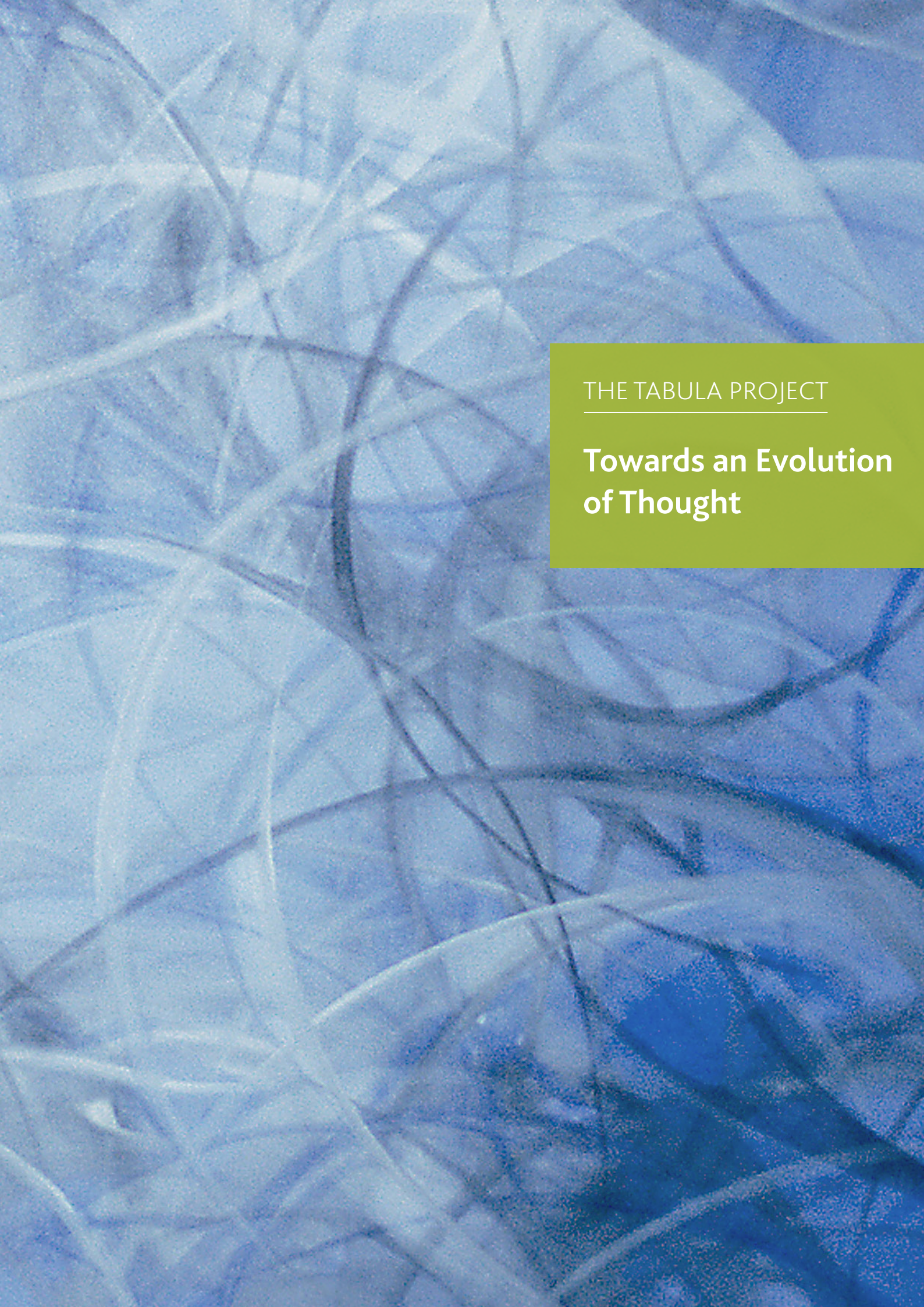


THE TABULA PROJECT

Towards an Evolution of Thought

Contents

Foreword

The Tabula Project aims to provide a new perspective on the mind. The paintings depict states of consciousness and thought and fundamental questions of our existence are explored in the writings and workshops. The development of the project was informed by extensive research into how the subject of thought and consciousness had been addressed across a range of disciplines.

My first port of call was general psychology, psychotherapy and group analysis. I became interested in the potential of groups to achieve breakthroughs and, conversely, how to avoid the worst excesses of 'groupthink'. My field of research gradually widened to include sociology, anthropology, physics, philosophy and theology. I found particular visual resonance with insights from quantum mechanics, chaos and the complexity sciences, and string theory.

I also came to realize that in order to paint consciousness, with or without thought, I needed to understand the self. This led me onto questions like who are we, why are we here, where are we going? Not only did this exploration feed directly into the paintings but it also led me onto a series of propositions about what it is to be human and the idea that there are generic patterns of thought.

Presented in this report is a summary of the main findings and some preliminary conclusions. The material is grouped into three main sections:

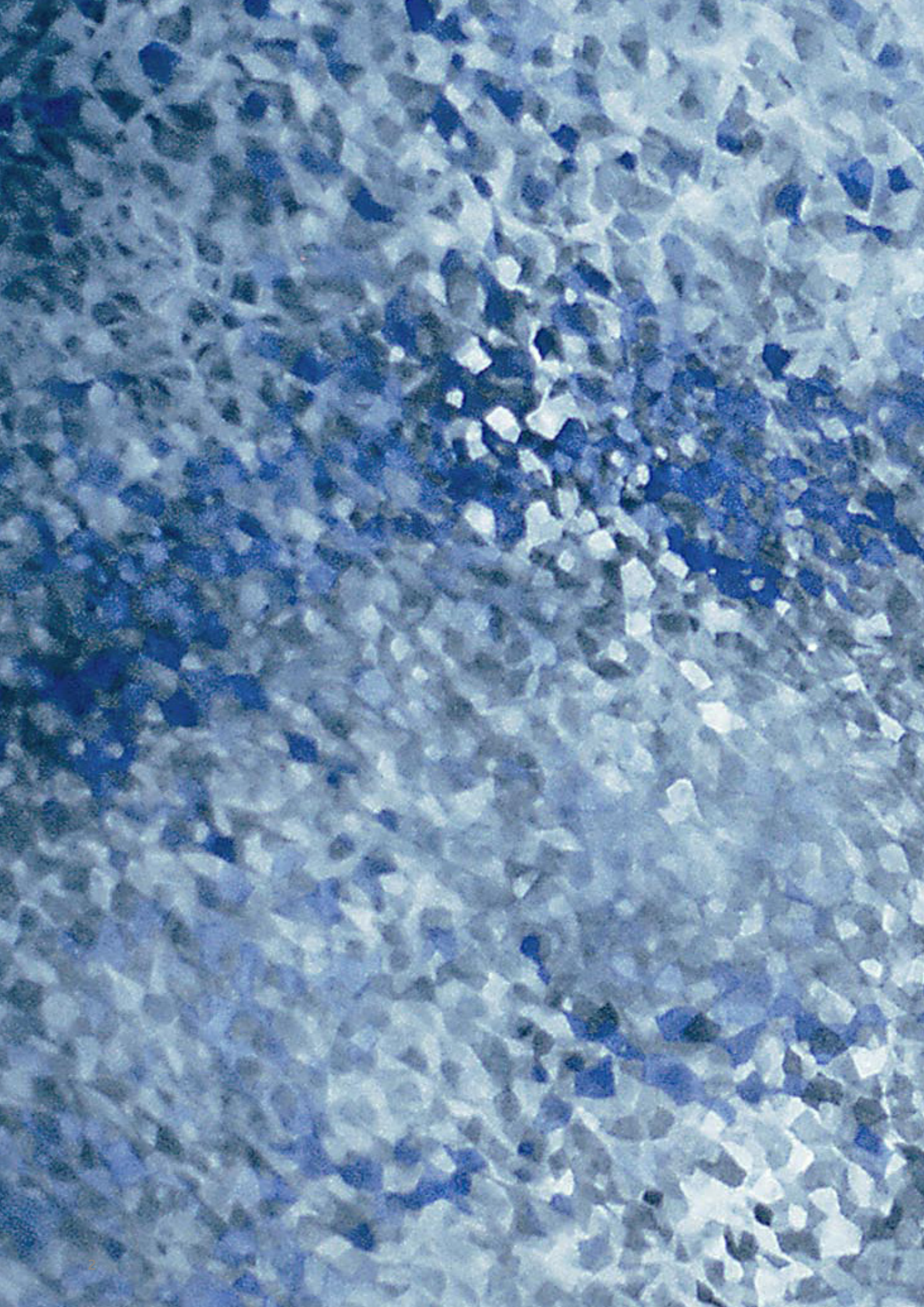
Examining how we think outlines some of the assumptions governing our thinking and how we perceive ourselves in relation to others.

The need for change highlights the fact that our understanding of ourselves is deeply problematic and we need to embrace a more holistic perspective where the individual and the social cannot be separated.

Towards an evolution points to the steps we need to take to begin to evolve our thinking and make better decisions grounded in a recognition of our fundamental interdependence with each other and with the biosphere.

This work is part of a wider project to create a new framework for thought. How we think is inextricably linked to our sense of identity, and this is a product of our history, of both our individual and collective experience. If we are to change how we think this will need to be a collaborative exercise. The ideas set out in this preliminary report form the background to a consultation, the findings of which will be incorporated into the final report on the project.

Claire Haigh
Founder, The Tabula Project
October 2017



1. Examining how we think

In order to be able to focus our minds on what matters we need first to look at how we think. This involves examining assumptions governing our perception and our understanding of the world, how we perceive ourselves in relation to others, and how we relate to society and the world around us.

In the age of mass information, it is even more important to recognize that it is not *what* we know, but *how* we know what we know that matters. To understand knowledge, we need to know the special characteristics of the groups which create and use it. The map is not the territory, no map shows all its presumed territory – and crucially it leaves out the map maker. And the map maker is heavily influenced by the prevailing paradigms.

Our construction of reality is based on thousands of years of often unexamined assumptions. Preconceptions inherited from previous generations are embedded in language, where we may not recognize them, and colour and distort our thinking.

1.1 The map is not the territory

We may imagine that we are capable of seeing things as they really are, and that our own view is the "objective" one.

However, we are laden with preconceptions and unexamined assumptions which colour and distort our view of everything.

Perception is a complex process, of which we are largely unconscious. We cling to the illusion that we are capable of direct perception, but we are not. As anthropologist Gregory Bateson observed "very few people seem to realize the enormous theoretical power of the distinction between what I "see" and what is actually out there"[1].

