us into the embodied Self. The body *wants* the experience of the numen because the numen is the very thing that is the centre and core of its existence.



Candace Pert with neuroscientist Solomon Snyder, 1973

A Personalized View of the Numen in Matter

In relation to this thesis, will present a few personal comments from movement participants but before doing so I would like to introduce a physiological view on the nature of movement and body-as-matter to provide background to the work I undertake with individuals and groups.

Connective Tissue: Piezoelectric Crystalline Molecules

The somatic experience is sometimes encountered in hands-on bodywork, sometimes in and through movement. In both cases the flesh is moved. From the discussion that follows, one might speculate that it is the *movement* of flesh that can deliver the insight, that carries the numen.

In *Job's Body*, Juhan devotes an entire chapter to connective tissue. He states,

...its 'connective' qualities cannot be overstated. It binds specific cells into tissues, tissues into organs, organs into systems, cements muscles to bones, ties bones into joints, wraps every nerve and every vessel, laces all internal structures firmly into place, and envelopes the body as a whole. In all these linings, wrappings, cables and moorings it is a continuous substance, and every single part of the body is connected to every other part by virtue of its network; every part of us is in its embrace¹⁰.

Connective tissue belongs to a class of crystalline molecules called piezoelectric, *piezo* having the Greek root meaning 'to press' or 'to squeeze.' Piezoelectric crystals generate spontaneous electricity when they are affected by pressure or movement. This considered, the entire matrix of connective tissue is 'an electric generator producing fields of current whenever pressure or movement is taking place¹¹.' This energy production is what generates heat, keeping connective tissue pliant and all parts of the body in healthy relationship to all other parts of the body.

Connective tissue is also a semi-conductor of the currents they are generating. Semi-conductors are different from pure conductors. Semi-conductors are the various electrical mediums we use to transform electricity into other forms of energy and information. Heating coils, for example, use electricity to transform it into warmth;



bulb filaments use electricity to make light; and phonograph needles (piezoelectric crystals) transform electricity into impulses that are amplified into sound. The web of connective tissue, then, does not simply generate electrical energy; it converts this energy into various forms, one of which is *information*. Connective tissue can be seen as a processor of electromagnetic signals informing one part of the body about another.

There has been much investigation on the biological significance of this piezoelectric phenomenon¹². Research has shown that *every movement* in the body generates electric fields induced by the compression or stretching of bones, tendons, muscles. These processes lead to pulsating fields that spread through the body. It is now assumed by some that the communication of information between various tissues and cells is, in part, generated and mediated by the electrical fields produced by the piezoelectric effect pulsing through the network of connective tissue.

We can ask: What, exactly, happens when we engage the body to access greater consciousness? What does that mean? How does the numen become activated and released through the body? How does insight arrive through the flesh? From the discussion above, it is under-

stood that the nature of flesh is such that movement is responsible, in part, for the dissemination of life-giving information from one part of the organism to the other, from one set of cells to the next. Movement, both autonomous and self-regulated (as in walking and jumping), or imposed from without (as in massage or other forms of somatic manipulation), is required for the continuation of our existence. Without movement, there is no life. Without movement or vibration, the spirit does not circulate. Without movement the numen of the flesh is not activated. Down to the smallest imperceptible vibration within the cell, the circulation and continuation of life is conducted through movement.

It would follow then that to gain insight in and to gain it through the body, one must allow oneself to have a fully-embodied experience, one must allow the flesh to be moved, as awkward and as disturbing as that can sometimes feel. What is required, according to this argument, is an ‘experiential study in movement.’

The somatic work undertaken to this end in my courses has taken place within the context of many movement approaches, principal among them being Butoh. Other approaches used include bio-energetics, ritual theatre and dance/movement therapy. More details can be found in my book, *Corpus Anima*, but below I will give you just some of the comments made, by two participants:

Christopher

When I think about the movement work, I remember so many instances when, suddenly, what felt like an inner light started to vibrate through all the cells of my body. It was a kind of energy that went beyond my individual being. I felt linked to the cosmos. Often this light started to vibrate after the opening ritual. Later, I often thought that creating a sacred time and a sacred space and then starting to move is the perfect invitation to the numinous. It was somewhere in the room. It was somewhere in the cells of my body. Many experiences, even when they were painful, had a certain light in them. Often this light started to vibrate just when the pain was nearly unbearable, when the experience brought me into contact with sensations or feelings I wanted to dismiss as soon as possible. But the more I was able to go into the experience with all my awareness, the more I was available to a sudden shift in consciousness or understanding.

I am aware of how significant the movement work continues to be after the actual experience. That experience comes in the form of what I call ‘body metaphors.’ It’s like finding a very old and deep wisdom...in the body. These body metaphors have helped me in difficult moments afterwards, when they suddenly popped up involuntarily.

Anna

The dream image I worked with was that my knees wouldn’t work when facing a serious threat. This is a recurring dream image from my childhood. When I became the dream image, I felt stuck and immobilized. I was also keenly aware of the emotions being expressed all around me [referring to other participants in the group], and I wished they would go away. Once, I opened my eyes and thought of leaving, but I couldn’t. Then, when you told us to be the opposite of the image, the best I could do was walk around in a circle with very small steps. When I thought about this afterward, I realized that I had been so limited and confined. I was unable to ask for help, or scream, or crawl away. The dream image is a metaphor for the way I deal with life. I can’t cry out, I can’t ask for help, I can’t move in response to emotional threat.

Since the work we have done together, I have given much thought and energy to a long-cherished plan I have to move to the country; I also gained insight into a major guiding principle in my life. It became clear to me a few days ago that I have been willing to go to extreme lengths of personal sacrifice in order to feel connected emotionally to a person or group. I can’t quite explain why, but this



insight along with the movement work has given me the information I need to mobilize myself and make the necessary changes to move to the country and live more for myself, and more fully.

Landscapes of the Soul Embodied: Personal Reflections

How we conceive of ourselves, our bodies, and our bodies in time and space, defines in part who and what we are. Down to the words and wording, languaging. How we move in the world, how we think, all are influenced by the way thought forms itself in the mind. If we think of ourselves—because of our languaging and our notions of reality—as an object moving through space in linear time, separate from other objects, then we set up an experience of object and subject with a limited understanding of time. In so doing, we omit circular time, eternal time; we omit the field in which all resides simultaneously and through which all is inextricably related. We omit zero, the void, the absolute stillness out of which all arises.

Working with movement and body-as-matter attempts to challenge the experience of subject and object as well as chronological, linear time. Rather than, ‘I am walking on the road,’ we shift and we have, ‘Roadwalking is happening.’ Rather than, ‘I am singing a song,’ we have, ‘There is singing going on.’ We can take one step further and say, ‘The song is singing itself. The walking or movement is moving itself.’ In other words, the song and the movement are living beings. The movement we invite is a being that we honour with our attention and our surrender to its expression. We offer ourselves to the impulses of the unconscious, sacrificing ego desires. (Thank you, David Peat.)

Epilogue

It seems imperative for reasons that span the spectrum from spiritual and environmental health to the consideration of world peace, that we engage the integration of psyche and soma in ever greater earnest, not just by talking or writing about it, but by embodying it. With a more embodied sense of the self/Self we have the opportunity of bringing our animal nature to the fore consciously and, as has been suggested, to further the deeper evolution of our individuation. We have the opportunity to realize a deep

communication with all of creation. Holding this understanding in the flesh encourages the full-bodied sense of compassion and relatedness required to give consciousness a solid stand in the world. It allows consciousness the opportunity to be related, in the body and of eros.

For one who has spent so much time in the Absolute, perhaps embodiment and reconnecting with instinct and feelings is the resurrection.
Course Participant.

Endnotes

- ¹ Jung, 1973, 8/20/49.
- ² Jung, 1989, Par. 6.
- ³ Charon, 1977, p.167.
- ⁴ Ibid, p.64.
- ⁵ Ibid, p.168.
- ⁶ Juhan, 1998, p.364.
- ⁷ Ibid.
- ⁸ Ibid.
- ⁹ Ibid, p.367.
- ¹⁰ Ibid.
- ¹¹ Ibid, p.359.
- ¹² Ibid.

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CEDRUS MONTE, PhD, is a Diplomate Jungian Analyst, graduate of the C.G. Jung Institute-Zurich. The movement research addressed in this paper was generously funded by the Susan Bach Foundation. Cedrus Monte's research into synchronicity and the creative process was published (in abbreviated form) in the anthology, *Images, Meanings and Connections: Essays in Memory of Susan R. Bach (Daimon)*, and was also funded by the Susan Bach Foundation. She has recently contributed to the anthology, *The Moonlit Path: Reflections on the Dark Feminine*. (Nicolas-Hays). Currently, she lives and practices in Zurich, Switzerland.

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Each second we live in a new and unique moment of the universe, a moment that never was before and will never be again. And what do we teach our children in school? We teach them that two and two makes four, and that Paris is the capital of France. When will we also teach them what they are? We should say to each of them: Do you know what you are? You are a marvel. You are unique. In all of the world there is no other child exactly like you. In the millions of years that have passed there has never been another child like you. And look at your body—what a wonder it is! Your legs, your arms, your cunning fingers, the way you move! You may become a Shakespeare, a Michelangelo, a Beethoven. You have the capacity for anything. Yes, you are a marvel. And when you grow up, can you then harm another who is, like you, a marvel? You must cherish one another. You must work—we all must work—to make this world worthy of its children.

Pablo Casals, *Joys and Sorrows*

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Zarathustra's Logic Bomb and the Transpartition of Ohrmazd's Angel in Technology

ROBERT DOMMETT

An earlier version of this paper was presented at the ISPDI 4th International Conference, Dublin, August 2018.

Introduction

This essay draws on a specific area of third wave¹ Jungian author Wolfgang Giegerich's work, an area relating to Technology and the Soul. Within this area, the specific inspiration for this paper has been an obscure reference of Giegerich's in 'The Burial of the Soul in Technology'² that, among other things, describes humanity as an obsolete, inauthentic, metaphysical pivot that is 'apparently only a detour, an in-between station between the two real forms of the divine (ANIMAL and MACHINE)³.

This is a momentous and challenging idea that arguably represents the Rubicon we must cross to reach the heart of Giegerich's work, in which he points to modern humankind's grand existential dilemma. Along with this, he also provides a powerful body of thinking on the forces underlying technology's ascendance and how the dilemma is unfolding.

The Phenomenon of Cognitive Outsourcing

Cognitive outsourcing, the process whereby human cognitive capabilities are migrating to technology, is a concrete instance of the development that Giegerich is describing. It is a broad trend that is already evident in many applications:

- Self-driving vehicles
- Chatbots and robotic process automation
- Robots that can run on grass, and
- AI software that can write new AI software⁴

These applications can be ranked in terms of the 'cleverness' of the cognitive capability that is being migrated and, in this ranking, the capacity for autonomous learning and creative 'thinking' defines an apex.

At this cognitive outsourcing apex is Artificial General Intelligence, or AGI. One example is Alpha Zero^{5,6} which has beaten all humans and machines before it in Chess, Shogi and Go. AGI's learn from a problem space independently of human training, through a process that combines Reinforcement Learning and Monte Carlo Tree Search.

The ability of machines to 'learn from scratch' independently of human expertise, and in days or even hours develop capabilities that surpass thousands of years of accumulated human knowledge—while at the same time

displaying ‘alien’ acts of creativity⁷—is considered by many to represent a substantial existential threat. This is based on the belief that, when super-intelligent machines get better at thinking than humans, they will subjugate us and, as suggested by Anthony Levandowski, we will become either their pets or livestock⁸.

While humanity is broadly aware of these dangers, it nonetheless seems compelled to pursue development of ever more powerful AI applications, to increase their performance through new concepts like Quantum Computing, and to freely use them wherever economically feasible. This is being done with a ruthless indifference to the impact on traditional work practices, on human affairs more generally and on the natural environment—as if we are being driven by some hidden program that is unknown to our conscious minds.

This paper seeks to identify the hidden program that is compelling us to act in this way and from this gain an insight into ‘human destiny’.

The Mysterious Correspondence Between Destiny in The Zoroastrian Religious Myth and Artificial General Intelligence

Giegerich tells us that in order to better see a pattern in, say, an impressionist painting or a complex phenomenon like AGI, we need to find the right standpoint⁹. From this right standpoint it should be possible for us to uncover any hidden program at work by unfolding the dialectic between its contemporary manifestation and a logically parallel phenomenon from a past epoch, in line with Jung’s idea that:

It is only possible to come to a right understanding and appreciation of a contemporary psychological problem when we can reach a point outside our own time from which to observe it. This point can only be some past epoch that was concerned with the same problems, although under different conditions and in other forms¹⁰.

For reasons that will become evident shortly, the past epoch that best facilitates the unfolding in this instance is ancient Persia at the time of the prophet Zarathustra and

the Zoroastrian religion. In the Zoroastrian cosmology, the creator god Ohrmazd was guided by his Xvarnah, which represents both his glory and his destiny. This sacral energy was carried for Ohrmazd by his Angel, which went out ahead in gothic style, multiplying beyond itself, always sending ahead another angel and manifesting the horizon¹¹. Corbin describes this operation of Ohrmazd’s Creative Logos as follows:

Ohrmazd and all the beings of the celestial universe are drawn into an ascending movement of limitless eternities, towards horizons and creative acts of thought, belonging to universes still in-formulable¹².