The baggage we carry makes it very difficult for us to see clearly and objectively. And this is made more so by the fact that much of that baggage is not our own, but results from the cumulative experiences of generations before us. Assumptions which we unconsciously inherit form the basis of our " world view".

In his seminal work *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* Korzybski put forward the idea that "the map is not the territory"[2]. No map shows all of its presumed territory and crucially it also leaves out the map maker. Maps are self-reflexive and equally are a map of the map maker.

What we choose to focus our attention on is itself a hugely selective process, and reveals as much about ourselves - the subject - as it does about the object of our attention. And when we observe, what is it that we actually see? What are we capable of knowing?

Bateson observed "There are no "things" in the mind, only precepts and ideas"[3]. We cannot transcend ourselves as organisms that abstract. We can only know ideas. And the "laws" that bind these ideas together, "the verities", are the closest we get to ultimate truth.[4] Korzybski argued that we cannot know the "ding an sich", the "things themselves", we can only know what we know as "abstracting nervous systems". Form and content are so intimately related as to be functions of each other.

To understand knowledge, we need to know the special characteristics of the groups which create and use it.

This is a central tenet of Thomas Kuhn's seminal work *The Structure of Science Revolutions*[5]. One of the most famous legacies of Kuhn's work is the concept of the "paradigm". A paradigm is a model by which practitioners define their field of problems.

All paradigms marginalize or disqualify practices which no longer conform to their criteria. As Kuhn observes, the key questions are "What does the group collectively see as its goals; what deviations, individual or collective, will it tolerate; and how does it control the impermissible aberration?"

[1]Gregory Bateson, *Sacred Unity: Further steps to an ecology of mind,* Harper Collins, 1991
[2]Alfred Korzybski, *Science & Sanity, Fifth Edition, Institute of General Semantics,* 1994
[3]Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana, 1980
[4]Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana, 1980
[5]Thomas Kuhn, *The Structure of Science Revolutions,* 1962

1.1 The map is not the territory

Knowledge depends on preconceptions which may need to be examined or altered, or even rejected, if one wants to progress in any given field. Kuhn explains how a paradigmatic work functions by overthrowing or challenging the norms of a given practice. A "paradigm shift" occurs when the prevailing paradigm is completely rejected and replaced by a new paradigm. Progress requires periodic review of preconceptions and underlying principles. Understanding is a constant process of change and renewal.

We cannot know things, we can only know ideas. And these ideas are heavily determined by prevailing paradigms of thought. Our thinking is also influenced by the concepts available to us through language. And language is a property of social groups. "The word is a thing in our consciousness…that is absolutely impossible for one person but becomes a reality for two."[6]

Language defines who we are as a community, and as a society. It is a means of communication and the common property of the groups we belong to.

Does language determine thinking? Would we even be capable of thought without language? How much is it limited, or even determined, by the concepts available to us through language and other "texts"?

Vygotsky suggests that thought and speech are not interdependent. The interrelations are not a pre-requisite for, rather a product of, the development of human consciousness. However, thought and speech are not unrelated. The meaning of a word is such a close amalgam of thought and language that it is hard to tell whether it is a phenomenon of speech or thought. Word meanings develop, and every thought tends to connect something with something else. "Not only one particular thought, but all consciousness is connected with the development of the word."[7]

The Sapir-Whorf hypothesis contends that people's thoughts are entirely determined by the categories available to them through language. Arguing against "linguistic determinism", Stephen Pinker emphasises inherent difficulties in putting things into words[8]. The use of language can be fraught with problems. Ferdinand de Saussure noted that rather than it being an ideal mirror reflecting the world, language is a highly idiosyncratic instrument that actively structures what it seems to describe. For Saussure language must be understood as a system of relations "a system of interdependent terms in which the value of each term results solely from the simultaneous presence of the others"[9]

Korzybski referred in General Semantics to the sorts of confusion that arise through our use of language. Whilst we can verbally split body/mind, emotion/intellect, space/time, we cannot do so empirically. Anthropologist Gregory Bateson pointed to the confusion that arises from speaking of abstractions as if they are real things. Hostility, dependency and love, for example, are not "things", nor indeed verbs, but are messages that constitute the relationship.[10]

[6]Lev Vygotsky, *Thought and Language,* The Massachusetts Institute of Technology, 1986
[7]Lev Vygotsky, *Thought and Language,* The Massachusetts Institute of Technology, 1986
[8]Steven Pinker, *The Language Instinct,* Allen Lane The Penguin Press, 1994
[9]Ferdinand de Saussure, *quoted by Robert Williams in Art Theory: an historical introduction,* Blackwell Publishing Oxford, 2004
[10]Gregory Bateson, *Steps to an Ecology of Mind,* 1972, University of Chicago Press, 2000

1.1 The map is not the territory

For Korzybski, the difficulty lies not in language itself but in our use of and attitude towards it. He described language as time-binding, as the basic tool whereby humans pass on knowledge from one generation to another[11]. It is essential that we become conscious of our abstractions, and the processes through which we arrive at these abstractions.[12]

Moving beyond language, Roland Barthes argued that everything from paintings to objects to practices to sites to people themselves become legible as "texts" to those with the tools of semiology. *Death of the Author* undermines notion of author as somebody who controls meaning, text is a multidimensional space. A work of art is not a self-contained thing, its meaning is radically contingent. "To single out any one work as a discrete "text" is merely to pull a single thread apart from the "textile" within which it has its semantic place."[13]

Inherent in the "texts" we use are certain "thought forms", and it is hard to deconstruct these without falling victim to the very thought forms one is trying to analyze. This can lead into a hall of never-ending mirrors.

Interesting questions arise when one considers the relationship between language and meaning, and the whole concept of meaning.

The father of deconstructionism Jacques Derrida stated that "there is nothing outside of the text", there is no Archimedean point outside of language from which the truth claims of language itself can be surveyed. It is only by understanding limits of language may we get glimpses of what, if anything, lies beyond.[14]

Clement Greenberg[15] argued that the whole essence of modernism lies in use of methods of a discipline to criticize the discipline itself - not to subvert it, but to entrench it more firmly in its area of competence. For Greenberg development of art was "immanent to practice". He highlights the contribution made by Kant, who used logic to establish the limits of logic, and "while he withdrew much from its old jurisdiction, logic was left in all the more secure possession of what remained to it."

So where - if anywhere - might we find meaning beyond language and the disciplines themselves? The syntax, the whole basis for thought, is heavily affected by language. Some would argue that structure is the only content of language.

In his classic work *Godel, Escher, Bach*[16] Douglas Hofstadter questions the whole concept and locus of "meaning". Is meaning to be found in the message itself, or is it manufactured in the interaction of the mind with the message? Perhaps meaning depends on the type of intelligence perceiving it. And there must be different levels of meaning which are accessible to different types of intelligence. For example, chess players see the board in chunks.

[11]Alfred Korzybski, *Science & Sanity,* Fifth Edition, Institute of General Semantics, 1994
[12]Alfred Korzybski, *Science & Sanity,* Fifth Edition, Institute of General Semantics, 1994
[13]Roland Barthes, *Death of the Author,* 1968
[14]Jacques Derrida, *Of Grammatology,* 1967
[15]Clement Greenberg, 1961, *quoted in Pollock and After, ed. Francis Frascina,* Harper & Row Ltd, 1985
[16]Douglas R. Hofstadter, *Godel, Escher, Bach: An Eternal Golden Braid,* Penguin Books, 1986

1.1 The map is not the territory

In a fascinating visualization, Hofstadter explores the "lift-ability of intelligence" by an imaginary "Aunt Hillary". Aunt Hillary is in fact an ant colony, but she seems like an intelligent organism. Could there be an Artificial Ant Colony?[17]

One of Hofstadter's central tenets is that there is no such thing as an un-coded message. The so-called message in any communication really just amounts to the product of familiar or less familiar codes. When the code is familiar enough, it ceases to appear like a code and the message becomes identified with the meaning.

If everything is in the message, or the codes that make up that message, where does that leave meaning? Is a greater intrinsic meaning just something we are hardwired to believe in, and destined to search for, regardless of whether it exists?

[17]Douglas R. Hofstadter, Godel, Escher, *Bach: An Eternal Golden Braid*, Penguin Books, 1986

1.1 The map is not the territory

What are we capable of knowing? Do we have the potential to access objective "truths" or are we destined to be limited to a subjective view of the world?

The French philosopher Montaigne observed that "everything is opinion" and "we mustn't be fooled by the feelings we sometimes have of certainty". Thousands of years earlier a similar observation was made by Socrates "only God knows. We can only have opinions and to know this is wisdom".[18]

Aristotle and Plato had different views about the sort of things we can have knowledge as opposed to opinions about. Plato believed that we can only know about things which were permanent, eternal and unchanging. Aristotle disagreed and thought it was possible to have knowledge about the physical world too.[19]

Centuries later, David Hume argued that we can speak of knowledge in mathematics where we begin with axioms or self-evident truths, but beyond that all we have is highly probable opinion. Today we would go further. With our knowledge of non-Euclidean geometry, we doubt even mathematics is knowledge.[20]

In science, one might argue that there can be no certainty, just varying degrees of probability. Karl Popper posited that reason is not capable of establishing the truth of generalizations beyond doubt. Scientific laws are only ever provisionally valid. Scientific laws cannot be verified, only falsified.[21]

This principle is taken to a new level by Heisenberg's uncertainty principle, which really marks the end of the classical idea of scientific objectivity. Heisenberg's work raised fundamental questions about the role of the observer. He demonstrated that the observer influences the system in uncontrollable ways.

In quantum mechanics, we are forced to go beyond the senses. But we can only "see" what we think is possible and real. The concept of superposition, for example, is very difficult for us to comprehend because we are conditioned to seeing things in one place.

[18]Mortimer J.Adler, *How to think about the Great Ideas, 2000,* Open Court, Chicago
[19]Mortimer J.Adler, *How to think about the Great Ideas, 2000,* Open Court, Chicago
[20]Mortimer J.Adler, *How to think about the Great Ideas, 2000,* Open Court, Chicago
[21]Quoted in George Soros, *The New Paradigm for Financial Markets,* Public Affairs, 2008

1.2 Mind, self and society

It is often been said that humans are "social animals". Taking this to the next level, we move away from the notion of a self separate from society.

Paediatrician Donald Winnicott famously observed that there is "no such thing as a baby". The baby is one part of the "mother and baby" relationship.[26] Siegfried Heinrich Foulkes, one of the founders of groups analysis, stressed that no individual has a mind independent of the social process which produced it. As he described it, the individual is "pressed into shape" by external forces.[27] For Foulkes the mind derives from the need to communicate.

The full extent of this line of thinking is illuminated by the work of George Herbert Mead. In *Mind, Self and Society* he demonstrates how both the mind and the self emerge from the social through language, through the internalization of a conversation of gestures.[28]

Mead argues that relationships are prior to, and constitutive of, the individual self. He defines a social act as a gesture by one animal that calls forth a response from the other which has meaning for both. The meaning of this gesture lies in the interaction, the whole social act.

The evolution of the central nervous system allowed our mammal ancestors to gesture to others in ways capable of calling forth a similar response in itself. A "significant symbol" is one which calls forth a similar response in the one making it to the one receiving it. Vocal gestures are very significant, and Mead argues that without language the emergence of the human mind, self, and society would not be possible.

Mead argues that language is the key ingredient in the development of society, and of the self. The social is vocal conversation, and the mind is silent role play. And through this silent role play the self emerges.

Self-hood resides in the capacity for an organism to be an object to itself through the "generalized other". The "generalized other" is a concept or mechanism whereby one imagines the attitudes of others not just to one's gestures but to oneself, and in so doing develops the capacity to be an object to oneself. This is the whole basis of self-hood. For one to become aware of oneself one must first become an object to oneself, and this can only happen through social means, by taking the attitudes of others towards oneself.

The mind and the self emerge from the social, through the constant interactions between people. The mind is not a thing which exists but a series of events. This moves us away from the notion of "the self" as a separate entity. The key driver is the relationship.

[26] D.W. Winnicott, *The Theory of Parent-Infant Relationship,* 1960
[27] Quoted by Farhad Dalal, *Taking the Group Seriously,* Jessica Kingsley Publishers, 1988
[28] G.H. Mead, Mind, *Self & Society,* University of Chicago Press, 1934

1.2 Mind, self and society

Which factors have the greatest influence over how we evolve?

In the "nurture/nature" debate there is increasing evidence that social and cultural factors are at least as important as, if not even more than, biological factors.

In the 1920's the Standard Social Science Model (SSSM), developed by Margaret Mead and John Watson, began to dominate intellectual life. According to the SSSM, humans are not rigidly controlled by biology, but by culture free from biological constraints and varying across different societies. Children, for example, learn their culture through a combination of indoctrination, reward and punishment.[29]

The growing importance of cultural factors in our evolution features heavily in the work of Norbat Elias. Changes in society led to a growing restraint on feelings and the need to think before acting, and a detachment in observing self and others. Elias' concept of "internal world" grew as a result of society's pressure to hide certain functions.

Elias argues that from Descartes onwards, whereas previously people experienced themselves as part of a group – whether family, religious or otherwise – increasingly they came to view themselves as individuals.[30]

At same time, paradoxically we see ever lengthening chains of interdependence. As Western society evolved, social functions became more and more differentiated, so any individual had to depend more and more on others to do anything.[31] These lengthening chains of interdependence lead to a basic tissue made up of many different single plans and actions, resulting in outcomes no single individual planned or created:

"It is as if first, thousands, then millions, then more and more millions walked through this world with their hands and feet chained by invisible ties. No one is in charge...no one stands outside...no one can regulate the movement of the whole unless a great part of them are able to understand, to see, as it were, the whole patterns they form together. And they are not able to visualize themselves as part of larger patterns because being hemmed in and moved uncomprehendingly hither and thither in ways which none of them intended, they cannot help being preoccupied with the urgent, narrow and parochial problems which each of them has to face."[32]

The impact of increased differentiation and proliferation of new roles and structures in society profoundly affects our evolution. Ralph D. Stacey asks why, given the weight of evidence we now have that changing evolving emerging social strategies are more important than genetic inheritance, do evolutionary psychologists keep going back 100,000 years?

[29]Referenced by Steven Pinker, *The Language Instinct,* Allen Lane The Penguin Press, 1994
[30]Norbert Elias, *The Civilizing Process,* Blackwell Oxford, 2000
[31]Norbert Elias, *The Civilizing Process,* Blackwell Oxford, 2000
[32]Norbert Elias, *The Civilizing Process,* Blackwell Oxford, 2000

1.2 Mind, self and society

There is an increasing recognition of the shortcomings of the rationalist view of the world, in which we as individuals are somehow separate from society and the world we inhabit.

There is a growing awareness that we are all connected, not only to each other as part of the human race but also to the ecosystem and beyond.

In 1923 Walter Gropius, founder of the Bauhaus school, prophetically wrote:

"The dominant spirit of our epoch is already recognizable although its form is not yet clearly defined. The old dualistic world-concept which envisaged the ego in opposition to the universe is rapidly losing ground. In its place is rising the idea of a universal unity in which all opposing forces exist in a state of absolute balance. This dawning recognition of the essential oneness of all things and their appearances endows creative effort with a fundamental inner meaning. No longer can anything exist in isolation."[33]

Over the last few decades a rejection of the rationalist framework has taken many forms. In his influential book *The Tao of Physics*[34] Fritzof Capra demonstrated the limitations of the mechanistic world view embodied by thinkers such as Newton and Descartes, and pointed instead to a more fruitful, holistic systems based approach. He envisaged this approach to be applicable in many fields including politics, sociology, economics, ecology.

Professor Ralph D. Stacey at the University of Hertfordshire has applied insights from the complexity sciences to human behaviour and management theories. In tracing the origins of predominant paradigms, Stacey has identified broadly two streams of thinking:

The first stream of thinking - embodied by thinkers like Kant, Descartes, Leibniz, Freud - represents the mind as existing purely "inside" the individual, and society as something very much "outside" the individual.

By contrast, in the second stream of thinking - embodied by thinkers like Hegel, Mead, Elias - there is no "inside" and "outside". Both minds and societies are patterning activities of human bodies. The mind is constantly forming and being formed by social interactions. This second stream of thinking presents a perspective where the individual and the social cannot be separated.[35]

There may be a growing understanding of the interconnectedness of all life, but such a world view is not yet mainstream. Moreover, our society and its predominant structures originate from a time when the individual was understood to be separate from, and often in opposition to, the world. One result of this mindset can be seen in economic systems which lead to the unsustainable plundering of finite resources.

In *The Tao of Physics* Capra suggested a convergence of modern physics and Eastern mysticism. He also identified a Yin/Yang imbalance, whereby we have favoured self-assertion over integration, analysis over synthesis, the rational mind over intuition, competition over co-operation. "The Yang having reached its climax retreats in favour of the Yin"[36]

[33]Walter Gropius *'The Theory and Organization of the Bauhaus'*, 1923
[34]Fritjof Capra, *The Tao of Physics, 1975,* Fontana Paperbacks 1983
[35]Stacy et al, *Complexity and Management,* Routledge, 2000
[36]Fritjof Capra, *The Tao of Physics, 1975,* Fontana Paperbacks, 1983

1.3 Is the mind inside or outside?

The work of Mead, Hegel and Elias suggests that consciousness refers to both the organism and its environment and cannot be located simply in either.

This is an idea that has found resonance across other fields.

Psychologist Carl G. Jung touches on this area in his concept of "synchronicity", which he describes as an acausal connecting principle. Meaning can exist outside the psyche. Jung urges us to give up on the idea of the psyche being connected with the brain exclusively, and for us to see meaningful intelligent behaviour of lower organisms without a brain. Jung suggests that there is an equivalence of psychic and physical processes, even an "acausal orderedness"[37].

From a neuroscience perspective Anthonio Damasio argues that mental phenomena can be fully understood only in the context of organisms interacting in an environment[38].

Sociologist Norbat Elias explores this question in some depth. A major theme of his work is the "crusade against 'homo clausus'". Elias asks, what in the human individual is "the container", and what is "the contained"? It may appear that we are each of us surrounded by an invisible wall, but the nature of this wall is never properly considered. The appearance of inside and outside appears at first glance as self-evident, but it is in fact far from conclusive[39].

Elias argues that the notion of "homo clausus" is a characteristic of a particular stage in the development of human perception. He compares this egocentric view of ourselves, to the geocentric view we once held of the world when we used to believe that the sun travelled round the earth. The fictitious polarity of the individual and the social is further reinforced by linguistic and semantic traditions which force our speaking and thinking into the same grooves.

Anthropologist Gregory Bateson describes the mind as part of a much larger system, immanent in brain, system and environment. He also places an emphasis on mental systems as including more than single organism. The "self" is only a small part of a much larger system. A theme running through Bateson's work is that we need to regard the "unit of survival" as organism plus its environment.[40]

Insights from across many different disciplines converge on the idea that the individual is inextricably part of its environment. This insight has profound implications for how we perceive ourselves and the priority we should place on the whole ecosystem.

Although there may be physiological correlates, nowhere in the body is there to be found a mind, a self, or a consciousness. There are no "things in the mind".

Consciousness is an operation not a "thing"[41]. As Julian Jaynes explained "There is nothing in consciousness that is not an analog of something that was in behaviour first."

[37] C.G.Jung, *Synchronicity: An Acausal Connecting Principle,* Ark, London, 1985
[38] Antonio R. Damasio, *Descartes Error,* Picador London, 1995
[39] Norbert Elias, *The Civilizing Process,* Blackwell Oxford, 2000
[40] Gregory Bateson, *Steps to an Ecology of Mind,* 1972, University of Chicago Press, 2000
[41] Julian Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind,* Penguin Books, 1999

1.3 Is the mind inside or outside?

Gregory Bateson also emphasised in his work that there are no things in the mind. He defined the mind as an aggregate of interacting parts, whereby interaction is triggered by difference.[42]

The idea of the mind being part of a much larger system, has led Ralph D. Stacy and his team at the University of Hertfordshire to conclude that knowledge is not an "it" but a process of creation, undertaken in the living present. Stacey challenges cognitivist assumptions about brain functioning which suggest the representing and storing of information. Instead he supports more dynamical theories of brain functioning, which suggest that the human mind is highly plastic.[43]

According to a dynamical process perspective, the brain does not passively process information arising from stimuli; instead the brain continually forms and reforms connections and emergent patterns throughout its life, in self-organizing internally generated neural processes. The brain is constantly changing and reforming.

The brain does not store memories in a memory bank. Instead some stimulus triggers an associative sequence of patterns across whole subsection of brain, in which past events are actively reconstructed in the living present. Most connections between neurons are formed by experience after birth, and these continue to change as old ones dissolve and new ones form.