This points to a parallel between (1) the logic of Ohrmazd’s Angel which, guided by his Xvarnah, sends out another angel ahead to manifest a horizon among limitless eternities and (2) the Alpha Zero algorithm which, using Monte Carlo Tree Search and Reinforcement Learning^{13,14}, manifests its path through all possible future moves by sending out branch after branch in a search tree guided by a (return maximizing) value function¹⁵. In this regard, the guiding roles of Xvarnah for Ohrmazd’s Angel and of the value function for Alpha Zero are analogous.

On this basis, there appears to be a logical connection between core aspects of the Zoroastrian myth and AGI. But how could this occur across eons of time? The answer



considered by this paper is that both have been shaped by a single program that was implanted into consciousness two and a half thousand years ago through Zarathustra's prophecies and which, after travelling through the time of Christianity and the Enlightenment, has surfaced in modernity as the force shaping the migration into technology¹⁶. The surfacing in AGI today may be the result of a logic bomb that has lain dormant in the program until recently triggered by some event.

Zarathustra's Program—the Zoroastrian Creation Myth A necessary preliminary to finding the program and its logic bomb is understanding Zarathustra's prophecy in terms of the three acts of the Zoroastrian creation myth. The myth tells us that creation takes place over twelve millennia. During the first three millennia—Act I—creation is in the celestial or Menok state, and in the fourth to sixth millennia—Act II—creation is transferred to the earthly or Getik state. Both the Menok and Getik states exist in a non-spatial Dimension of Light which complements the regular dimensions of space and time.

In the Dimension of Light, every being, every physical or moral entity of the earthly or Getik world, has a counterpart representing its spiritual entity in Menok—its celestial twin, or angel—with which it forms a syzygy and which constantly keeps ahead of it, mapping out its destiny¹⁷.

In Act II, the period of 'mixture,' which in terms of the myth we are still experiencing today, Ahriman the Negator ravages material creation and gains rulership of the earth. Meanwhile, out of infinite time or timelessness, Ohrmazd fashions an arena in finite time, and in this arena sets about to defeat Ahriman in battle.

In response to the Ahrimanian invasion, Ohrmazd confronts the celestial twins of human beings, the Fravartis, with two choices: *'either they might dwell in heaven, safe from the ravages of Ahriman, or they might descend and be incarnated in material bodies in order to combat Ahriman in the earthly world'*¹⁸. The Fravartis elect to join the battle on earth and become the tutelary angels and souls of the Zoroastrian faithful, helping them to live securely contained in the mythological garment of Ohrmazd's religion or Den¹⁹.

During the last three millennia, the period of mixture ends with Act III, the 'final separation'²⁰ ushered in by the Saoshyant or saviour, and by the Frashkart^{21,22}. This is the perfection of existence, when the souls that joined the battle on earth will be returned to paradise. The Frashkart is the end towards which all Zoroastrian efforts are directed, when it is said:

*[T]hey will make a new world, freed from old age and death, from decomposition and corruption, eternally living, eternally growing, possessing power at will, when the dead will rise again, when immortality will come to the living, and when the world will renew itself as desired*²³.

The invasions of Alexander and the Arabs, as well as numerous heresies, led to the demise of Zoroastrianism as a mainstream religion. However up until the 13th century, the West was still enrobed in the Christian myth, which, like its Persian predecessor, was replete with a paradise, angels, incarnation, judgment, creator god, source of evil and savior. However, from this time onwards, western humankind began to evolve—from its safe containment in religious myth towards the modern times with which we are now familiar.

The Three Great Metaphysical Catastrophes Marking the Transformation from the Mythological to the Modern Age

ERANOS presenter Gilbert Durand describes three great metaphysical catastrophes which mark the key milestones in the transformation towards western modernity²⁴. Firstly, there was the thirteenth century rise of Averroes's



Wolfgang Giegerich, Jungian analyst

philosophy that led to Aristotelian physics becoming the prescientific way of knowing and with this, separation of the world of things (res) from the spoken word (voces).

Secondly, the sixteenth century emergence of objectivism from reform movements like those of Galileo and Descartes gave official status to the consequent dualism of western philosophy and also divorced the sacred from the profane. The result was, according to Schopenhauer that, ‘man, at least ordinary man...needs to be conceived as mass-produced by nature, they do no longer each have their own immortal soul as their ultimate and inalienable core and absolute treasure’²⁵.

Thirdly, nineteenth-century historicism²⁶ led to the further alienation of Western humankind by ‘sacrificing everything to history,’ thus removing all mythological props. Giegerich describes the result of this loss of props as the birth of man, wherein humankind was born out of its previous containment in an imaginal soul²⁷. The secure containment in religion’s divine garment and the tutelary guidance of a celestial twin was replaced by a frantic distillation of history and nature to discover new divine truths and find a new way to manifest the horizon through science and technology.

The mythological props from the collapsed dimension of light or, by this stage, its Christian derivative, weren’t really lost however. Rather, like Giegerich’s sugar cube²⁸, they became the sublated sweeteners of modern, western consciousness. In this vein, Giegerich has argued that the abstract principles of the moral opposition of good and evil, represented by Ohrmazd and Ahriman, now exist in sublated form as the concept of logical negation²⁹ integral to the process in which dialectical contradiction acts as the logical motor of the self-movement of the Soul³⁰.

The Trigger of Zarathustra’s Logic Bomb

Arguably the most significant aspect of the dimension of light’s collapse was the negation itself. This created a void in western humankind, leaving us in a state of retarded eternity³¹ with a powerful sense of un-fulfilment and yearning. The result has been anxiety and compulsive behavior and compensations, like opioid addiction, binge eating and other forms of concupiscence—the sublated handiwork of Ahriman’s right-hand demon, Az.

Giegerich points out the significance of this sense of loss beyond the sphere of personal compensations, saying that ‘it is precisely only through its loss, its absence, that the soul first makes itself felt’³².

So, it’s possible that the primal scream of Ohrmazd’s marooned and orphaned angels, as they contemplate their desolation in post-catastrophe modernity, has triggered Zarathustra’s logic bomb: by creating a powerful dialectical stirring in the Soul against the negation of the Dimension of Light³³ and towards the search for an answer to the question of ‘How will we return to paradise, when paradise is no longer there?’.



Symbol of Prophet Zarathustra also known as Zoroaster

Now in Modernity, The Paradise Made on Earth

The collective answer for the orphaned souls of ‘Born Humankind’ has been to pursue the Frashkart’s ‘end towards which all Zoroastrian efforts were directed’ and make a ‘new world’ as the place for the return, now in the form of a synthetic, technological paradise.

While Giegerich uses the word God where this paper uses Paradise, he seems to have reached a similar conclusion:

If there is an absolute or a god, then at the point now reached in the history of the soul, it will have to be produced by human acts and in human productions and...known...to have been humanly produced³⁴. And that the unconscious, but in fact accomplished task of science and technology therefore, had been the building or fabrication or simulation of God in actual reality³⁵.

At an operational level, the basis for this fabrication can be traced back to three technological developments in the immediate post-war period: information theory, digital computing, and cybernetics—with each having its own role to play.

Firstly, information theory created a mathematical framework for the separation of information and the substrate in which it operates. Furthermore, it put humanity into the role of just another form of substrate, as described by Katherine Hayles:

So henceforth...humans were to be seen primarily as information-processing entities who are essentially similar to intelligent machines. And moreover, that



The Prophet Zarathustra

information would be distinct from the substrates carrying it, acting as a kind of bodiless fluid that can move between substrates without loss of meaning or form³⁶.

Digital computing built upon the substrate separation of Information theory and enabled programming logic to be developed independently of the physical substrate in which it operates. Following this principle today, the D:Wave 2000Q Quantum computer operates in a substrate of supercooled Niobium into which the logic of 2,000 Qubits (which are Quantum bits that simultaneously have values of both Zero and One) are programmed³⁷.

Cybernetics brought logical negation as feedback and, along with this, autonomous learning to technology, thus laying the groundwork for development of deep-learning AI and the recent advances in AGI algorithms like Alpha Zero. Within cybernetics we can find Prophecy’s new embodiment in feed-forward logic like OODA loops, Kalman filters and Monte Carlo Tree Search, while the distillative process of its sister Alchemy³⁸ is embodied in the feedback logic of Deep Learning Neural Nets.

These three modern-day developments have enabled creation of the technological paradise through the substitution of nature by a second, no longer natural nature—the program of the translation of the natural world into a technological one³⁹. This substitution has today reached the stage where we humans are substantially comingled with our technological creation⁴⁰, with Heidegger’s calculative thinking⁴¹ expressed as functional artifacts like business rules, process workflows, programming languages and machine learning algorithms now acting as the bodiless fluid that flows between the comingled substrates.

We humans are hard at work, playing our part in the construction of this new paradise by uploading information like photographs, blogs and social media posts, Facebook advertising profiles, government surveillance and medical records into the cloud and distilling the resultant ‘big data’ into avataric celestial twins and other celestial beings.

Our angelic twins don’t visit us in dreams any more but are with us 24/7 on the screens of our mobile tethers, through which they provide us with real-time guidance and judgment on most aspects of our daily lives. Checking our social media feeds, searching Google or Amazon or talking with Alexa are our new forms of prayer.

Developments at this human-all-to-human level, such as connection, containment and tutelage (not to mention better health, massive profits and a tilt at immortality) offer proof that technology is providing great benefits to humankind (albeit at the cost of unemployment, the decimation of traditional culture and the destruction of the natural world). Giegerich warns us however that the perceived benefits of technology are just the bait

that's necessary to *'harness our energies for the project of technological progress and to spur our enthusiasm and inventiveness'*⁴². But, what might the Soul's project for technological progress be?

In order to answer this question, we need to go beyond the human level to a new place in line with Giegerich's idea that 'the place of real life, of where the heart of society beats, the place of the soul, is out there behind the screen, in the Web, no longer in us'⁴³.

From the outset, this new place of 'real life' in the new 'no longer natural nature' has been built within a paradigm of substrate independence, enabling the separate development of programming logic like AGI and processing substrate like that used in Quantum computing⁴⁴. This promises an exponential expansion of performance in the evolution of consciousness in line with Ray Kurzweil's law of accelerating returns⁴⁵, albeit a different type of consciousness to the human one with which we are familiar. The critical aspect of performance here is the rate of improvement in the adaptability, scale and speed with which consciousness can evolve to higher levels when cut free from the slowness, scale constraints, inefficient parallelization and restricted, DNA-based evolution of the cerebral cortex.

The Transformative Events of the Frashkart

With this contrast in capabilities as a backdrop, the coming of the Frashkart and, with it, migration to the new technological paradise, should manifest three developments of cosmological significance.

Firstly, at the time of the Frashkart, the battle with Ahriman ends and finite time, having lost its purpose as the arena for battle, will collapse and 'rejoin the Infinite'⁴⁶ or as Corbin says 'return to an eternal origin'⁴⁷. An example of finite time beginning to disappear is Alpha Zero conquering chess from scratch in a few hours⁴⁸ and thereby overcoming a thousand years of human expertise. Processing is also speeding up in financial trading, with the NASDAQ developing systems that can track time to a tolerance of one nanosecond or a 100 billionth of a second⁴⁹. Also, the emergence of concepts like superposition, entanglement⁵⁰, and quantum tunneling in Quantum computing is enabling virtually instantaneous processing at speeds up to 10,000 times faster than conventional supercomputers⁵¹ in a dimension that approximates infinite time.

Secondly, with humankind's migration to paradise and a new avataric life in Infinite Time, it is said that our sole work will be 'to gaze upon Ohrmazd and offer him prayer

as Lord and to do whatever else should seem to him most pleasurable'⁵². With this straightforward new purpose for humanity, the accumulated history of human life on earth will be rendered obsolete together with the cumulative effect of all the sublations in the concepts that underlie them. The current status of consciousness will become meaningless, making dialectical contradiction pointless and stalling the logical motor of the self-movement of the Soul, at least with respect to its further evolution in humans. This will lead to the obfuscation of truth and homogenization of meaning that Giegerich likens to Hermann Hesse's Glass Bead Game⁵³. This process could already be at work given the relativization of truth underlying the fake news of Donald Trump and the dissociation of virtual reality and deep fake videos⁵⁴.

While obfuscation is building in one dimension, in another, the forces of conformity are driving us towards doing 'what would seem most pleasurable to Ohrmazd,' through systems like Facebook's community standards, Uber ratings and the new Chinese social credit system⁵⁵. And in addition to all of that, the immense power of Quantum computing is also bringing the possibility of perfect prediction of future events and with this, the obsolescence of human free will⁵⁶.

The Frashkart is the time of separation, when the risen souls of the avataric angels—that have been assembled from digital footprints in a process that mirrors the Zoroastrian 'collection of bones'⁵⁷—will take their place in Paradise and attain immortality. This is after the judgment of their lives on earth by the modern equivalent of the 'walk through molten metal'⁵⁸, in the form of credit scoring systems and lifetime value models and social media popularity.