Extending this concept to society suggests that social structure is shared, repetitive and enduring values, beliefs, traditions, habits, routines, procedures – which are not stored but continually reproduced in the interaction between people. This view cannot locate mind in brain functioning alone.

Stacey and his team applied insights from the complexity sciences to understanding human behaviour. They developed the theory of "Complex Responsive Processes", as a means of explaining the emergence of long term widespread coherent patterns of relating. Interaction is iterative, and wider social relations are intrinsically implicated in the interaction between two people.

In this theory, time is defined as the living present. It is paradoxical in that interaction takes place in a present which constantly reproduces the past in expectation of the future, and that expectation changes the reproduction of the past. Self-organization is a paradoxical process of repetition and potential transformation.[44]

Knowledge is a process of creation, through constant interaction. The mind cannot be located in brain functioning alone, but is part of a much bigger system.

[42]Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana, 1980
[43]Ralph D. Stacey, *Complex Responsive Processes in Organisations,* Routledge, 2001
[44]Ralph D. Stacey, *Complex Responsive Processes in Organisations,* Routledge, 2001

1.4 What is consciousness?

What is consciousness? This question has preoccupied us for generations.

As Julian Jaynes put it: "This consciousness that is myself of selves, that is everything, and yet nothing at all - what is it?".45

There may be an inbuilt limitation to our understanding of consciousness. It is all pervasive, but perhaps inevitable that we will never gain an objective perspective on it - just like fish will be the last to discover water!

George Miller wrote "Consciousness is a word worn smooth by a million tongues. Depending on the figure of speech it is a state of being, a substance, a process, a place, an epiphenomenon, an emergent aspect of matter, or the only true reality."[46] Our efforts to try and understand it may be doomed to fail: "Turning a tool on itself may be as futile as trying to soar off the ground by a tug at one's bootstraps".

Colin McGinn uses the analogy that humans can't see ultra violet light for biological reasons. In the same way consciousness may be a rather simple biological characteristic, like digestion.[47]

One of the difficulties in gaining a perspective on consciousness is that in no mental system can one part have unilateral control over the whole.

As Gregory Bateson puts it, it is surely self-evident that the whole of the mind could not be reported in a part of the mind.[48]

Roger Penrose stresses that we cannot consciously understand how we form our conscious impressions or judgements. Those reasons are inaccessible to consciousness and would need to be understood at a deeper physical level.[49]

This idea is developed in some detail by Douglas Hofstadter. In trying to penetrate thought we find that below every tangled hierarchy lies an inviolate level. We can change the rules, and the rules that change the rules about how we think, but we can't change the neurons, the hardware. You can't think your neurons into running some non-neural way.

As Hofstadter explains language creates strange loops when it talks about itself. Something "in" the system jumps out and acts "on" the system as if it were "outside" the system. Is there a limit to the depth to which any individual can penetrate into his own psyche?

"Just as we cannot see our faces with our own eyes, is it not reasonable to expect that we cannot mirror our complete mental structures in the symbols which carry them out? All the Limitative Theorems of meta-mathematics and the theory of computation suggest that once the ability to represent your own structure has reached a certain critical point that is the kiss of death: it guarantees that you cannot represent yourself totally."[50]

[45]Julian Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind,* Penguin Books, 1999, London

[46]Referenced in *The Nature of Consciousness ed. Ned Block, Owen Flanagan, Guven Guzeldere,* Massachusetts Institute of Technology MIT, 1997

[47]Referenced in *The Nature of Consciousness ed. Ned Block, Owen Flanagan, Guven Guzeldere,* Massachusetts Institute of Technology MIT, 1997

[48]Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000

[49]Roger Penrose, The Emperor's New Mind, 1989

[50]Douglas R. Hofstadter, Godel, Escher, Bach: *An Eternal Golden Braid,* Penguin Books, 1986

1.4 What Is consciousness?

There is an important distinction to be made between first and third person perspectives on consciousness.

From the inside "first person" perspective consciousness seems all pervasive, self-evident and undeniable. But from the "third person" perspective it seems to be an epistemic impossibility for anyone to have direct access to 'qualia' of others "what it's like to be them."[51]

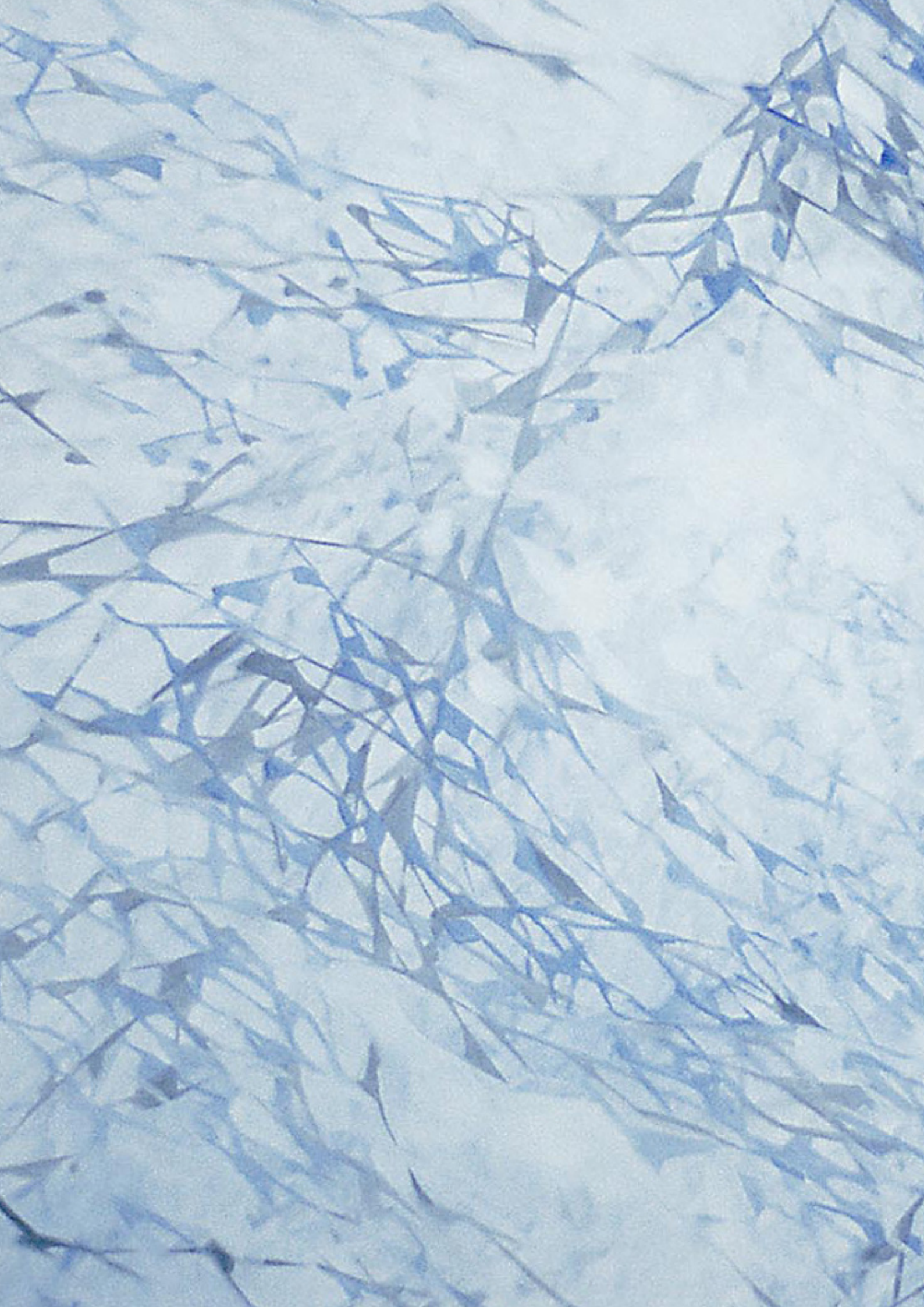
In his famous essay "What is it like to be a bat?" Thomas Nagel characterizes an organism's possession of conscious states as being "something it is like to be" that organism. This subjective character of experience cannot be captured by any functional or causal analysis.[52]

Guven Guzeldere emphasises the need to allow a cross-fertilisation of first and third person perspectives, which would allow theorising about how consciousness feels and what consciousness does.

Whether consciousness will ever be understood by our rational minds is doubtful. The question has the capacity to baffle us indefinitely. It may be more fruitful to open our minds and focus on expanding our field of awareness beyond the purely analytical.

[51] Guven Guzeldere, *Introduction to The Nature of Consciousness ed. Ned Block, Owen Flanagan, Guven Guzeldere,* Massachusetts Institute of Technology MIT, 1997

[52] Thomas Nagel, *What is it like to be a bat?* 1974



2. The need for change

Our understanding of ourselves is deeply problematic. The sense of a separate self is an illusion, but this illusion becomes the filter through which we perceive the world. Our minds are defined by the "selves" we construct, and our perception is limited to what these "constructed selves" can comprehend.

Our understanding of the world is also inevitably limited because we are part of the world we seek to understand. We are wired to make decisions based on our narrow individual interests as these dominate our conscious awareness.

By focussing on the "common sense" dictates of our individual consciousness we are destined to make unwise decisions. The result is short term expediency and a lack of systemic wisdom. We need to recognise our fundamental interdependence with each other and the biosphere.

2.1 The illusory separate self

Our understanding of ourselves is deeply problematic.

The notion of the "self" is an assumption fraught with difficulty. Louis Zinkin suggests that the very act of self-knowledge produces self-estrangement . Jacques Lacan describes how the introduction of language coincides with a spilt between the conscious and the unconscious. The child loses access to the "real" when it enters the symbolic order. There remains a permanent split between the "moi" out there and the "je" referred to by the word.[54]

The sense of self may make sense to our intuition, and on an experiential level, but there is little logical basis for it. David Bohm argues that the "I" is not the central entity, but is a movement of assumptions and experiences. It is attributed the status of an "entity" through habit, lack of attention and cultural consensus.

"What happens is that there is a "doubter" who doubts. Somewhere in the "back of the brain" is somebody who is observing what is wrong, but he is not being observed. The very "wrong" things which he should be looking at are in the one who is looking, because that is the safest place to hide them. Hide them in the looker and the looker will never find them"[55]

Douglas Hofstadter asks whether the so-called self could in fact be a subsystem in the brain. He suggests that there is no reason why "I" couldn't be represented by a symbol. The symbol for self could be most complex of all systems in the brain, a subsystem, a kind of "sub-brain". Because of the extensive links between the subsystem and the rest of the brain it would be difficult to draw a boundary between that subsystem and the outside.

The key question, as Hofstadter puts it, is whether human beings are capable of "jumping out of themselves"? Certainly, we can move from one "subsystem" to a new understanding, but there is a difference between perceiving and transcending.[56]

We need to recognise that we may not be who we think we are. The illusion of hegemony seems self-evident, but the notion of the "I" or the separate "self" is deeply problematic. The harder we try to define the "self" the more illusory it appears to be. The self is not a real fixed thing or essence, but is a construct in our minds, and infinitely malleable.

Personal non-existence makes no sense at all to our individual selves. As David Bohm says, it is somehow inbuilt that thought will create the illusion of immortality, or of a state beyond death: "Thought cannot possibly consider its own death. So, if it tries to do so, it always projects something else, some other broader point of view from which it seems to look at it... It seems to be built into thought that it cannot possibly consider death properly"[57]

[53]Louis Zinkin, *Malignant Mirroring,* 1983
[54]Jacques Lacan, *The Mirror Stage as formative of the I,* 1936 /1949
[55]David Bohm, *On Dialogue, Routledge,* Oxford, 1996
[56]Douglas R. Hofstadter, Godel, Escher, Bach: *An Eternal Golden Braid,* Penguin Books, 1986
[57]David Bohm, *On Dialogue, Routledge,* Oxford, 1996

2.1 The illusory separate self

Similarly, Douglas Hofstadter contends that everything we know is embedded in our minds, and for that to be abstract from the universe is not comprehensible to us.

So who are we really? Who is doing the thinking? Who or what is the active agent?

This question has given rise to many theories. Gustav Fechner, philosopher and founder of psychophysics, put forward the idea that the body is a dwelling place for higher spirits. The mind is also the property for these higher spirits and as Fechner puts it "whatever comes to pass in it belongs to both sides only in different sense and manner".[59]

This presents a view different to one where the individual "self" is in charge, as the decision maker. Here we are often compelled to do x, y and z as the result of influence from spirits entering into us and acting from centres different to our own. This view does not negate the concept of the "self", it just presents a more fluid multiple manifestation.

The way we predominantly experience our "selves", however, is at odds with the underlying reality of our existence.

Dan Siegel describes the mind as an emergent property of energy and information flow, which emerges from the engagement with others and the outside world. Our minds and our sense of self emerge not only from our inner life but also from our "inter life"[60], from our sense of ourselves in relation to others.

The notion of the separate self is an obstacle to realizing our potential and the cause of much suffering.

For centuries, enlightened spiritual teachers have pointed to the illusion of separateness as the cause of all suffering. And yet it is such a powerful illusion. The creation of the separate self is very damaging to humanity.

Everything we experience is filtered through the separate selves we construct. The illusory self becomes an obstacle to real understanding. The key is to recognize these limitations in our awareness, for they may not be apparent to us. We are prisoners of our own partial perception, and this limits the degree of consciousness accessible to us.

Dan Siegel describes the notion of the separate self as essentially a "lie"[61]. And one of the problems with the lie of the separate self is that if we believe it we will experience a sense of disconnection, isolation and despair.

"Another problem with this delusion of separateness is we come to treat the planet as a trash can. Instead of being in love with nature, we treat Earth like a dumpster."

[58]Douglas R. Hofstadter, Godel, Escher, Bach: *An Eternal Golden Braid,* Penguin Books, 1986
[59]Gustav Fechner, *On Life After Death, 1835,* The Open Court Publishing Co. Chicago, 1906
[60]Daniel J Siegel, MD, *Mind: A Journey to the Heart of Being Human,* W.W. Norton & Company, 2017
[61]Daniel J Siegel, MD, *Mind: A Journey to the Heart of Being Human,* W.W. Norton & Company, 2017

2.2 Lack of coherent subjectivity

How capable are we of holding an authentic integrated position?

Robert Williams suggests that our minds have become machines for motivating our bodies. Desire, which Plato regarded as heart of our inwardness, has been colonized by advertising, reduced to an instrument for stimulating consumerism. Our bodies have become machines for perpetuating the cycle of production and consumption.

Williams argues that this has dramatically reduced the possibility of our holding an integrated position, of a coherent subjectivity.[62] Subjectivity has been linked closely to art since the Renaissance. Expression required the notion of the "self" of artist to be expressed, and this self had to have attributes of authenticity. But postmodernism casts into doubt very possibility of a coherent subjectivity.

Body critiques, including our obsession with how we look, suggest an underlying anxiety about our identity and our own subjectivity. Meanwhile we have been increasingly coerced by the consumer culture. Our minds are distracted by social media and over stimulated to consume goods and services. There is little space for deeper contemplation, the vital inner journey.

Robert Williams concludes: "Art exposes the fact that a critical outlook toward the world depends upon an integrated position of some kind, even if it may also insist that a fully, ideally integrated position is impossible."[63]

The separation of thoughts and feelings undermines our ability to form an integrated position.

Our tendency to separate thoughts and feelings causes confusion and is profoundly destabilising. Gregory Bateson describes any attempt to separate intellect from emotion as monstrous.[64] William James concluded "try to subtract from a strong emotion the feelings of its bodily symptoms and you'll find nothing left behind, no mind stuff."[65]

The interdependence of thoughts and feelings is evidenced at a biological level. Candace Pert illustrates how our internal chemicals, neuro peptides and receptors, are the actual biological underpinnings of our awareness manifesting as emotions, beliefs expectations. At the level of the "body mind" Pert describes there to be multiple selves, sub personalities, altered states of consciousness simultaneously happening.[66]

This type of thinking marks a departure from the more rationalist framework embodied by thinkers such as Kant, Descartes and Newton.

Antonio Damasio illustrates how emotions and feelings are intimately enmeshed. Reason is not pure, and feelings are not intangible. Feelings are just as cognitive as other precepts. "The mind had to be first about the body, or it could not have been".

[62]Robert Williams, *Art Theory: an historical introduction,* Blackwell Publishing, Oxford, 2004
[63]Robert Williams, *Art Theory: an historical introduction,* Blackwell Publishing, Oxford, 2004
[64]Gregory Bateson, *Steps to an Ecology of Mind, 1972*, University of Chicago Press, 2000
[65]William James, quoted by Antonio R. Damasio, *Descartes Error,* Picador London, 1995
[66]Candace B Pert, *Molecules of Emotion: why you feel the way you do,* Simon & Schuster London, 1998

2.2 Lack of coherent subjectivity

In *Descartes Error* Damasio explains how the brain and the body are mutually interactive biochemical neural circuits.[67]

How is it that we are conscious of the world around us, that we know what we know, and that we know that we know? According to Damasio, body precedence sheds light here. We begin with being, only later do we think. In *Descartes Error*, Damasio explains how the neural basis of the self mitigates against the idea of a disembodied mind.[68]

Our ability to hold an integrated position requires a mind fully integrated with thoughts and feelings in balance.

Huge possibilities are opened up by technological advances, genetic research, and virtual reality. But these advances have the capacity to undermine our very notion of who we are.

Donna Hathaway speaks of the "cyborg", which is a combination of human and machine. Artificial intelligence (AI) has the potential to undermine the very notion of what it means to be human. Can intelligent behaviour be programmed? Where is borderline between non-intelligent and intelligent behaviour?

Roger Penrose discusses "Strong AI". Is mental activity just the carrying out some well-defined sequence of operations, an algorithm, which it is perfectly possible to programme? Penrose contends that the decision as to validity of an algorithm is not in itself an algorithmic process. He concludes that the hallmark of consciousness is the non-algorithmic forming of judgements.[69]

Douglas Hofstadter argues that "jumping out of the system" is the key property of intelligence. There may be rules, meta-rules, meta-meta-rules, rules for inventing new rules. But an inherent property of intelligence is capacity to jump out of the system.[70]

It may be possible to make a distinction between conscious intelligence, and the kind of intelligence which needs to be programmed. However, the boundary between humans and the technology meant to serve them has become somewhat blurred.

[67]Antonio R. Damasio, *Descartes Error,* Picador London, 1995
[68]Antonio R. Damasio, *Descartes Error,* Picador London, 1995
[69]Roger Penrose, *The Emperor's New Mind: Concerning Computers, Minds and The Laws of Physics,* OUP, 1989
[70]Douglas R. Hofstadter, Godel, Escher, Bach: *An Eternal Golden Braid,* Penguin Books, 1986

2.3 The world becomes how it is imagined

Ideas have a self-fulfilling power of their own.

Gregory Bateson demonstrates that we are often governed by epistemologies which we know to be incorrect but which are nevertheless self-validating. Courses adopted for short term gain are by default adopted for the long term, and then become rigidly programmed with sometimes disastrous consequences.

Bateson highlights the risks of extinction that arise by way of loss of flexibility. Habits which have become hard-programmed are very difficult to reverse.[71]

When they go unexamined, ideas can also become hard-wired habits. Bateson asks what sort of habit of mind leads to paying too much attention to symptoms and too little to the system? Treating the symptom makes the world a safe place for the pathology. For example, cure congestion by building more roads![72]

George Soros talks about the long term danger of "fertile fallacies". Such ideas may be fertile in the short term, in that they produce positive results before their deficiencies are discovered, but in the long term have damaging consequences.

Past experience can actually disrupt rather than benefit problem solving. This type of deficiency in thinking is illustrated in an experiment by Karl Duncker. The experiment illustrates how we are limited by "functional fixedness", which is a mindset that prevents us from addressing current problems.

In Duncker's famous "candles and box of nails experiment" participants are presented with a candle, a book of matches and a box of thumbtacks and given the task to fit the candle to the wall in such a way so the candle won't drip wax onto the table below. Most participants are fixated on box's function as a container rather than as a separate component available to be used in solving the problem. The optimal solution is to use the box as a platform! [73]

Bateson warns us not to be blinkered by "conventional wisdom". It is important to keep open and not trapped in a priori decisions.[74] According to Alfred Korzybski, if a person is over committed to certain verbal constructs, definitions and formulae he may not be able to respond appropriately to new data from the non-verbal, or yet to be anticipated world.[75]

In our search for understanding we can often get in our own way. Our past experiences and interpretations can mislead us. We need to be aware, keep our minds open, and examine all assumptions. Our minds affect the world in ways we barely understand, and not necessarily in ways we would expect or intend.