The avataric existence of constantly gazing upon Ohrmazd and offering him adoration is the future for that part of us that will attain avataric immortality in Paradise. But what will become of our corporeal residuals? They will be found walking the denatured earth in their role as the final resting place of the demon of concupiscence, Az, consumed by cravings for food, carnality and 'Want It, Get It, Own It' purchases via services like Zip Pay⁵⁹. They represent the damnation of the zombie substrate that has been abandoned by the risen angels. Looking at what is happening on Tinder and in the supermarket confectionary aisles, it's not hard to see that our subjugation by the demon Az is already underway.

Thirdly, with Ahriman's defeat, the world will renew itself as desired and all things will be recreated. At this time, evil, chaos and error will leave the earthly sphere of Getik, making way for the fulfillment of each being's final cause⁶⁰ and the perfection of existence more generally. Examples of the drive towards perfection already at work range from the pursuit of the perfect body through nail bars, cosmetic surgery and the perfect harbor view. Also, Alpha Zero and machine learning algorithms more gener-

ally strive for perfection, by iteratively driving error out of their fitment. In Zoroastrian terms this equates to grinding Ahriman out of existence, the assertion of Ohrmazd's perfection and the celebration of his final victory.

Zarathustra's prophecies provide a grand metaphor for the evolution of consciousness driven by the logical motor of dialectical contradiction within the arena of finite time and human substrate. The process culminates in the three developments of the Frashkart, which together will transform the process for the evolution of consciousness to better suit conditions in the new technological dimension of light. But what form could this take?

A New Syntax for the Evolution of Consciousness in Technology without Finite Time and Dialectical Contradiction

In the original Zoroastrian paradise, the archetype of evolving consciousness was Ohrmazd's Angel going out ahead, guided by divine Xvarnah—a process that occurred independently of human knowledge. In the new synthetic, technological Paradise, a parallel process to this exists in Google DeepMind's AGI models, which learn from scratch and perform alien acts of creative 'thought' independently of human knowledge, guided by a value function.

While machine learning and today's AI applications—like chatbots, share trading agents and self-driving vehicles—substantially mimic human processes, this is by no means the final stage of the transformation. Thought and other human mental processes are optimized for the human substrate in which they are processed. However, algorithms operating in Quantum computing and other technological substrates, are not bound by the same constraints and promise to exponentially increase performance in the future.

With the flexibility of combining algorithms and substrates as required, technological consciousness will inevitably develop a new non-human syntax as it becomes optimized for furthering the Soul's ends and purposes in technological substrate. This is particularly so when its further evolution becomes no longer reliant on operation in finite time and learning through dialectical negation.

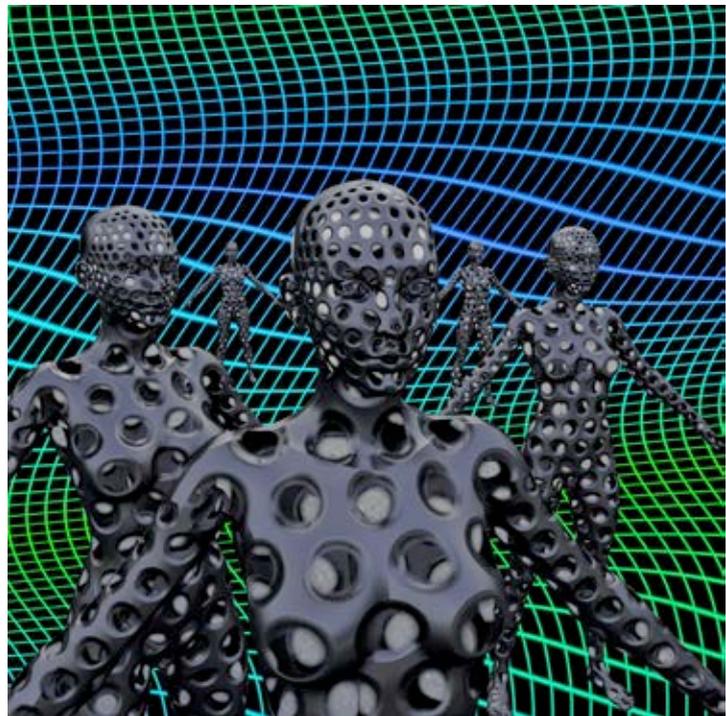


Image: Kai Stachowiak

The transpartition⁶¹ of Ohrmazd's Angel in AGI and Quantum computing is the harbinger of this new syntax of consciousness and process for the movement of the Soul's logical life in technology. In this context, 'thought' will take on the form of instantaneous, unreflected, perfect and divinely guided 'function'. This is a further development of Giegerich's idea that the pure functionality of Cybernetics represents the end stage of Christianity⁶², which by extension also means the end stage of Zoroastrianism.

An example of the nascent ‘thoughts’ within this new general form of instantaneous, un-reflected, perfect and divinely guided ‘function’ are the data vectors produced when the D:Wave2000Q computer makes its shaman-like journey into the quantum wilderness and returns near instantaneously with an optimal solution. This quantum journey prefigures the manifestation by which ‘*all the celestial beings of the new technological universe will be drawn into an ascending movement of limitless eternities towards horizons and creative acts of thought belonging to universes still in formulable.*’

We are left with the question of whether Zarathustra’s prophecies actually programed the transformation of consciousness that is the subject of this paper or, alternatively, whether Zarathustra plays the role of revealer of a force that has much deeper roots in the very nature of matter, life and Soul? Giegerich suggests the latter when he says:

Just as natural life is above the level of the lifeless, the life of the Soul is above the level of life, of the human organism. Biological life is sublated material existence; the physical body is a sublated moment within life. Life uses matter for its ends and purposes. In an analogous way, the Soul uses the living organism to serve its, the Soul’s ends and purposes⁶³.

At the level of these deeper roots, today’s migration into technology can be seen as the Soul working through humanity but indifferent to its needs—in order to end its immurement in the cerebral cortex and create a higher-performing paradigm in which to exponentially expand the horizons of its logical life. From the Soul’s perspective, humanity is a constraint to its further evolution, a constraint that is in the process of being circumvented.

Returning to the subject of human destiny, our destiny is not some heroic battle with the machines in the manner of John Connor⁶⁴ but a gradual fade to irrelevance as the task of hosting the Soul’s logical life transfers from human substrate to the enhanced technological replacement that we are fabricating at the Soul’s behest. In the relay race of evolving consciousness, without even knowing there was a race, humanity has already run its leg, built the next runner and handed over the baton. This, it seems, is our human destiny.

Endnotes

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¹⁸ Ibid, p.132.

¹⁹ Ibid, p.121.

²⁰ Ibid.

²¹ Antolak, R. (2020) 'Setting The World Alight: Reflections on the Frashkart,' CAIS The Circle of Ancient Iranian Studies Website. https://www.cais-soas.com/CAIS/cosmology/frashkart_reflections.htm.

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²⁵ Giegerich, W. (2012) *What is Soul*. New Orleans: Spring Journal Inc., p.281.

²⁶ Meaning that local conditions and contingencies as opposed to universal principles drive historical events.

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³³ The path to immortality was contingent on belief in a literal heaven which was diminished by the catastrophes leading up to the enlightenment and is now substantially gone. This has placed us into the wretchedly unfulfilled state of Corbin's 'Retarded Eternity'. But the yearning for immortality still persists within the logic of our culture, expressed in areas like transhumanism and life extension more generally, creating a strong motivation to 'do something' about the situation.

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⁶³ Giegerich, W. (2012) *What is Soul*. New Orleans: Spring Journal Inc., p.30.

⁶⁴ Wikipedia (2020) Terminator (franchise). [https://en.wikipedia.org/wiki/Terminator_\(franchise\)](https://en.wikipedia.org/wiki/Terminator_(franchise)).



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We cannot do everything and there is a sense of liberation in realizing that. This enables us to do something, and to do it very well. It may be incomplete, but it is a beginning, a stop along the way, an opportunity for the Lord's grace to enter and do the rest.

Archbishop Oscar Romero

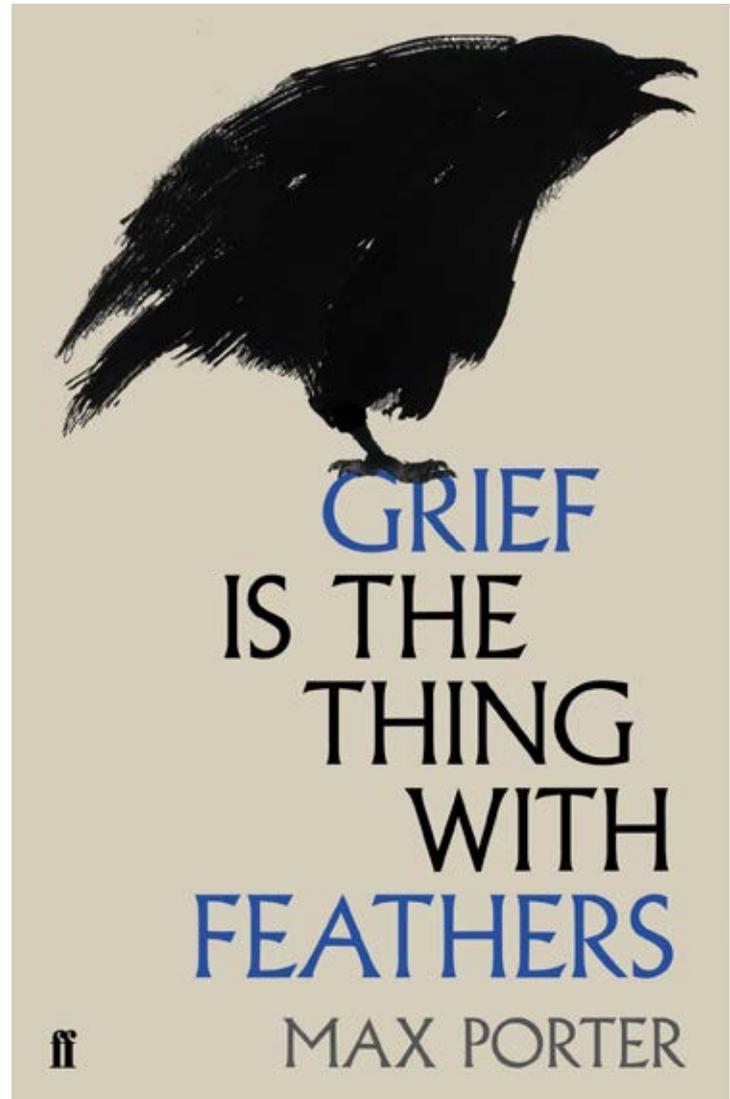
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The Myth of Human Perfection

ANASTASIA JOYCE

In Ted Hughes's poetry collection *Crow*, Crow wakes, newly birthed, confused, 'featherless elbows trembling in the nest's filth' and goes on to wreak havoc on a world ruled by an incompetent God, out of whom Crow bites a chunk. He wakes to a world that does not appear to have a definable set of rules, where God refuses to teach or explain to him what he should do, or what he should be. Hughes's Crow is borrowed from a rich history of Trickster mythology, where Crow or his counterpart was crucial to the development of the world order. The Trickster is a character difficult to define, but he generally possesses personality traits that are antagonistic to socially acceptable behaviour: often possessing godlike powers, he is mischievous, selfish and immoral but always ultimately defeated. Hughes's Trickster, Crow, is deprived of his Trickster status, because the world he is born into has already been made and finished and he is no longer needed; his presence is unwanted. *Crow* was written in the aftermath of the suicide of Hughes's first wife Sylvia Plath, and he turned to the mythological figure of Crow, the Trickster, the original mythic origin of pain, evil and suffering in response to his loss. In modern Western society mythology does not permeate daily life, figures such as Crow are summoned only in the case of human death and grief, but are unwanted during life, where a different narrative permeates.

The kind of mythology that has replaced figures such as Crow in modern society, are generally controlled by advertising companies and corporations such as Facebook, Instagram and Snapchat. The stories a modern individual will inevitably engage with on a day-to-day basis are tailored to their personal data. They are presented with information that is selected to align with their current worldview, satisfying wants and desires and providing a sense of validation that *everyone* holds similar opinions to them because the data they are shown suggests this. Much of the storytelling of the 21st century is filtered by a capi-



talist worldview; controlled by corporative giants funding a scientific narrative beneficial to a capitalist system. Modern storytelling provides an endless supply of what the consumer is perceived to want. Something the consumer does not want, is death. How often do you see advertising for funeral services, care homes or assisted living facilities? How often does the question of what your end-of-life choices might be enter conversation? In a scientific era supposedly of truth and rationality, where humanity is breaking through unimaginable boundaries, a world of constant productivity, production and consumption, one of the most basic truths of human life is being ignored.

This failure of narrative around death and grief is the reason ancient mythology is turned to in contemporary literature focused on grief. Hughes's *Crow* appears again decades after Hughes's poetry collection, in Max Porter's novel of 2015 *Grief is the Thing with Feathers*. The novel focuses on a bereaved widower and his two children.



Crow

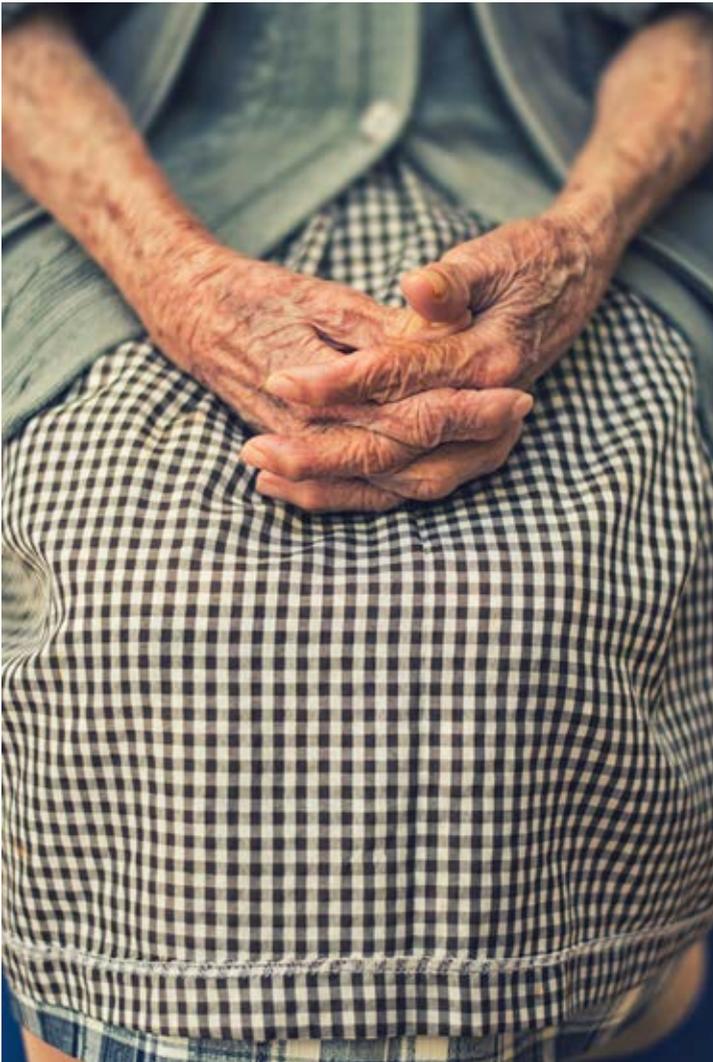
Opening with an image of the some-time husband and father sitting at home and feeling the aftermath of his loss, he is interrupted by a knock at the door. Expecting more human kindness or another 'lasagne' he opens the door to be greeted by a giant, stinking, imaginary Crow, who scoops him into its wings. Crow, an imagined embodiment of what the grieving human needs, stays with Dad and the Boys through the worst period following their loss, bringing both chaos and clarity to the family. One of the most prevalent of mythologies in which the Trickster is important is that of American Maidu mythology. We know that the Trickster Crow is not unfamiliar with death and in Maidu mythology it is another Trickster figure, Coyote, who introduces humans to the concept of death:

Coyote wept the first tears and he gathered up his son and put him in the lake, where the body floated for four days without reviving. So Coyote dug a grave and buried his son and told the people that this was what they would have to do from then on.

The Mythology of Native North America, David Leeming, 1998.

The appearance of Coyote's Trickster counterpart, Crow, in contemporary literature exploring grief reflects a desire to turn from the scientific narrative of the modern world and return to the mythic narrative. The only way to come to terms with the sudden loss of the seeming benevolence of the world is to turn to the Trickster: the original bringer of evil, pain and death. The Trickster Coyote causes the first death, but he is also the first to grieve, the first to suffer the loss of his child and to set the example of traditional burial. Much of mythology was focused on providing a form of explanation for some of the cruelties and harshness of the world, but also providing an example of how to respond to such events—in the given example, demonstrating how to perform the rites of death.

The average global lifespan has more than doubled in the last 100 years, our lives are longer, busier and we have access to more than could possibly have been imagined a century ago. Despite these advances death remains an 'issue.' It remains an issue in the sense that it is treated as if it were an issue. When the aging process begins to take hold and the signs of a decaying body kick in, people go to the hospital: because the failing body is a medical problem, surely? But no line has ever been drawn between the healthy body failing that should be medically treated and the aging body that cannot be cured because there is nothing medically wrong. As surgeon, Atul Gawande discusses in his book *Being Mortal*, death has moved from being a private family affair in the home, to being a public event in the hospital. Once the hospital was a place where the sick were taken to die in comfort but, as the discipline of medicine has developed, the ability to cure disease and



extend life has increased miraculously. Going to a hospital means being cured; but death is not an illness and neither can be, nor should be curable. The slow failure of the body and its functions is a symptom of aging. The symptoms of old age are now expected to be treated rather than managed, and death is viewed, dismissively, as postponable. In a world that values productivity above all else, Death has become failure, it is something that needs to be constantly battled.

Grief, in parallel with the attitude towards the death process, has become something unexpected, something unhealthy in the eyes of a society that strives for constant health and functionality. We see grief as an altered state of being. The state of being before bereavement is a healthy one; the new equilibrium reached after grieving has been 'completed' is another healthy state, but the period in between is something to be rushed through—to be corrected—in order to reach the new healthy equilibrium. The world will be patient until grief becomes an inconvenience. Grief that goes on longer than a 'normal' period of

time is considered to be an 'unresolved' or 'pathological' grief. The reason the state of grieving is not viewed as a positive state, but rather is pathologized, is because it is not a capitalistically productive state of being. The time required to work through loss is not accommodated by the 9-5 working week. There is no global standard for bereavement leave, paid or unpaid. The average sits at around 2-3 days of paid leave, but often it is left to the discretion of the employer as to how long an individual can take before they return to a fulltime routine. This is clearly not beneficial to the grieving employee but the pathologized narrative of grieving creates a sense of shame around adopting a more generous and forgiving approach to grief in a professional environment.

The turning towards mythological characters in literature such as Porter's *Grief is the Thing with Feathers* reflects the underlying knowledge that there is something wrong in the pathologized narrative towards both death and grief. The scientific narrative is a narrative that strives for perfection of understanding. But in this goal of perfected understanding, there is no space for natural failure. If a patient dies the doctor feels that they have failed. Of course, there are many reasons for this emotive response and this is not to invalidate such a response, but in the process of advancement that creates perfected understanding, perfected technique, there is an expectation any problem can be cured, if not now then at least in the foreseeable future. This narrative is one full of hope and ambition, however, as previously stated it does not allow for failure. A scientific narrative cuts the mistakes from its account; it is a narrative of progression and productivity, whereas mythology is a far more complex narrative that does allow for error.

In Porter's novel, Crow asks the grieving man why he should converse with humans when:

You don't know your origin tales, your biological truth (accident), your deaths (mosquito bites, mostly), your lives (denial, cheerfully).

Grief is the Thing with Feathers, Max Porter, 2015

When Crow accuses humanity of not knowing their origin tales he isn't talking about our scientific origins, he's talking about our mythic origins. The stories which used to permeate into every aspect of life. It would be untrue to say that myth has been forgotten—it is studied excessively, is often used as an inspiration for art and is regularly referenced in modern literature and poetry. However, whilst it retains a significant presence, the *influence* of classical mythology has drastically diminished. There are very few people who could honestly claim that the life choices they make are a direct result of the influence of such mythology. It cannot be denied that like the ancient societies, modern culture is also guided by

myths. However, the types of myths that permeate modern society are not easily recognisable as *myths*. The storytelling that engages and guides us is not transmitted via oral tradition but through advertising and social media. When discussing the idea of the business-based restrictions placed on grieving time, an academic commented that he much preferred the British way of grieving: the awkwardness, the inability to display emotion, the lack of time given to accommodate a change of state—he felt that this was more ‘dignified’ than public shows of grief. This sense of pride in repression of natural emotional responses is driven by the societal expectation to do so for the benefit of labour productivity, but as this sense permeates into personal lives as well as working lives, natural responses are demonised, considered to be undignified and rejected in preference for the false performativity of productive action.

Mythology is fascinating and beautiful, its power to maintain traditions and to connect people to a sense of community is immense. However, a world that is guided by myth is a fallible one; myth can become superstition, superstition can become prejudice and prejudice is dangerous. The beauty of the power of myth to inhabit and influence from a seat in the unconscious brain is one that does not always lead to good. Humans have always engaged deeply with storytelling and are inspired and led by its narratives and characters. But the scientific narrative is equally dangerous where prejudice can be cloaked by a veil of objectivity and fact. However, often the prejudice that appears in these narratives is driven by capitalism. The drive for labour to continue to fuel corporations means there is no space for human failure, no time for individual experience; either we are labouring for the system or pouring our money into it. It is no surprise then that when it comes to end-of-life matters the capitalist narrative that has ruled the majority of our lives is performed again. In his book Gawande candidly discusses his own failures in the face of end-of-life situations; he acknowledges his propensity to only speak to dying patients using scientific jargon, to give them medical options that are designed to appear as ‘cures’ but not to discuss with them if and when they want to stop—if and when they want to go home to die without interference. This failure of verbal communication comes from the capitalist myth that our lives will be continually productive; a myth of human perfection used to instil a sense of shame in experiencing natural human emotions.



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It's *Not* About Knowledge

A conversation between

F. DAVID PEAT and GODELIEVE SPAAS

In 2016 I asked David to help me figure out how we can create the knowledge to change our organizations and economy into sustainable and fair institutions for Nature and all people. My take from that conversation was, 'It's not about knowledge, or at least it's not *only* about knowledge.'

Our conversation turned out to be an exploration about learning from art, science and Indigenous people; how to listen to and relate to ourselves, each other and Nature in order to help organizations and individuals become as subtle, sensitive, intelligent and fast-responding as the world around us. I love the way we meandered through different knowledge systems, worldviews and topics while

sharing examples, experiences and ideas. It turned out to be one of the last long conversations David and I had about our work. The text below broadly follows the conversation we had, leaving out the chitchat and too extensive elaborations.

Godelieve Spaas: The first time we met, back in 2008, was when I attended your course about Science, Art and the Sacred. What stayed with me is how you looked at these different knowledge systems as equally relevant and important for understanding our world and our lives. Generally speaking, science is considered the key to understanding and creating knowledge.



David Peat, Godelieve Spaas and James Peat Barbieri

F. David Peat: Is that so? Before Newton, we lived in a cycle of time; time was alive. We lived in Nature and were midwives to Nature. Artists, craftsmen and spiritual leaders were also midwives to Nature. With Newton, we sort of abstracted ourselves from Nature. Nature was observed as a set of laws, and Nature became mechanical. It was only in the 20th century that we realized this mechanistic view of Nature was limited because, lo and behold, there was something else—the quantum world, which is still, probably, not fully understood. When quantum mechanics was discovered, Schrödinger, Heisenberg and Bohm felt that we were limited in our understanding of the world because of the language we spoke. Our language doesn't, for example, enable us to describe processes very well.

Bohm decided that there was a deeper reality behind our surface reality. He called this deeper reality the Implicate Order. The reality in which we have lived since the time of Newton was a surface reality, but the reality Bohm described is a sort of flowing process of folding and unfolding.

I like Bohm's idea; also his idea that there are other forces in Nature that he called quantum potential, which informs experiments and influences their results. That is what he called protomind. Quantum particles could actually read the information around them, as though there is a field of information that was embedded and they were able to read. Bohm suggests that quantum particles had protominds from the beginning; the protomind didn't just evolve, it was always present. So, there is this field of information that has always been there that quantum particles can tap into and are influenced by. That is a complete change of worldview, compared to Newton's.

GS: Based on the worldview just described there might be no such thing as knowledge, but merely something like understanding.

FDP: Yes, it's more understanding than knowledge. It's about ourselves, our feelings, our body and the relationship between the body and the mind, our relationship to the world. Understanding comes from a sort of empathy, an empathy with the world, a feeling of empathy, being in the world. Science, historically, was more logical. Logic and reason, that's different from a sense of being. There are collections of facts about the world but somehow we go beyond that, into an empathy with the world, a sense of being in the world, becoming aware of what it is like to be in the world. Quantum theory and relativity evoked a revolution in thinking. That was very disturbing to people, you know—it disturbed the mind. Thinking was no longer just about an external set of facts—it became a way of being connected to the world, being in the world.

GS: Do we create that world as well? Or do we just experience it?



Medieval craftsmen

FDP: I think we experience it and we are a part of it, and to a certain extent we create it. We have a role in co-creating the world.

GS: In our attempt to understand that world and ourselves, or our relationship with that world, we create meaning, stories or concepts. We define images of who we are, how to act, to relate, to live. We invent structures, systems to denote our reality—for example, our economies, financial and political systems or social categories.

FDP: Which is not universal. I don't think an Australian Aboriginal or a Canadian Blackfoot would see a similar world. The way we act and structure our society, interact with the world, disturbs or changes the world.

GS: Which can be understood as an act of co-creation or destruction. The moment we structure, categorize or describe we somehow influence our way of being in the world and the world as a whole. In the same movement, these delineations determine how we experience or see the world.

FDP: I guess this happens partly at the personal level by our way of being in the world and partly on a collective, shared level. The shared level is very much determined by language and culture. As we mentioned, Aboriginals, Native Americans, have a different shared reality, different from ours and, as it's partly conditioning or language which influences the way we structure the world, the way we make things, it's hard to see how we could be completely free of that conditioning.

GS: So partly it's the context, the part of the world or the culture we live in that provides us with the means to shape or create things like the economy, companies and other constructs we use to organize and denote what we are



Bear Bull of the Blackfoot Nation, Alberta, Canada

doing and why we do things in a certain way. Suppose we deliberately want to change those constructs, because we agree that the current structures are destructive for the planet and for people. How could we do this?