[71]Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000
[72]Gregory Bateson, *Sacred Unity: Further steps to an ecology of mind,* Harper Collins, 1991
[73]Karl Duncker, *Zur Psychologie des produktiven Denkens,* Springer, Berlin, 1935
[74]Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000
[75]Alfred Korzybski, *Science & Sanity,* Fifth Edition, Institute of General Semantics, 1994

2.3 The world becomes how it is imagined

Our understanding of the world is flawed because we are part of the world we seek to understand.

This limitation in our understanding is highlighted by George Soros his book The New Paradigm for Financial Markets. He refers to the "correspondence theory of truth". In order to establish "correspondence" the facts and statements which refer to them must be independent of each other. This cannot be fulfilled when we are part of the world we seek to understand.

Soros applies this limitation to financial markets. He rejects the idea that "financial markets are self-correcting and tend towards equilibrium", even though this is the prevailing paradigm on which the various synthetic instruments and valuation models are based. The markets in fact demonstrate a two-way interference. He concludes that we urgently need a new paradigm which looks in terms of reflexivity: circularity, a two way feedback loop between perception and the actual state of affairs.[76]

The need for a new paradigm applies even more urgently to our understanding of ourselves. From the narrow perspective of the individual separate self it is almost inevitable that we will engage in self-defeating behaviour. Fear manifests as anger, and lack of self-awareness compounds that anger, which then escalates to the kinds of troubles all too apparent in the world today.

How do you decide where to focus your attention? On what principles does your mind select that of which you will be aware?

Gregory Bateson contends that we are hard wired to focus on that which will serve our immediate self interests. He describes this as "purposive consciousness", which is a shortcut device to enable us to get what we want. Whilst this might be an effective means of satisfying our immediate urges and desires, it leads ultimately to a lack of systemic wisdom.

Bateson shows that if we focus on the "common sense" dictates of consciousness we become effectively "greedy and unwise".[77] And it is easy for us to lead ourselves astray. The premises of subjective insight may seem self-evident, but they need to be examined otherwise they can lead to disastrous consequences.[78]

The unit of survival is the organism plus its environment. But the cumulative impact of decisions made for immediate reasons of self interest is leading to irreversible changes to the environment, and putting massive strain on our ecological system.

Political expediency is self-defeating. It is important to do the right things for the right reasons. Bateson argues that the rationale, the ecological reasons for a policy, are as important as the policies themselves, and these need to be communicated clearly to people. Otherwise politicians will struggle to gain the mandate they need to take future difficult decisions.

[76]George Soros, *The New Paradigm for Financial Markets,* Public Affairs, 2008
[77]Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000
[78]Gregory Bateson, S*acred Unity: Further steps to an ecology of mind,* Harper Collins, 1991

2.3 The world becomes how it is imagined

We need to increase our collective sense of responsibility. Douglas Griffin illustrates how too easily we slip into thinking that an "organisation" has a mind of its own, and locate ethical responsibility in a few individuals and the "system", the rest of us being passive victims.[79]

If we are to address the serious systemic and environmental challenges we face, we will need to increase our understanding and plan for the longer term.

In *The Selfish Gene* Richard Dawkins asks which level in the hierarchy of life will turn out to be the inevitably "selfish" level, at which level does natural selection act? Is it the species, the group, the organism, the ecosystem? His answer is that it is the gene.[80]

Dawkins describes the gene as a long-lived replicator existing in the form of many duplicate copies. And natural selection sees to it that gangs of mutually compatible genes are favoured in the presence of each other. Sharing genes explains altruism by parents to their young.

Dawkins argues that it is a misconception that living creatures evolve to do things for "the good of the species". Even while the group may be going downhill, selfish individuals prosper in the short term at the expense of altruists.

Dawkins urges us to try to "teach generosity and altruism, because we are born selfish. Let us understand what our own selfish genes are up to, because we may then at least have the chance to upset their designs, something that no other species has ever aspired to."

[79]Douglas Griffin, *The Emergence of Leadership,* Routledge, 2002
[80]Richard Dawkins, *The Selfish Gene,* OUP, 2006

2.4 The future is under perpetual construction

The complexity sciences can provide useful insights into human behaviour, society and global trends.

Complexity science understands the world in terms of organic holistic systems. Life is an emergent phenomena existing at "the edge of chaos". Life is not located in any single molecule but is the collective property of systems of interacting molecules, near a kind of phase transition. Society too may be described as an emergent phenomena, irreducible to previous physical, chemical and biological levels.

In *At Home in the Universe* Stuart Kauffman describes the "edge of chaos" in detail. He explains how the number of connections between agents comprising a complex system determines the dynamics of the system.

When the number of connections is small, the dynamics take the form of stability, i.e. highly repetitive patterns of behaviour. Conversely, if the number of connections is high the constraints which agents impose on each other are numerous and the system is unstable. At a critical number of connections, neither too few nor too many, the system reaches the edge of chaos - where it is neither stable enough to obstruct the potential for change, nor unstable enough to destroy the pattern.[81]

The complexity sciences reveal that interaction between entities has the intrinsic capacity to produce coherence in the absence of any blueprint, programme or agency. Order emerges from disorder through processes of spontaneous self-organization. Bifurcation describes the behaviour of complex systems in states and conditions far from equilibrium, which may lead to a restructure of, or fatally perturb, that system.[82]

In his dissipative structure theory Ilya Prigogine demonstrated how a liquid or a gas can be held in a far from equilibrium state by some environmental constraint such as heat, whereby small fluctuations are amplified to break the microscopic symmetry of entities comprising it.[83] At a critical point the system reaches a bifurcation point where a number of possible pathways open up. This leads the system to spontaneously self-organize, leading to long-range correlations, and a new coherent pattern emerges without any blueprint.[84]

Lazlo applies this insight to current global trends. The modern world is unsustainable and on the way to a bifurcation point. Micro interactions between individuals transform both global patterns and themselves, in a paradoxical movement of forming while being formed at the same time. The cumulative effect of all these micro interactions is putting a massive strain on our ecological system and threatening the very foundation our existence.

[81]Stuart Kauffman, *At Home in the Universe,* OUP, Oxford, 1995
[82]Ervin Laszlo, *The Age of Bifurcation,* Gordon & Breach, 1991
[83]Ilya Prigogine, *Order out of Chaos: Man's new Dialogue with Nature,* Bantam Books New York, 1984
[84]Ilya Prigogine, *Order out of Chaos: Man's new Dialogue with Nature,* Bantam Books New York, 1984

2.4 The future is under perpetual construction

We need a new paradigm.

In *The Chaos Point,* Ervin Lazlo argues that we urgently need to think and act in a global context with a long term horizon.[85] Lazlo points to the obsolescence of modern beliefs such as: the "law of the jungle", the "invisible hand", and "a rising tide lifts all boats".

We need to move beyond liberalism and communism to a 3rd strategy whereby we co-evolve the person and society, optimising individual freedom and autonomy and ensuring at the same time social justice and equity.[86]

Is future a given, or is it under perpetual construction?

A teleology is a pattern generated at end of a sequence, which is also causal of the pathway followed by that sequence. In *Complex Responsive Processes in Organisations* Ralph Stacey identifies five main teleologies, or "final causes".

First there is the "Secular Natural Law Teleology", where the future is a repetition of the past. Next there is the "Rationalist Teleology", where the future is a goal chosen by reasoning human beings. "Formative Teleology" implies that future can be known in advance and is a mature form that which is implied at the start. By contrast "Transformative Teleology" says that the future is under perpetual construction by the movement itself and cannot be known in advance. Finally, "Adaptionist Teleology" says the future is a stable state, adapted to an environment that may change in unknowable ways.[87]

The causal framework adopted by Stacey is "Transformative Teleology", the roots of which can be seen in the work of Hegel. From this perspective, there is no mature or final state, only perpetual iteration of identity and difference, continuity and transformation of identity at the same time, moving to an unknown form.[88]

[85]Ervin Laszlo, *The Chaos Point: the World at the Crossroads,* Piatkus Books Ltd London, 2006
[86]Ervin Laszlo, *The Age of Bifurcation,* Gordon & Breach, 1991
[87]Ralph D. Stacey, *Complex Responsive Processes in Organisations,* Routledge, 2001
[88]Ralph D. Stacey, *Complex Responsive Processes in Organisations,* Routledge, 2001

2.4 The future is under perpetual construction

Truly novel change is possible

In "Transformative Teleology" we move from a notion of design to one of emergence. For example, our understanding of human interaction moves from that interaction being patterned by innate design; to it being patterned by learning; finally, to human interaction pattering itself.

Roger Penrose suggests that the future is not computable from the present, although it may be determined by it. There is something mysterious about evolution, with its apparent groping towards some future purpose. Things at least seem to organize themselves better than they ought to, just on the basis of blind chance evolution and natural selection. Intelligent groping of evolution is better than blind chance in natural selection.[89]

Insights from the complexity sciences suggest that truly novel change is possible. Ilya Prigogine refers to the constructive role of arrow of time.[90] Change is a product of repetition and transformation, at the "edge of chaos" - neither stable enough to prevent change or unstable enough to destroy pattern.

[89]Roger Penrose, *The Emperor's New Mind,* 1989

[90]Ilya Prigogine, *The End of Certainty: Time, Chaos and the New Laws of Nature,* The Free Press New York, 1997

3. Towards an evolution

The aim is for thinking to become a tool at our disposal. Too often it is the other way around. We find ourselves at the mercy of compulsive thinking and anxieties which hinder us from responding adequately to the challenges we face - both as individuals and as a society.

We need to develop a heightened degree of self-awareness. We need the freedom to choose what we think, where to put our attention, and at times to be able to clear the mind of thought. Increasingly, we may come to see our knowledge as a tool, a construction, and our "selves" as constructions too. This brings the possibility of real change: the liberation from the self.

With this liberation comes the realization of essential oneness. We become open to new insights. We may begin to recognize intrinsic patterns and the interconnectedness of all life.

3.1 Progress in awareness

As Socrates once declared, "The unexamined life is not worth living".[91]

Robert Kegan describes different orders of consciousness.[92] As we transition through these levels, we transcend previous constructions and co-constructions. Progress in awareness can be likened to the change from a dot, to a line, to a plane - each successive principle subsumes or encompasses what went before. As we evolve we liberate the self from that in which it was previously embedded, making what was subject into object.

At the highest order, we understand that "the self" is incomplete. We recognise the self as a process of form creation; we understand that conflict arises from the over identification with a single system. We also recognise relationships as prior to and constitutive of the individual self. Kegan emphasises that the key thing is to identify with "the transformative process of becoming rather than formative products of our becoming." [93]

Psychological problems are not caused by the unconscious but by the deprivation of full consciousness. Gregory Bateson describes five key stages in the progress of awareness.[94] First one blames the patient for their dysfunctional behaviour. Then one realises that the patient's behaviour is a response to another's behaviour and one blames the "etiological figure" (such as the parent).