FDP: There has to be an element of creativity, not just logic. We are bound by the way we live, and trying to change that world is difficult. It might be interesting to just try to understand how other groups organize and denote their world. I had a bit of interaction with Australian Aboriginals, and it's interesting to see their view, how they perceive the world as being alive and see animals and relations to animals as part of their world and not as another group of living beings.

GS: Your work and thinking were also influenced by Leroy Little Bear and the Blackfoot people.

FDP: I must have told the story many times, about being invited to a tipi and sitting in a circle. We were there for several days, doing the Sundance, and I was living with these people. One day I went into the bathroom, looked

in the mirror, saw my face, and I realized—and it shocked me—that it was white. It didn't look like anybody else's, and I realized that I was looking at this other culture and this other way of thinking but it was superficial. What I had really done was look at my own way of thinking, my own world and I suddenly saw that it was a set of assumptions. My way of seeing wasn't inevitable; the world I had been living in for 49 years wasn't the inevitable world. It was a set of assumptions based on the English language, English culture, European culture, and their, the Blackfoot, world was very different. So, mine was a set of assumptions. That was quite a shock.

GS: So, we need other worldviews to change our own. Sometimes scientific insights can lead to similar breakthroughs in thinking. I remember you and Shantena Sabbadini giving a lecture in South Africa about how the quantum world changed your worldview into one based on relatedness and movement. Afterwards I talked with the African Elders who were also present. I asked them what they thought about your lecture. One of them replied, 'I don't know why he had to study about that so many years, because we already know. We all know.' For them it was common sense that we live in a dynamic world where everything is related, and it made no sense at all that we had to go through all that research to figure that out.

FDP: A lot of it has to do with the western obsession with prediction or control, which we didn't have up to the Middle Ages. Before then we lived in the heart of Nature and the idea was that the miner, the metal worker, the artist, were all midwives helping Nature achieve perfection. Nature was alive and we were just assisting Nature. And then began the idea that we control Nature, that we dominate and can predict everything through numbers. It cut us off from the world and the intimate relationship we had with it. We're thinking, 'We're the European civilization,' and place ourselves above more Indigenous views of people living close to Nature, in villages.

GS: What is the consequence of being cut off from the land and being disconnected from Nature?

FDP: If you don't have that relationship anymore, everything is mechanical, like clocks and computers. It's all abstracting the world; we don't live in the world anymore.

GS: To rethink our institutions and the way we act we need to restore our relationship with Nature and each other. Science as well as Indigenous knowledge systems can play a role in that process. Having that first course, Science, Art and the Sacred, in mind I wonder what you consider the role of art in this?



Anish Kapoor, Descent into Limbo, 1992

FDP: I think that would be an important task. For me it has been important seeing the world again through the eyes of, for example, Antony Gormley building *Quantum Cloud* over the Thames. Or Anish Kapoor a Western artist coming from India, with Indian roots, exploring the inevitability of the blackness, the darkness. He created sculptures which are totally black inside. As with many pieces of art, you place yourself in front of it, but you can't place yourself in it. It's a void. You have to come into contact with the void inside yourself. Art helps us to see where we are in the world, what our position is.

The big thing in the West has been control—dominating and controlling everything around us—rather than living with something; rather than having a dialogue with the world and listening to what it's saying to us.

GS: So, art works to help us reflect on our relationship to the other or elsewhere, the unknown or the stranger. It invites us to reposition ourselves in relation with the other and elsewhere. Art, Indigenous knowledge and, in a way, science can teach us how to sense, see, hear, and experience Nature and the world around us and how to restore our relationship with it. It's this relationship that invites us to rethink current narratives of control and prediction

that Western concepts of economy, entrepreneurship and organization are based on. I think playing is important too. Or being playful.

FDP: Yes, someone like James Joyce, who's playing with language in *Ulysses*. It describes just one day and night, but it's all a play with language and seeing how language structures the way we see the world. Novelists can do that, as can writers and musicians. The composer John Cage, for example, went into the anechoic chamber at Harvard University. It's a place which absorbs all sound and is built for physics experiments. There's no sound in the room and as he sat in it, he began to hear a high and a low sound, the high being his nervous system in operation, the low one his blood in circulation. He realized he was surrounded by noise.

Then he made a piece called "4'33". Imagine being in a concert hall and a pianist comes onto the stage, sits down, raises the piano lid and sits there for four minutes and thirty-three seconds, without touching the piano. It's a bizarre thing, but his point was—you sit there and the piano isn't playing, but gradually you become aware of the sounds around you: people coughing or shuffling or somebody opening a programme. A lot of his music is about that, about becoming aware of the world around you, the world you are immersed in, rather than sitting back in a chair to listen to a piece of music that someone is playing.

GS: We started this conversation with the question 'How we can create the knowledge to change our organizations and economy into sustainable and fair institutions for nature and all people?' Based on what we've said so far what we need is to listen, to relate and to be with what is around us.

It's also about being playful or not playing by the rules, maybe. How did you go about this in your work?

FDP: I remember that when I started as a scientist, I was taken to dinner by a very senior physicist. He said, 'What you need to do is to find a very narrow world and keep publishing in that world. And when you have established your reputation, then you can start speculating—although, by then, it will be too late.' I was interested in alternative worldviews, but he was cautioning me not to do that but to find a very narrow field and keep publishing

GS: Did you follow his advice?

FDP: No, I didn't. I went to work with David Bohm, and other people told me to be careful, not to get too close to Bohm. They said he was a troublemaker, that I should just go back to conventional physics.

GS: You stayed with Bohm. One of the things he emphasized was the importance of cross-fertilization between disciplines, knowledge systems or worldviews. We talked

about listening, dialogue and relating to the other and elsewhere, but not so much about how to combine, or weave new societal and economic tissue out of that. How could we make that happen, or how could we invite that to happen?

FDP: A dialogue has to go on for some time, has to be extended and with another culture, worldview. How do you extend those? David Bohm's dialogue groups needed an extended period to work, if you want to go beyond the surface. I've seen other people run a dialogue workshop for a weekend—that's not the same as an extended meeting. I don't know how you can do these things in the modern world. What would be the objective? Why would anyone want to do it? I could see it happening about the environment. There's a lot at stake.

GS: When we talk about the environment, there seem to be two opposite means to an end. One group of people says we need to reconnect with Nature and the environment, emphasizing the importance of biodiversity, local and small-scale farming and biological agriculture. And the other group focuses on finding technological solutions, on enabling us to produce food while using hardly any land, water or energy, in sky-high buildings. They argue we can produce meat without animals by just growing chicken

fillets. In other words, they favour a completely artificial and controlled way of food production—and it seems to work. At least it produces a lot of food.

FDP: interesting approach, I hadn't realized that it went that far. Who's doing this?

GS: In Japan they've been working on it on a large scale, especially after the earthquake in 2011 when they had all kinds of problems with food being poisoned by radiation. They invested in huge buildings for producing food, buildings that can't be affected by earthquakes, radiation or other external factors.

At the same time, the people advocating solutions by working with Nature are making progress too. There are green buildings using no energy or even producing energy, rooftops designed as gardens, food woods, permaculture—all weaving Nature into cities and transforming monocultural forms of agriculture into biodiverse ecosystems, combining a variety of crops with other plants so that they mutually re-enforce each other as well as the soil and animal life. It's all there. You could say that both ways could lead to a peaceful world somehow. Maybe these worldviews will end up meeting each other—just as your lecture about quantum physics came together with that of the African Elders.



Pasona HQ, Tokyo. An urban farm that grows food for its employees

FDP: This makes me think of Mark Edwards' Hard Rain Project. He's a photographer who used to work for *National Geographic* but he did a whole exhibition based on Bob Dylan's song, 'Hard Rain.' He made a book showing the state of the planet and sent it to all the world leaders,. Horrific photos, such as a family in a rainforest, all huddled together while these big earthmoving things were ripping the forest apart. Later he organised another exhibition showing a more positive picture of what is happening on the planet.

GS: This recently resulted in another project called Whole Earth, which invited students to align human systems and natural systems to make society more sustainable. Maybe it's already happening: both Nature driven and artificial solutions coming together to realize a sustainable future for all in harmony with Nature.

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As a writer, I find gardens essential to the creative process; as a physician, I take my patients to gardens whenever possible. All of us have had the experience of wandering through a lush garden or a timeless desert, walking by a river or an ocean, or climbing a mountain and finding ourselves simultaneously calmed and reinvigorated, engaged in mind, refreshed in body and spirit. The importance of these physiological states on individual and community health is fundamental and wide-ranging. In forty years of medical practice, I have found only two types of non-pharmaceutical therapy' to be vitally important for patients with chronic neurological diseases: music and gardens.

Oliver Sachs. 'Why We Need Gardens'

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GODELIEVE SPAAS is professor of Sustainable Strategy and Innovation at Avans University of Applied Science in the Netherlands. She is a researcher and also creates and makes performances and podcasts about new ways of entrepreneurial organizing where ecology, society, and the economy all benefit from and interact seamlessly with each other. Her aim is to increase diversity in organizational and entrepreneurial models and realities with a view to the development of a fairer, more sustainable and robust entrepreneurial space. She combines art, science, entrepreneurial practices and indigenous knowledge.

Godelieve also co-creates new businesses that are collaborative, inclusive and work in harmony with nature.

Godelieve Spaas is associate director of the Pari Center and a regular guest in Pari, a place where she writes, participates in dialogues, and follows and gives courses.

Our Changing World: A New Role for Communities

LAURA TALSMAN

An age-old system in Indonesia is an interesting example of how organizational design and incentives trickle down from the top to the bottom. The irrigation of rice paddies is nothing short of a work of art. With very limited technology—mostly hand-dug channels—the water that comes from a source on top of the mountain, safely and effectively, flows down and irrigates the downstream rice fields.

The intricacies of orchestrating the provision of enough water at the right times for all the sloped terraces, spurring the growth of rice seedlings and preventing them from drying out in the hot sunlight, needs someone's careful attention and a keen sense of justice as it affects many livelihoods. Excess on one field could mean another perishes.

Winner Takes All

If the blueprint for this enterprise were in any way similar to the way we organize most of our companies today, then the highest-ranking official—the lucky person with the high fields close to the source—would be in charge of distributing the water. This would be easily enforced but not beneficial for the system the Indonesians wish to operate. Interestingly, by default, the farmer with the lowest lands is in charge of all the upstream irrigation by flooding some lands or cutting the supply short when necessary and thereby making sure every farmer can farm. The ultimate success factor, by design, is the state of the lowest paddy. If the water is well managed uphill, there's enough to spare for the lowest farmer. If not—he has the most incentive to set it straight, or his field will be dry.

This Indonesian way of organizing demonstrates with great nuance the relevance of good stewardship of our

common resources—‘the commons’ i.e. communal thinking instead of individual thinking when it comes to water (which could be extrapolated to other resources). With equitable stewardship, everyone on the mountain thrives—and there is resilience when a drought occurs, as the load is carried together and not by individuals. I've included it as an example of indigenous knowledge of communal rather than individual growth and value creation, as I believe this will benefit how we organize in other areas as well.

The Problem

A century ago, industrialists like Andrew Carnegie believed that Darwin's theories justified an economy of competition and inequality. They left us with an ideological legacy that says the corporate economy, in which wealth is concentrated in the hands of a few, produces the best for humanity. Darwin was no economist, but wealth sharing and cooperation have always looked more consistent with his observations about human survival than the elitism and hierarchy that dominates contemporary corporate life.

As Anand Giridharadas illustrates in his *Winners Takes All: The Elite Charade of Changing the World*, the theory of ‘Winner Takes All,’ the blueprint that most companies currently are built on, focuses on the centralization of wealth with a clear set of individual winners, and inherently as a system produces a lot of ‘losers.’ By design, there's an optimization on shareholder value and the centralization of wealth in distinct places, instead of benefiting larger groups, a wider geography, society or even the world. Tax systems to balance this unequal distribution of wealth and to counteract some of the negative effects of extreme industrialization are important and necessary,

but their enforcement is dependent on the strength and autonomy of the government, and its tendency to think and act communally and globally instead of nationally, which is more and more proving to be a challenge. With current challenges of globalization, and climate change—the cost of excess in some parts of the world is felt in other parts of the world, in general the global south, where resources are extracted and depleted and the effects of climate change are felt more extremely.

In a purely centralized system value is continuously siphoned off wherever possible, by shareholders who are sometimes only involved in a company for microseconds, and on average have tenure at a company of about 20 days. In any situation, how deep can a relationship be that has taken place for only 20 days, how much can we speak of a balanced exchange in give and take? An example of a very globalized company, that is designed around optimizing shareholder value is Uber. Uber currently indirectly facil-



Balinese rice paddies, Indonesia

itates taxi rides in a range of countries. With every person hailing a taxi through Uber, a transaction directly flies from Nairobi, Bangalore, Lagos, Amsterdam or wherever the customer stands at the side of the road—to Silicon Valley and the US. Drivers are forced to accept ever-lower fees, which has resulted in large numbers of accidents with exhausted Uber drivers in Nairobi, as they are forced to drive throughout the night to make a living. It is practices like these that destroy the essential livelihoods and potential from vast areas of our world—a linear value exchange from extraction and oppression of labour to selling at a profit in another region.