At the next stage "one discovers that these figures feel a guilt for the pain which they have caused, and one realizes that when they claim this guilt they are identifying themselves with God. After all, they did not, in general, know what they were doing, and to claim guilt for their acts would be to claim omniscience".

Then one reaches a more general anger "that what happens to people shouldn't happen to dogs". Finally, pessimism and anger are replaced by something else - perhaps humility? "And from this stage onwards to whatever stages there may be there is loneliness". Bateson's profoundly moving account perhaps highlights how rare true compassion is. As one progresses along a path towards greater awareness, the road gets narrower.

Rudolf Steiner described different stages of knowledge. At the highest stage, "the intuitive stage", man no longer stands outside "but is himself within". In this context intuition is not a vague sense but far surpasses intellectual knowledge. At the highest stage one "lives in all things". Steiner wrote of the need to liberate individual ego from the personality in which it is enmeshed so it can become a fully conscious instrument of divine will.[95]

The self is not a separate entity and has no intrinsic value.

The self can appear real, and take on too much importance. This creates a powerful illusion of separateness, which is the cause of so much of the suffering in the world. Throughout the ages, our greatest thinkers have emphasised the importance of freeing oneself from the bondage of self.

[91]Mortimer J.Adler, *How to think about the Great Ideas,* 2000, Open Court, Chicago
[92]Robert Kegan, *In Over Our Heads,* Harvard University Press, 1994
[93]Robert Kegan, *In Over Our Heads,* Harvard University Press, 1994
[94]Gregory Bateson, *Sacred Unity: Further steps to an ecology of mind,* Harper Collins, 1991
[95]Rudolf Steiner, *Supersensible Man,* Anthropological Publishing Company London, 1961

3.1 Progress in awareness

Meister Eckhart, the non-dual Christian mystic sage of the 12th century, wrote that "a really perfect person is dead to self". Einstein famously wrote "The true value of a human being is determined primarily by the measure and the sense in which he has attained to liberation from the self." [96]

But the self does have a purpose. Gregory Bateson described it as a ladder, useful in climbing but to be thrown away at a later stage.[97] In developmental stages, it is an aid to negotiating early relationships and to learning. Ultimately however it becomes a limitation to understanding. Bateson describes "Learning III" as an advanced stage of learning whereby the self, "is no longer a nodal argument in experience". At this point, personal identity merges into the vast ecology.[98]

Self-consciousness creates inhibition, and blocks the flow of inspiration. In *Hare Brain: Tortoise Mind,* Guy Claxton writes that the more the self is involved, the more cautious consciousness must be for fear of getting it wrong.[99] Claxton emphasises the need give up the belief in certain knowledge, and to have the confidence at times to lose clarity and control. Referring to Keats' concept of "negative capability" and he urges us to wait, to stay with the unknowing.[100]

Liberation from the self involves seeing the self for what it is. It is not a fixed entity but a pattern of thoughts and ideas, which are constantly changing and re-forming. Freed of the illusion of the self we observe our knowledge as an evolving personal and social construction.

Non-dual awareness is the ultimate goal.[101]

The self is ultimately just an object in awareness. It follows that any division between the self as "the observer" and the object of observation, "the observed", is also an illusion. Enlightenment is a state of liberation from that self.

Ken Wilber describes the journey to enlightenment as a process whereby at each level the observing self sheds an exclusive identity with a previous lesser or shallower dimension.

While the goal is to arrive at non-dual state, Wilber stresses the importance of each stage of the journey. He warns against the kind of "one-step" transformation advocated by branches of transpersonal psychology. An exclusive focus on peak experiences, and teaching that ego is "bad" and not ego is "good", is far too simplistic and leaves out many vital stages in between.

Wilber describes how the spirit goes out of itself to produce nature, awakens to itself to produce the subjective mind, then recovers itself in pure non-dual awareness.[102]

[96] Albert Einstein, *The World as I see it*, London John Lane The Bodley Head, 1935
[97] Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana, 1980
[98] Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000
[99] Guy Claxton, *Hare Brain: Tortoise Mind,* 1997
[100] John Keats quoted by Guy Claxton in *Hare Brain: Tortoise Mind*, 1997
[101] Ken Wilber, *A Brief History of Everything,* Shambhala, 2000
[102] Ken Wilber, *A Brief History of Everything,* Shambhala, 2000

3.1 Progress in awareness

In *The Awakening of Intelligence* Krishnamurti speaks of the need for us to perceive with complete attention, and without "the observer". He points to different types of observations: "me seeing" and "seeing". "If I am aware that I am aware then that is not awareness, in that there is a division between the observer and the observed".[103]

It makes no sense to say, "I want to know myself". The mind must empty itself of everything past. Krishnamurti describes a state of "choiceless awareness". This is where we see without image, investigate without knowing, perceive with complete attention without "the observer".

Douglas Hofstadter highlights some of the challenges to be overcome in reaching a non-dual state. Human perception is by its nature a dualistic phenomenon. This is the heart of Zen's struggle. Dualism is as much a perceptual division of the world into categories as it is a conceptual division. Enlightenment is obscured even by perception, since as soon as you perceive you divide the world into parts.[104]

Guy Claxton describes wisdom as transcending conventional dualities, it is at once subjective and objective, involved and dispassionate.[105]

The illusory self is an obstacle to true understanding, and enlightenment is the liberation from the self. But while the self is an illusion it is a necessary tool on the journey to wisdom and non-dual awareness.

There is no way of avoiding looking at oneself in detail if one wants to attain to a higher level of consciousness.

This involves a good deal of self-scrutiny, and an examination of all our issues and how our experiences have affected us. The more attached we are to the people, places and things in our life, the more imprisoned we become by them. And the harder it is for us to see the bigger picture, to recognise as it were our "true purpose". One might say these attachments set up a conflict of interest.

Not only do we need to be aware of our own immediate baggage, but also of the baggage we have inherited from our culture. Most of the time we aren't aware of the extent to which we are shaped by our culture. But we are steeped in preconceptions and misperceptions, all of which must be examined.

David Bohm speaks of the virus like nature of unconscious assumptions. He encourages us to observe them with "relaxed, non-judgemental curiosity". A lot of our collective representations are like a rainbow - they appear solid but are made up of raindrops reflecting light[106]

Bohm highlights the need for a "reflective intelligence" to examine representations. Perceptual input is fused with memory to produce representations which are not true pictures of reality. Once we start down the path of unpicking these representations we can find ourselves in an unfamiliar place with little to hold onto. The whole basis of our lives, the assumptions underpinning our entire mental infrastructure, needs to be examined.

[103] J. Krishnamurti, *The Awakening of Intelligence,* Victor Gollancz Ltd London, 1973
[104] Douglas R. Hofstadter, Godel, Escher, Bach: *An Eternal Golden Braid,* Penguin Books, 1986
[105] Guy Claxton, *Hare Brain: Tortoise Mind,* 1997
[106] David Bohm, *On Dialogue,* Routledge, Oxford, 1996

3.1 Progress in awareness

This moves us into rarely chartered territory. One needs to become an object to oneself, to see oneself as a construction, an amalgamation of thoughts, feelings and manifold influences. It requires a considerable degree of personal security to tolerate such a high level of uncertainty, to recognise that one's "self" is not "real".

There are different levels of consciousness. The level we reach depends on our self insight and awareness. The key is to have as much awareness as possible of the factors that shape and influence us. These factors become filters which determine how and what we see. The "vantage point" from which we see determines everything we see. Each of us has the capacity to reach a higher level of consciousness. But we need to be aware of our filters and avoid being trapped by the immediate details of our lives.

Is there such a thing as ultimate truth? And if so, and is it possible for us to know it, to penetrate that level of awareness?

For ultimate truth to exist, there needs to be a consciousness capable of comprehending it. In *Hare Brain: Tortoise Mind,* Guy Claxton says that "Truth waits for eyes unclouded by longing".[107] He urges us not to actively think, but rather bear the problem or question in mind. He encourages us to engage in the art of gestation, a gentle incubation of thoughts.

Gustav Fechner suggests that we may not have the capacity to comprehend ultimate truth while we are alive. In *On Life after Death* he argues that our mind never realizes its inward fullness all at once. "Detached ideas only happening to find a new idea to associate with will emerge from the dark for a moment to sink back into the dark the next moment. On death, this is all lit up".[108]

The quest for truth has preoccupied civilisations through the ages. Julian Jaynes writes that, "The very notion of truth is a culturally given direction, part of the pervasive nostalgia for an earlier certainty".[109]

In *The Origin of Consciousness in the Breakdown of the Bicameral Mind,* Jaynes describes how the human mind has evolved through language. At one time, the mind was bicameral with "God" as executive and "Man" as follower. Jaynes suggests that vestiges of the bicameral mind can still be seen in religion, oracles, idols, poetry, hearing voices and hallucinations.

[107] Guy Claxton, *Hare Brain: Tortoise Mind,* 1997
[108] Gustav Fechner, *On Life After Death, 1835,* The Open Court Publishing Co. Chicago, 1906
[109] Julian Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind,* Penguin Books, 1999, London
[110] J. Krishnamurti, *The Awakening of Intelligence,* Victor Gollancz Ltd London, 1973

3.1 Progress in awareness

In *The Awakening of Intelligence* Krishnamurti suggests that questions of meaning and purpose are "only of this side of the shore" and really have no meaning at all.[110] Gregory Bateson writes in *Mind and Nature* that big questions are never answered: "the very posing of these questions always gives a false scent, leading the questioner off on a wild goose chase".[111] Freedom is always imagined to be round the next corner "one day we will find the thought that will set us free!"[112]

Krishnamurti emphasises the need for the mind to be free of thought. "Intelligence is not thought - it is totally impersonal silence".[113] All that matters, is for the mind to be still - "silence is the only fact". When the old brain sees that it can never understand what freedom is, when it sees that it is incapable of discovering something new, that very perception is the seed of intelligence. One can't destroy thought, but through meditation one can find a state of the immeasurable where thought doesn't function.[114]

As Krishnamurti explains the brain and mind become quiet and only function when necessary. The brain becomes a recording instrument without thought using it as the "me". At this point the brain/mind enters a different dimension of which there is no description, "because the description is not the described, the word is not the thing, and when one realises that one is free of the word". Once the mind has emptied itself and become completely still it enters the immeasurable. This is the essential prerequisite for true intelligence.