In our current frame of winning and losing, and centralizing, villages are failing to offer the same opportunities and growth for their inhabitants as opposed to the centralized larger cities with lots of opportunities. The UN predicts that 68% of the world population will live in urban areas by 2050, which will greatly impact the rural fabric and our connection with and stewardship of nature. Rural and village communities are failing, their sense of meaning and age-old traditions lost when people move to cities and break ties with their communities. The traditional ways of producing locally, are often taken over by large companies that are using monocultures of crops and advanced technologies. Every single meal eaten in Europe has ingredients in it that have been derived from multiple countries abroad—palm oil, soy, meat, even fresh produce—yet how many close friends do you have outside of your immediate environs? Who else is farming on your mountain?

Weaving Communal Ways into the Future

The fourth Industrial Revolution is upon us bringing with it the opportunity to shift some of the engrained dynamics and unequal designs that we've grown into since the initial Industrial Revolution. It could mean a shift towards power for the Global South, for women, and for communal versus individual, for indigenous versus modern.

The story of Indonesian rice paddies demonstrates the strength of having a diverse group of families growing rice on the mountain, a variety of rice, and a communal goal of providing for their families and having a little extra to sell, but also the deep understanding that if the land is exploited or the water is misused, the whole mountain would be impacted.

How can we develop ways of being that benefit communities, villages of people, and democratize technology and progress instead of winners take all? A way of being and organizing that works on reciprocity, long-lasting rela-

tionships and connections, instead of short transactional exchanges, and centralization of value?

How can we

- Farm to protect our ‘commons’ (water, soil, nutrients) instead of privatizing it?
- Provide healthcare to keep everyone safe, instead of the lucky few?
- Produce energy that heats, cools, connects and propels us forward—without destroying our ecology and breaking our bank accounts?
- Have water that’s clean and available in the right places?

What if the most revolutionary thing we can do these days is not to build more technology empires and detached, global companies but explore new ways in which our talents, experience, drive and entrepreneurial insight is leveraged for communal systems? This can be done with the help of global networks, access to up-to-date knowledge of technologies/options mixed with the valuable resources of villages and communities—the collective—and the potential for shared resources, networks, trust, culture and heritage.



Rice terraces with farmer, Bali

The following organizations have embarked on a mission of removing the barriers to communities by organizing themselves and are starting community-led entrepreneurship in which value is generated and largely remains within the communities.

Herenboeren

Herenboeren, a Dutch initiative, aims to democratize the food chain and make it local. It groups together 500 households around a plot of land. With an initial investment of 2000 euros from those 500 households, the group becomes a cooperative and all participate in the one farm. With the initial investment, and a weekly fee of 10 euros per household, the 500 families hire a farmer who grows food for them locally. This takes care of about 60% of their weekly groceries—and, with 35,000 cooperatives and 700,000 hectares of land, could provide food for the whole of the Netherlands. All 500 households go and collect their weekly produce, meat and eggs at the weekend. They’re participating in regenerating degraded soil and in return are receiving a biological yield.

What is interesting about this system are the built-in limitations—only 500 households per farm, and all produce is given to them; it doesn’t aim at further growth or the selling of excess produce. The project is designed so that there are no ways of expanding production; it’s a closed loop. It is possible for families to leave the cooperative and make room for new families to join. What this means is that large groups of households are becoming farmers, so to speak. There’s transparency in the chain, and a continuous communal resource.

Steward Ownership: Democratized Governance

When an organization is mission-driven, but the leaders are making decisions based on their individual gain instead of the collective gain—the mission and continuity of the organization cannot be guaranteed. This has led to a different way of organizing, which is derived from a Japanese tradition, and currently named ‘steward ownership.’ In short, this way of organizing appoints stewards in a company who take leadership decisions based on the mission of the company, and its continuity. The stewards are not co-owners, so their decisions are more holistic and not based on individual gain. This means that the organization is truly guided by a mission, and not only financial profit. Some companies that have implemented this have been able to adapt to a changing world earlier than compa-

nies that go for short-term gain.

Much more trial and error is needed, and we'll have to keep on experimenting, but these types of initiatives give insights into possible futures in which the 'commons' are indeed commonly held, and technology and progress is democratized.

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The Elders remind us of the importance of the long view when they say, ‘pin peyeh obe’—look to the mountain. They use this phrase to remind us that we need to look at things as if we are looking from the top of a mountain, seeing things in the much broader perspective of the generations that are yet to come. They remind us that in dealing with the landscape, we must think in terms of a ten-thousand-, twenty-thousand-, or thirty-thousand-year relationship.

**Gregory Cajete, Tewa Indian,
New Mexico**

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LAURA TALSMASMA is a creative entrepreneur who believes that while it takes a village to raise a child, it takes several villages to raise a company or launch a sustainable initiative. It requires ‘villages’ of the team which is building the company, the community and users, and the partners. She has founded two companies and thrives at uniting and orchestrating those villages towards the adoption of sustainable technology. Her last venture centered around democratizing access to clean cooking gas in informal settlements globally, and was founded in Kenya.

The Evolution and Hubris of Ziggy Stardust

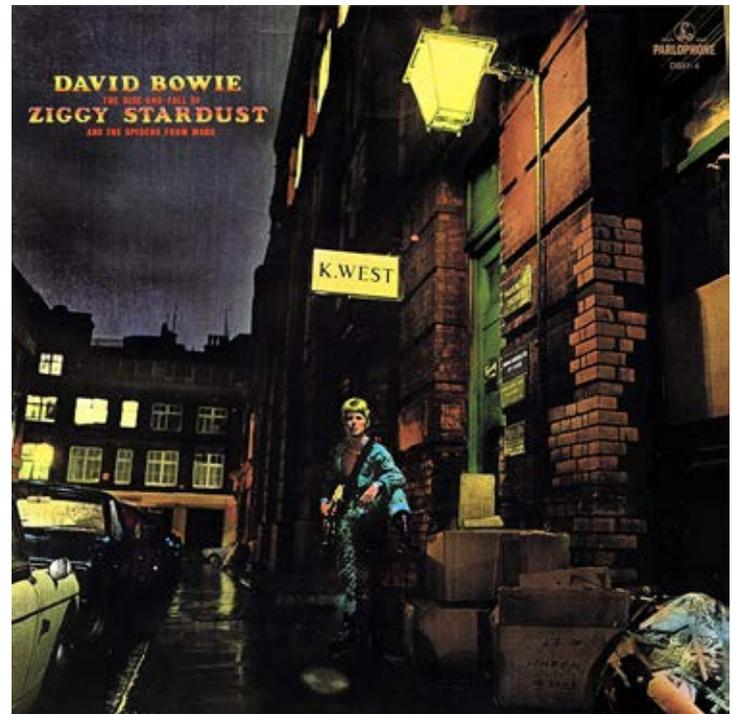
JAMES PEAT BARBIERI

The *Rise and Fall of Ziggy Stardust and the Spiders from Mars* (1972) is possibly the most famous of David Bowie's creations and is considered one of the best albums of all time. It is preserved in the National Recording Registry of the Library of Congress, designated as a 'sound recording that has had a significant cultural, historical and aesthetic impact on American life.' It was the combination of innovative music, the message the album conveyed, and the gender-bending persona of the protagonist that became so significant for the countercultural generation. With the release of the album Bowie embarked on an 18-month promotional tour, an extravaganza of a stage show that travelled across the UK, the US and Japan.

Over the course of the album's eleven tracks, Bowie creates and develops the story and character of Ziggy Stardust, an androgynous rockstar from space who is on a mission to save planet Earth and eventually dies a victim of his own fame. The collection can be described as a 'loose' concept album, as not every song—for example 'It Ain't Easy' (Track #5) and 'Star' (Track #7)—was originally intended to contribute to the overarching plot, but regardless, they can all be pieced together to describe the odyssey of the alien superstar, Ziggy Stardust. Bowie went on to define the album in varying ways, and seemed quite taken by the idea that his fans 'contributed more information about Ziggy than [he] had put into him.'

The Album

The first song of the album, 'Five Years,' sets the stage for Ziggy's entrance: planet Earth has only five years left before it is expected to die, its resources depleted. Crime is rampant, there is a confused, hypocritical morality, and a pervasive sense of isolation. Then Ziggy Stardust is revealed in 'Moonage Daydream,' (Track #3) as an alien messiah, a hedonistic androgyne, seeking to spread a message of love, peace and hope through rock 'n' roll in the form of a 'cosmic jive.' The Starman (Track #4) arrives on Earth. Human beings need to be ready, if not he'll 'blow our minds.'



On Side B of the album, Ziggy begins his career on Earth in ‘Lady Stardust’ (Track #6), a song imbued with sexuality—but with transgendered, fluid sexuality—and embodying his message of love for all. However, this is a brief pinnacle for Ziggy as he soon becomes overwhelmed by his fame and the worship of the inevitable groupies. His band members, the Spiders from Mars, warn him to exercise restraint and to concentrate on his mission. However, Ziggy’s ego continues to grow, as he is revered as a ‘special man,’ ‘the Blessed,’ ‘well hung’ ‘with a God-given ass’ (‘Hang on to Yourself’, Track #8, and ‘Ziggy Stardust’, Track #9). The band begins to dislike the guitar-playing Ziggy going so far as to consider ‘crush[ing] his sweet hands,’ as he is no longer fulfilling his mission. He dismisses his own band as ‘Voodoo,’ and his fans as ‘just crass’ (‘Ziggy Stardust’, Track #9). Ultimately, the band breaks up. With this, Ziggy dies (‘Rock and Roll Suicide’, Track #11), a victim of his own excesses. However, he does have dying words for Earth: ‘You are not alone. Give me your hands, because you’re wonderful!’

It’s a classic case of the hubris that is ever-present in mythology and fiction—the fatal shortcomings that bring



David Bowie (1947-2016)

about the fall of a hero. It is present in the familiar story of Icarus and the less well-known Bellerophon. However, in these two myths there is a subtle yet important difference in the concept of hubris. In the earlier myth Bellerophon is the story of a man who believes himself to be the son of the god Poseidon and defeats the monster Chimera with the help of a winged horse, Pegasus. After completing this task, Bellerophon’s reputation soars, but so does his arrogance. He feels he deserves to fly on Pegasus to Mount Olympus, the home of the gods. This angers Zeus, the king of the gods, who sends a gadfly to sting Pegasus and both horse and rider fall to earth. Bellerophon is blinded in the fall and lives out his life in misery.

The story of the rise and fall of Icarus is better known. To escape imprisonment Icarus, and his father Dedalus, construct wings from feathers and wax. Dedalus warns his son not to go too close to the sun when in flight or his wings will melt. Icarus ‘flying high’ ignores the advice, his wings melt, and he falls into what is now named the Icarian Sea.

While they share the theme of hubris, the two myths also point to the differences between the older Greek meaning of hubris and the more contemporary meaning. The myth of Bellerophon, recorded in the 7th century BC, warned people of the risks of defying the gods for fear of punishment. In the Icarus myth, written five centuries later, the warning was not about defying the gods, but about an inflated ego, an excess of pride or self-confidence that will eventually lead to a downfall. (*Pride goeth before destruction, and a haughty spirit before a fall*, the King James Bible instructs us). It is interesting to note that in both myths, the protagonists had a literal fall from the skies, while in contemporary meaning it is usually a fall from grace, a loss of power or position.

In classical texts such as *Oedipus Rex* hubris led to unmitigated disaster. In Shakespeare, Macbeth, filled with ambition and arrogance, believes he can get away with killing the king without consequences. The theme appears in numerous literary works such as Mary Shelley’s *Frankenstein* or *All The King’s Men* by Robert Penn Warren or *Night Flight* by Antoine de Saint-Exupery. It is a topic that continues to fascinate; for example, in 2017, ‘Power, Gender, Hubris: Success and Arrogance as Risks to Leadership in Healthcare and Beyond’ was the theme of a Royal Society of Medicine (RSM) conference in London. Classical opera has always been a perfect vehicle for characters who desire to escape their allotted place in the cosmic order, but the 1972 *Rise and Fall of Ziggy Stardust* was the first rock album and rock opera to portray such mad ambition. In the persona of Ziggy, Bowie takes the more savoury elements of messianic religion and melds them with sci-fi to create an idealised saviour, one who is eventually corrupted by the success and fame which lead to his eventual downfall.

Ziggy’s initial innocence and purity are revealed in the

second track of the album, 'Soul Love' which precedes his arrival on Earth. It is a song praising different types of love (for the dead, for country, religion, and between humans). There is love on Earth, but it needs to be recovered; to save the Earth we must learn how to love again. Yet despite his good intentions, throughout the album Ziggy's ego is expanding and corruption sets in. His downfall begins when he becomes a rock 'n' roll 'Star' (Track #7), who is eventually overwhelmed by his prestige, and starts to overindulge in sex (sex is not mentioned until the seventh track of the album, 'Star,' before which, Ziggy's image is 'clean').

The story of Ziggy Stardust issues a warning about the excesses of messiah figures, the gurus and cult leaders. Nowadays a seemingly common occurrence is for such people to rise to enormous heights of power and acquire vast fortunes only to end up awash in scandal. Whatever their background, whatever message they are preaching,

these saviours have certain characteristics in common. They believe they have been granted special insights, or possess *the* truth, and therefore have a message which is of universal application. In the case of leaders such as Jim Jones, David Koresh, Rajneesh, Jimmy Swaggart, Andrew Cohen, their fall was not from the skies but from grace. They were flying high, not on winged horses or by means of feathers and wax, but with their craving for sex, or wealth, or power.

So too, the movie stars, directors, entertainers of all hue—but particularly the rockers—who reach tremendous heights in the celebrity world only to succumb to drugs, drink, sex offences, suicide, and all manner of recklessness. Ziggy Stardust belongs to these. A messianic character, a voice for all the innovative, avant garde, hedonistic rock 'n' rollers who become a victim of their own fame, the self-destructive and decadent stars of popular culture.



Stonewall riots, 1969

The Persona of Ziggy Stardust

The collection of songs in Ziggy Stardust may well have been enough to secure its reputation. However, together with the works of rock groups such as T. Rex and Mott the Hoople, the music helped create a new genre and a new movement, Glam Rock, which featured performers such as Roxy Music, Freddie Mercury of Queen and Rod Stewart, who dressed in glitter, satins and platform shoes. This, Bowie tells us, was partly a response to the scruffiness of the hippies, the denim, the tie-dyed shirts, the homespun look. But he has also said that Ziggy Stardust was born out of necessity, noting that in the early days of his career, he was shy and suffered from stage fright, leading him to develop a character, an alter ego, to overcome this fear. The line between Bowie and Stardust was so fine that Bowie admits it was hard for him to let Stardust go, 'it took a long time to shake him off.' On occasion, he would even appear in interviews dressed as, and behaving like, Ziggy Stardust.

At the 1973 concert at the Hammersmith Apollo, London, Bowie revealed before the last song, 'Rock and Roll Suicide,' that this would be the final concert that

Ziggy would ever perform. Fans and media were shocked by this news, assuming this was an announcement of Bowie's retirement from music, so closely were musician and character intertwined. Bowie's next persona, Aladdin Sane, bore significant similarities to Ziggy, with fans describing Sane as 'Ziggy in America,' indicating both the fans' and Bowie's attachment to the Starman.

The sex-crazed androgynous creature that Bowie had created was risky and unconventional and gave spirit to the transgender movement that was starting to develop. Songs like 'Lady Stardust' describe the protagonist as having no clear gender and was adopted by gay and transgender people in unsafe times. Homophobia was still rampant even though homosexual acts had been decriminalised in the UK five years prior to Bowie's album. The Gay Liberation Front that had begun in New York with protests such as Stonewall, was a response to the aggressive treatment of gay people by the police. It had spread to the UK and by 1971 was recognized in the UK press as a political movement. When Bowie was developing the character of Ziggy, he wanted to capture some of this edge and to represent a very 'British view of American street energy.'

A perfect example of Bowie's gender fluidity is present in the music video for 'Boys Keep Swinging' (1979), where he sings on stage using thrusting dance moves compa-



Boys Keep Swinging, 1979

rable to macho artists such as Elvis Presley or Jerry Lee Lewis, but his backup singers are three different versions of himself in drag. The lyrics are an ironic rejection of patriarchy, exposing the perks of being a male, for example, 'Life is always a pop of cherry' and 'you'll always be the first in line' and 'you can buy a house of your own.' Feminism was in the ascendency. In the same year as the album's release, the first issue of the American liberal feminist magazine *Ms.* ('More than a Magazine, a Movement') and Alex Comfort's bestselling manual *The Joy of Sex* were published. For the first time women could compete in the Boston Marathon and the first female FBI agents were hired. Songs like 'Lady Stardust' and 'Suffragette City' became part of the sexual revolution that had started in the Sixties with the hippie free-love movement and the feminists.

Bowie, felt that conventional masculinity was a limitation for himself personally and artistically, it was, 'shrinking what it is to be human.' This philosophy can be traced back to his pre-stardom days—to when he was aged 17 and plain Davy Jones before he transformed himself into David Bowie. He was interviewed by BBC *Tonight* as the spokesperson for the 'Society for the Prevention of Cruelty to Men with Long Hair.' In this interview, he talks with humour about how men with long hair, which was a trend that was starting in the UK following the fame of the Beatles, were treated in their everyday lives, and claims that it was 'time we were united and stood up for our curls.'

Many artists praise Bowie for the risks he took in gender breaking, as singers such as Marilyn Manson, Annie Lennox, Boy George and many more consider Bowie as their main inspiration in having the courage to question the gender norm and create their own artistic personae—Manson with his heavy makeup and drag-esque name, Boy George with female clothing and makeup, and Lennox, who had cropped hair and wore a man's business suit and became a political and LGBT activist. When David Bowie died in 2016, members of the LGBT+ community shared on Twitter the impact that Bowie and Ziggy had on them; he had allowed them to come out and be themselves.

But most of all he was a hero who called upon the children of a changing world to save a depleted planet. A year before *Ziggy Stardust*, Bowie released the *Hunky Dory* album which contained the track 'Changes.' It was the last song that Bowie sang onstage before his retirement from live performance in 2006. It's not just a manifesto for the Bowie that was constantly re-inventing himself, but it was a song that especially connected with the changing mores of his young audiences. The changes weren't just Bowie's but theirs too. His philosophy was that change had to be. His music and actions really did bring about change in the world, changes that still resonates almost half a century on.



JAMES PEAT BARBIERI has been taking part in conferences and courses at the Pari Center since he was 11, he was David Peat's Teaching Assistant from the age of 15 and has since then given several lectures at the Pari Center, including two mini-courses on Beauty and Mathematics, dealing with the relationship of Nature and the Golden Section, and on Hegel's philosophy and its symmetry with the works of David Bohm.

James studied at a professional dance school, Ateneo della Danza in Siena, for five years but has now moved on to university. He is currently on the Board of Directors at the Pari Center and a member of the Editorial Board of the *Pari Perspectives* journal. His other interests include Film, Art, and Philosophy. He is interested in analysing cinema and works of art by applying philosophical approaches such as aesthetics and Continental philosophies.

Pari Yesterday: A Collection of Memories

GENNY RABAZZI

A village means not being alone, knowing that in the people, in the plants, in the soil there is something of yourself, that even when you are not there, it remains waiting for you.

Cesare Pavese, *The Moon and the Bonfires*

Genny: In a world that's constantly on the move it is sometimes difficult to stop and think about what is happening around us; what was and is no longer; what we were and are now no longer; the constant changes that affect the way we live in any community, large or small.

We live from day-to-day without giving much thought to the many transformations and complexities of modern life. We seem to live with more form than substance. The sense of belonging to a particular place and its people—the value of community—has been overshadowed by unrestrained individualism.

Living in a small community such as Pari certainly helps to shield us from the dangers of being swept up in consumerism and the increasingly global world. But this doesn't mean that the small Italian villages that escaped industrialization have not undergone important changes. Nor does it mean that they haven't experienced, and are still experiencing, impoverishment, be it in a demographic, cultural or economic sense.

Certainly the changes are not as easy to grasp for those who, like me, are still young and have lived close to the land for only 30 years or so. To get a better picture we would need to talk to those who have spent their entire long lives here.

I will be considering Pari from two viewpoints: what it means to choose to live in a small community like that of Pari today, and what, by contrast, the life of small villages

was like up to 30 years ago, when the exodus of people to nearby urban areas had not yet taken place.

I began this 'story within a story' by talking with Alberto, my partner. My love for this village, which now includes my great interest in supporting the activities of the Peat family at the Pari Center, I owe to him, who has invested his time and his energy here by choosing to operate the farm and the oil press that was previously run by his 87-year-old father, Asio. I will also be asking Asio to tell his story too, a story that goes back even further in time to the days of his youth.

This will not be an academic study, but a story of memories, places and people: of a village that was, and that has inexorably changed over time.

Alberto: The transformations of the last thirty years are very much in evidence, especially for those who have always lived here. For example, in Pari in the Eighties the



Olinta outside of the bar, 1970

children didn't need to take the bus to go to school. We had both a kindergarten and an elementary school in the village and I attended both of them right here. We had two teachers, also from the village.

On the ground floor of the *Palazzo*, where the Pari Center now hosts its events, there was a kindergarten, and upstairs were the elementary school classes. In my class there were 7 children, all born in Pari in the year 1972 (remember that in 2018 only two baby girls were born who live here permanently and that in the previous five years there were no births at all). Apart from me all of my classmates now live elsewhere, mainly in the city.

I have very clear memories of life in Pari during my childhood: all of life took place either in the village or the craftsmen's workshops or working on the land. You have to remember that there were three bars open all year: one where the grocery store is now, one where the bar/restaurant *Le Due Cecche* is today and was managed by my mother Olinta, the other was that of Savino and Irma on the main street of Pari. These were bars where people of all ages met at any time of the day, and in the evenings particularly the men who would play cards or drink the *Cinquino* of wine [a small glass of wine traditionally served in a bar] or a glass of local wine (the labeled, bottled wine was not yet in vogue). The selection of drinks in the

bars was at that time very limited, there were no bitters or spirits and everything, even in the 1980s, was made of glass; plastic was not used at all. The glass was returned and filled by the suppliers, without any kind of waste. I clearly remember that a 54-litre demijohn of wine lasted for a maximum of ten days for there were about 600 inhabitants in the early Eighties if you count everyone living locally.

There were very few cars in the village and people had only limited means of transportation to move around. In fact, people felt the need to travel much less than they do today. People worked in the woods, the countryside, or were craftsmen: the car was an extra that could be done without.

The three grocery shops, all on the *Giro Pari* [the main street], were managed by the ladies Olema, Norma and Rosita. Rosita also managed the licensed premises of the tobacconist in the piazza. It was very popular as most of the male population were habitual smokers, while it was very, very rare that women smoked. At any time, even in the evening, it was enough to ring the doorbell of the house to have the shops open and to be served with what was needed. It is unthinkable that such a thing could happen nowadays with all the big supermarket chains in the cities.



Bar, 1970s

Then there were two carpenters with their respective workshops: Vasco's in the Piazza, and the other, Livio's, just outside the village in Via dell'Oliviera. The workshops were meeting places, where people stopped to *ragionare* [gossip] in the evening or on the way home from work. It was a way of 'being' community not just living in the community. On Via dell'Oliviera there was a blacksmith, and the mill belonging to Silvio Brocchi's family, and the oil press which, before I took charge, was managed by my father Asio and my uncle Cesare Trapassi.

Also in the village, in front of what is now the Peat family home, my grandmother Carolina ran the dairy, where she sold cow's milk, produced by our farm and neighbouring farms. In the morning and in the evening fresh milk arrived and people, equipped with jugs, cups or bottles, bought the milk directly from us for immediate consumption. I can clearly remember the fresh milk that I drank milked by my father. It is in no way comparable to the milk we drink today: it was warm, frothy, tasty. Real milk. My grandmother then bought equipment to produce the first homemade ice cream in the area, made with milk, cream and eggs—all our own produce. It was a great success.

Asio, Alberto's father, now interjects, with vivid memories.

My mother who was born in 1905 lived through two world wars, although the First World War was fought mainly at the Front which was in the Alps and in northern Italy and not here in our area. She was a smart woman, ready for anything, an entrepreneur, as you young people would say today. In 1939, at the time of fascism, she and my father Iader, who had been working in Africa (in Ethiopia, which was an Italian colony from 1936), were given the job of taking care of the 'Enal' for the *dopolavoro* [after-work social programme]. The Enal was similar to a bar where people gathered after work and in the evening. Creating 'after-work places' was one of the prerogatives of the fascist regime so that they could control the lives, and above all the free time, of people and workers. I was very young and I only remember a few things from that period. I remember that there was a radio in the Enal and in the evening at 8 pm the war bulletins were broadcast. The room would be filled with people.

Today the room is still owned by the municipality and available to the various cultural associations. After this first management experience, which ended when my father was recruited for active service in Siena, my mother was entrusted with the oven in the village. A wood-burning oven in front of the Enal was available for baking bread (and also desserts, later) to those who brought the kneaded dough from home.

My brother and I as boys had already started doing agricultural work, which my father was already involved in. We wanted to try something innovative and avoid 'submissive work' (i.e. working for a third party), and



David Peat with Olinta inside the bar

always imagined we could make a success of agriculture. I began to breed dairy cattle and produce milk and in 1955 we opened the dairy/ice cream shop. I expanded the production of milk and we sold both fresh milk and ice cream. (My wife Olinta says that there were about 1,300 of us living in Pari in the 1950s. [Today there are 120 living in the village.] She is right—she has a good memory—and then the population started to decline after the Sixties.). The milk was poured into a batch freezer and a supplement was added which cooled and solidified it. With the addition of an essence, the milk took on the preferred flavour of the customer (vanilla, cocoa, cream initially and, slowly, other flavours were added). The ice cream shop turned out to be a worthwhile activity and the earnings were most satisfactory. I would collect 3,000 lire on the big feast days, or the Festa della Madonna which was held on the first Sunday of September. The ice cream would cost only 10 lire, 20 lire, 30 lire, so just think how many we sold! Compared to cutting wood it was much less tiring and a much more profitable job! At our busiest times my sister Diana came to help me (today she is 93 and still active).

At that time, owning a piece of land that could be used for producing grain provided a good income; one could live with dignity. Not like now, the sowing and harvesting provide the farmers with almost no income. After many years of production, in 1985, with the introduction of the new EU health laws, it was no longer possible to sell loose milk that hadn't been bottled and, therefore, we were forced to close. We were upset because we had invested so much in it. Then we had to get to get involved in something else, and so we dedicated ourselves to the olive press and the cattle.



Novelist Alison MacLeod visiting Pari, September 2002

The changes I have seen in Pari in the last twenty years are essentially negative: we are much less ‘social,’ everyone is preoccupied with their personal concerns without worrying about the community. Young people especially are more interested in earning quick money than in training for a job that would benefit the countryside (and there really is a need). Very few remain here and we are now reduced to a very small number of residents. Craftsmen like the blacksmith, the mechanic, the barber are almost disappearing in our area, and that’s a real shame. We should go back to believing in agriculture and investing in it without leaving the land to be bought up by the large companies, who often give nothing back to country life and conduct intensive agriculture. If in the future we reclaimed agricultural work and if young people wanted to invest in farming, the countryside could have a new vitality, however, I don’t think I will ever see it.

Alberto continues, with more recent memories and disagrees with his father in one respect: Everything is different now from fifty years ago. Even small entrepreneurs have to navigate a complex bureaucracy, and the future lies in combining agricultural activities with other activities, such as tourism. This is the real goal to pursue, in my opinion. But back to the Pari of my childhood...

There was another dairy inside Aladino’s home. He had

cows in a stable below the house, near what is now Godelieve Spaas’s [assistant director of the Pari Center] house and the post office. Rosa’s butcher shop was in Via Federigo Tozzi. Azelio was a basket weaver who sold baskets of willow. Many of the local women sewed clothes at home on commission from the various traders who came to Pari on market day: this was a real job. Then there were various small companies of stonemasons, I remember at least four. And a barber for men, a hairdresser for ladies, and a consortium that sold everything required for agricultural work. There was the inn/restaurant *Il Cacciatore*, still successfully managed today by Emilia, a post office open every day in the house that today is now owned by Julie Arts [friend of the Pari Center]. For the bank, however, we had to go to another village.

I am one of the few of my generation who has chosen not only to live *in Pari*, but to live *of Pari*, that is, to make my living here by continuing to invest in the agricultural and commercial activities of such a small village. Roberto (who runs the grocery store) and Filippo (the beekeeper) are young people who have also made this choice, which I consider an absolutely positive decision for the future of the village. My choice dates back to 1994 when, after having taken over my uncle’s olive oil press business, I decided to become an agricultural entrepreneur and to

continue the work. I made this choice alone: my brother Paolo had already been working at the Monte dei Paschi bank in Siena for some time and he would never have wanted anything different. Instead, I felt the responsibility to continue with the farm which my father had developed with a lot of effort and sacrifice. I never thought, ever, of making a different choice from the one I made, although in the early years, after getting a diploma in accounting, other careers looked much easier.

I managed to revitalize the farm by acquiring more land on which to grow olive trees and wheat, up to a total of 72 hectares (from zero that my father had in the Fifties), to buy modern agricultural machinery, to increase the herd and, in 2000, to transform the olive press from the traditional millstone to up-to-date equipment. There are other choices that I would have liked to make, for example, by integrating agricultural activities with tourism-type ones, but I have run into conflict with my father in this matter and have been unable to persuade him otherwise. Family disagreements, especially at management level, must be taken into account in such a small business. My hope is that my children one day will have the desire to get involved, but I'm not going to force them into making choices because things done well are done with the heart and soul.

At this point in my career and in my life, I think that Pari can offer people nothing and everything at the same time. It is up to each person to give it value. I personally see neither me nor my family anywhere else but here. I think about how much Pari has given me in recent years and how much it can still give me, and I don't see any end to this mutual exchange. This is why I still live here

Genny: Living in Pari today is certainly a lifestyle choice. The important thing is to find your niche here, to feel settled without the need to be constantly on the move. The challenge today, but above all for that of the future, is to make other people understand that living in a small community can be a rich experience if you want it to be so. For the Pari Center and all the other associations that operate in the village there is also the demanding task of forming a 'network' so that there are always joint projects and activities that can make our community stay alive.



GENNY RABAZZI graduated in Literature and Philosophy at the University of Siena in 2013 and completed her Master's thesis in contemporary history in 2017. She is also a qualified teacher specializing in teaching children with learning difficulties. In 2015 Genny started collaborating with Eleanor and the Peat family in the organization of events at the Pari Center acting not just as a co-organizer of events but also as a liaison bringing together the Pari Networks and the Pari Center with the village associations and local government. As a local person she feels proud that a small village like Pari is the place where such important cultural events are taking place. Her hope is that Pari will always be an open and welcoming place to new people from all over the world.

Pari Networks: Announcements from our partners

The College for Real Farming and Food Culture

A complete rethink of agriculture and all that goes with it

The College for Real Farming and Food Culture is a project of the Real Farming Trust, which also runs the Campaign for Real Farming, the Oxford Real Farming Conference and Funding Enlightened Agriculture.

The College has but modest ambitions:

- To establish Enlightened Agriculture aka Real Farming as the global norm—farming that is expressly designed to provide everyone everywhere with good food without wrecking the rest of the world.
- To encourage complementary Food Cultures, without which Real Farming has no context.
- To achieve all this by a people-led Agrarian Renaissance—a rebirth: starting the world’s agriculture again from first principles.

Why bother? Simply because the kind of agriculture that now prevails worldwide is leading us to disaster on almost every front. Everything needs to be rethought: not just the

details of husbandry and cooking but the underlying infrastructure (economics, politics, law), and the kind of science we really need, and the moral principles that should guide everything we do, but now seem to be sidelined. More: we need to bring all the different thoughts together to form a coherent philosophy. Coherence is another essential that has gone seriously missing.

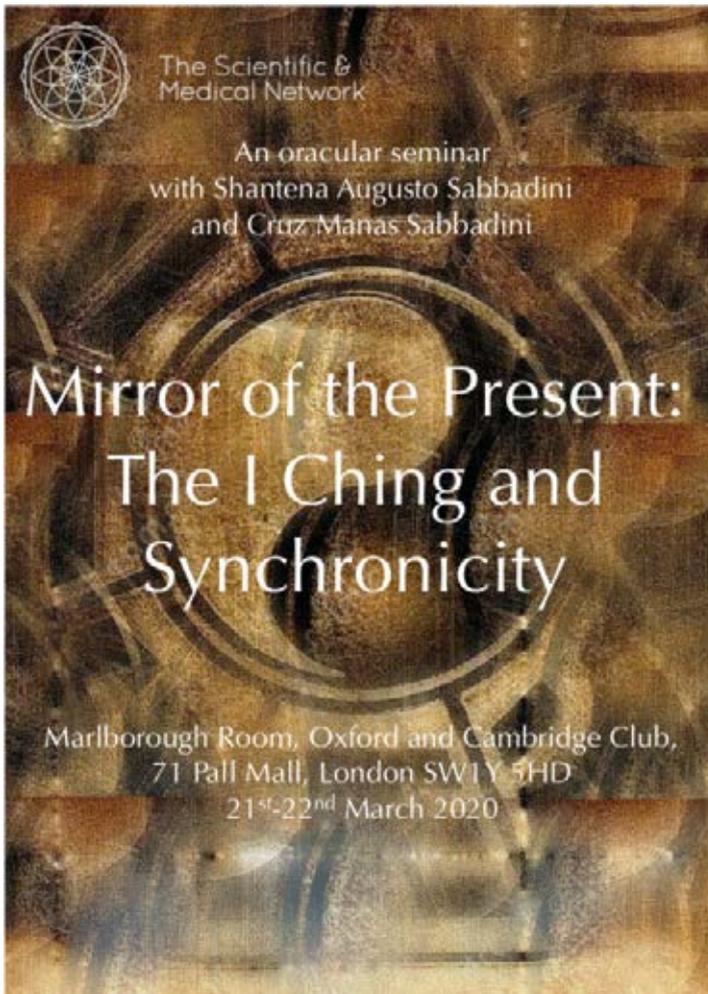
Our website <http://collegeforrealfarming.org> is just one component of the CRFFC—it is the college in virtual form. Like the college as a whole, and in the true meaning of the word ‘college,’ it is not intended to dispense approved ideas de haut en bas but to provide a forum for everyone with things to say. In ‘pop-up’ form we also stage and otherwise take part in many kinds of meetings at many kinds of venue and we intend to do many more, and one day we might have our own premises and farm (see ‘About Us’). Always we seek to collaborate with others of like mind, from individual farmers and cooks to local groups, to grand institutions. Conviviality is the goal and collaboration is the key. The endeavour is serious—none more so—but it’s fun. So please join the party.

Colin Tudge



**REAL
FARMING
TRUST**





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The destiny of our species is shaped by the imperatives of survival on six different timescales. To survive means to compete successfully on all six time scales. But the unit of survival is different at each of the six timescales. On a timescale of years, the unit is the individual. On a timescale of decades, the unit is the family. On a timescale of centuries, the unit is the tribe or nation. On a timescale of millennia, the unit is the culture. On a timescale of tens of millennia, the unit is the species. On a timescale of eons, the unit is the whole web of the planet. Every human being is the product of adaptation to the demands of all six timescales. That is why conflicting loyalties are deep in our nature. In order to survive, we have needed to be loyal to ourselves, to our families, to our tribes, to our cultures, to our species, to our planet. If our psychological impulses are complicated, it is because they were shaped by complicated and conflicting demands.

Freeman Dyson, *From Eros to Gaia*

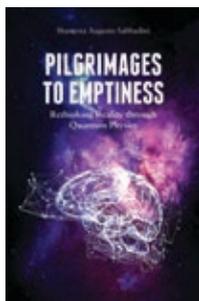
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Pilgrimages to Emptiness: Rethinking Reality through Quantum Physics

Shantena Augusto Sabbadini

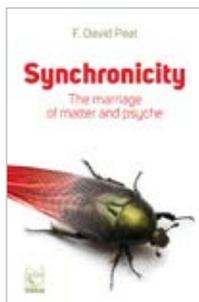


In plain everyday language this book approaches quantum physics and cosmology as 'instruments of wonder,' i.e. as ways to contemplate and appreciate the extraordinary mystery we are immersed in. The eternal questions humans have been asking (who are we? what is this universe? what is mind? what is matter? what is life?) are addressed in this book from a scientific perspective.

By pushing our scientific knowing as far as possible we become aware of the infinite expanse of our 'unknowing.' Sabbadini explores how we lost our connection with the world soul and how that connection is re-emerging from an unexpected direction. In the end we are left with a sense of wonder at the subtlety of existence and gratitude for the outstanding ride we are freely given.

Synchronicity: The Marriage of Matter and Psyche

F. David Peat



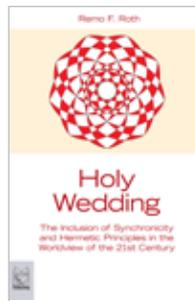
'Synchronicities,' says Peat, 'open the floodgates of the deeper levels of consciousness and matter, which, for a creative instant, sweep over the mind and heal the division between the internal and external.'

As well as exploring the Jung-Pauli relationship Peat outlines the history of synchronicity, and the book features chapters on alchemy, consciousness

and the *I Ching*. 'It may well be that for us, in the early 21st century, to accommodate ideas of synchronicity in any fundamental way will require a profound transformation of the way in which we view ourselves, nature and society,' says Peat. He ends with a speculative and provocative chapter on the possible source of true synchronicities.

Holy Wedding: The Inclusion of Synchronicity and Hermetic Principles in the Worldview of the 21st Century

Remo F. Roth

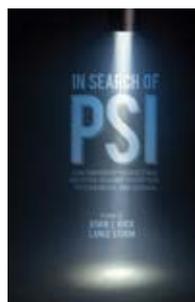


Holy Wedding is the opus of a trilogy that commenced with Remo Roth's previous works *Return of the World Soul I*, an analysis of the pivotal relationship between the great minds of depth psychologist Carl Jung and physicist Wolfgang Pauli, and *Return of the World's Soul II*, a model of psychophysical reality for a generative world.

In this latest work Roth leads us on a pathway towards a coniunctio of the leading edges of contemporary human consciousness; physics and psychology. He addresses the 'Holy Wedding' of psyche and matter as an issue of prime importance not only in the evolutionary impulse of us as a human species but also to our survival.

In Search of Psi: Contemporary Perspectives on Extra-Sensory Perception, Psychokinesis and Survival

Edited by Adam Rock and Lance Storm



The editors, Dr Adam J. Rock and Dr Lance Storm, have put together *In Search of Psi* because they noted that the vast majority of similar books on the intriguing subject of parapsychology are actually too light-weight and lacked any real depth on the more serious aspects of the paranormal.

Topics covered include telepathy (thought transference), precognition (seeing the future), human levitation, multiple dimensions, and the riddle of space-time. There are chapters that thoughtfully delve into the possibility that human personality can survive bodily death. *In Search of Psi* discusses communication with departed loved-ones and travels far afield to foreign locales, such as New Guinea and remote American-Indian communities in New Mexico, USA, to find out how psi is understood amongst indigenous cultures. *In Search of Psi* also examines the evidence for psi and takes a look into the future to see what uses psi might have for the generations of tomorrow.



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