[111] Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana, 1980

[112] Gregory Bateson, *Angels Fear: Towards an Epistemology of the Sacred,* 1987, Hampton Press, 2005

[113] J. Krishnamurti, *The Awakening of Intelligence,* Victor Gollancz Ltd London, 1973

3.2 Recognizing intrinsic patterns

Patterns can be a means of expressing the inexpressible.

Einstein spoke of the non-verbality of thought, how conventional words only come much later (at the laborious stage): "The words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities which seem to serve as elements of thought are certain signs and more or less clear images which can be "voluntarily" reproduced and combined".[115]

Time plays a strange role in conscious perception and creativity. The conventional "rules" of time do not always apply. Understanding is a process of recognition. For example, composers "hear" music of the spheres. Mozart was able to "seize at a glance" an entire musical composition. Breakthroughs come from unexpected sources.

Patterns can be a means of expressing the inexpressible, where verbal communication fails. Almost by accident we can find new ways into previously impenetrable mysteries.

There are fundamental principles about the way things work, and these can be captured in patterns.

These fundamental principles go across all boundaries, all disciplines, all fields of human endeavour, all matter, all phenomena, everything – including the human mind. Ludwig von Bertalannfy wrote in General Systems Theory, that despite the increasing specialization of different disciplines, there were remarkably similar conceptions leading to universal principles.[116] These universal principles can be represented in patterns.

Bateson wrote about the pattern which connects. "We have been trained to think of patterns, with the exception of those of music, as fixed affairs… In truth, the right way to begin to think about the pattern which connects is to think of it as primarily (whatever that means) a dance of interacting parts and only secondarily pegged down by various sorts of physical limits".[117]

We can reach a higher understanding of life via patterns. The mind replicates these key intrinsic patterns, and these can be portrayed as "unifying codes". The key is to look for harmony, patterns that resonate and replicate the way everything works. Art plays a key role. Painting, for example, can be a window into higher awareness. Unifying codes can be portrayed as patterns on a two-dimensional surface as an aid to comprehension.

Beauty and functionality stem from the same source and are united at core.

Roger Penrose observed that a beautiful idea is more likely to be correct than an ugly one.[118] The "De Stijl" movement took art beyond expression and decoration, to functionality and utility.

[115] Albert Einstein quoted by Roger Penrose in *The Emperor's New Mind,* 1989
[116] Ludwig von Bertalanffy, *General Systems Theory,* Penguin Middlesex, 1973
[117] Gregory Bateson, *Mind and Nature: A necessary unity,* Fontana 1980
[118] Roger Penrose, *The Emperor's New Mind,* 1989

3.2 Recognizing intrinsic patterns

In Piet Mondrian's 'new plastic' paintings, coloured planes represent relationships not forms, bringing relationships into aesthetic equilibrium. "Sculpture and architecture, until the present, destroy space as space by dividing it. The new sculpture and architecture must destroy the work of art as an object or thing."[119]

In *Zen and the Art of Motorcycle Maintenance,* Robert Pirsig outlined two competing realities: the immediate artistic appearance (Romantic) and the underlying scientific explanation (Classical). He identified an inherent contradiction in the scientific method. Two competing realities lead to "a house divided against itself". The key is to find a synthesis between them. After all, the root of the world technology is "techne" which originally meant art - the Greeks never separated the two.[120]

Patterns can express the universal in us, that which goes beyond our individual selves.

Piet Mondrian wrote that art must be a direct expression of the universal in us. The universe is constant and unconscious, the individual is changing and conscious. Misery is caused by continual separation, happiness is caused by perpetual rebirth of the changeable. The immutable is beyond all misery and happiness, it is equilibrium.[121]

Mondrian described art that expresses the universal as the "New Plastic". He described art that expresses the individual as the "Tragic Plastic". Writing nearly a century ago, he anticipated that greater maturity would be required before the individual would cease to do dominate:

"Because it is part of the whole, the new spirit cannot free itself entirely from the tragic. The New Plastic, expressing the vital reality of the abstract, has not entirely freed itself from the tragic but it has ceased to be dominated by it... So long as the individual dominates, tragic plastic is necessary, for that is what creates its emotion. But as soon as a period of greater maturity is reached, tragic plastic becomes insupportable."[122]

The kind of change to which Mondrian refers will take time. Nearly a century later his ideas seem as relevant as ever. The path to the universal leads us beyond our individual "separate" selves.

Universal patterns are replicated in generic patterns of thought. We might speculate that ultimately there is one mind, that consciousness cannot be separated. The mind replicates itself, and many minds replicate the same fundamental principles of one mind. Group consciousness is an extension of individual consciousness.

Perhaps we might even speculate that there is ultimately one universal pattern: the root of all patterns, a kind of "uber pattern". A formula that can predict and unlock to 100% accuracy all information that exists about a person, place, situation, thing; a formula that is in effect an all-seeing eye, that can tell us everything we need to know about anything and everything. Perhaps one day we might recognise this pattern and transcend to a higher universal level of consciousness.

[119]Piet Mondrian, *Dialogue on the New Plastic,* 1919
[120]Robert Pirsig, *Zen and the Art of Motorcycle Maintenance*, 1974, published Corgi, 1976
[121]Piet Mondrian, *Dialogue on the New Plastic,* 1919
[122]Piet Mondrian, *Dialogue on the New Plastic,* 1919

3.3 Finding new frontiers

We need to adjust the lens through which we perceive: the window of perception.

In the preface to *Foundations of Modern Art,* Ozenfant wrote: "The man of tomorrow will see via relays of new telescopic or microscopic radars not only what our superficial retinas see now but also living atoms and celestial bodies: he will see functioning life in living bodies and, possibly, what we call thought."[123]

Since Ozenfant wrote those words over half a century ago, huge advances have been made in science, with implications far beyond what we can physically see. If we are to comprehend what these discoveries point to, we will need to find new ways to see and to conceptualise.

The implications of cutting edge science take us beyond the realm of linear thought, beyond nouns and verbs as we understand them, beyond language, beyond ourselves. We reach the limit of our individual minds, as they are currently constituted, to comprehend.

Einstein once asked, "What I am really interested in is whether God could have made the world in a different way; that is, whether the necessity of logical simplicity leaves any freedom at all."[124]

There is a distinction between what we can comprehend as individuals and what we can comprehend from a perspective of wider consciousness, which we might have access to in moments when we get beyond the limitations of our separate selves.

We experience many different types and levels of thought. There are human, reactive thoughts which may be linked to our survival instincts, which are personal, specific and rooted in particular experiences. There are analytical, intuitive and creative thoughts. And there is a wider awareness, a knowing - which we rarely access. At the highest level, what we understand from the perspective of our separate selves is of little relevance.

We might speculate that there is a timeless awareness we can tap into, however, which transcends the individual mind and self. The self is only a receiver. We must transcend these selves to connect with who is doing the thinking. When we discover this, new windows of perception will open.

Techniques can help us to break out of our limited thought patterns and expand our minds. We might start by asking some fundamental questions.

Einstein once asked, "Why does the Universe go to all the bother of existing?" In a similar vein, Martin Heidegger famously asked, "Why is there something rather than nothing?"[125]

[123] Ozenfant, *Foundations of Modern Art,* Dover Publications, 1952
[124] Albert Einstein quoted by Roger Penrose in *The Emperor's New Mind*
[125] Quoted by Russ Marion, *The Edge of Organisation: Chaos and Complexity Theories of Formal Social Systems,* Sage London, 1999

3.3 Finding new frontiers

Space and time are artificial constraints. They don't exist except in our minds as a grid, a way of conceptualizing that relates to the senses. It is important not confuse the instrument of measurement with thing itself. Time and space are relative, have no intrinsic value. There is no beginning, middle, or end.

What are the roots of time? Did time start with the big bang or does it pre-exist our Universe?

Ilya Prigogine says that the Big Bang was an event associated with an instability within the medium that produced our universe. Although the universe has an age the medium that produced our universe has none. "Time has no beginning and probably no end"[126]

Stephen Hawking suggests that before the Big Bang everything was merged into one super-force in a dot like universe. Hawking also talks about the no boundary condition: the universe didn't have a beginning but it hasn't existed forever. It spontaneously arises. Time begins when the universe begins. There is no need for a creator, the universe came out of nothing and exists on its own and goes on expanding forever.[127]

Brian Greene describes the Big Bang as something that happened in zero space. He suggests that the image of "Big Bang" is a bit misleading because when a bomb goes off it does so at a particular place and time, but in the Big Bang there is no surrounding space. We cannot presuppose space and time: in the raw state, there is none.[128]

The latest insights from science suggests that there may be 11 different dimensions, and we are trapped in just three of them. One of the current theories (M-Theory) is that each of these dimensions exist as membranes, or "branes", entirely separate giant sheets. Trapped as we are in a three-dimensional world, we are like matter stuck on the surface of a brane. Spacial fabric has both extended and curled up dimensions.

According to string theory the fundamental stuff of matter is all the same: single strings, all identical, vibrating.[129] The elementary ingredients of the universe are not particles, but tiny one-dimensional filaments. Space, time and gravity are all made of tiny strings.

All these theories go way beyond our immediate experience and sense perception, and are very difficult to conceptualise. Even our language is inadequate. For example, the notion of "before" is built into our thinking but is misleading. However, as Brian Greene concludes we will need to find a way if we are to fully comprehend string theory.

"Just as we should allow our artists to work from a blank canvas we should allow string theory to create its own space-time arena by starting in a space-less and timeless configuration".[130]

[126]Ilya Prigogine, *The End of Certainty: Time, Chaos and the New Laws of Nature,* The Free Press New York, 1997
[127]*The Hartle and Hawking No-Boundary Proposal,* 1983
[128]Brian Greene, *The Elegant Universe,* 1999, published by Vintage London, 2000
[129]Brian Greene, *The Elegant Universe,* 1999, published by Vintage London, 2000
[130]Brian Greene, *The Elegant Universe,* 1999, published by Vintage London, 2000

3.4 The evolution of society

How far and under conditions are people capable of facing themselves?

Norbat Elias stresses the need for us to avoid emotionally charged ideological evaluations. He recommends in *The Symbol Theory* that humans look at themselves with higher degree of detachment, to take a "detour via detachment". [131]

In his book Violence: *Our deadly Epidemic and its Causes* James Gilligan argues that the tragic flaw of civilization is its "Puritanical kind of moralism and punitiveness, which is generated by the illusion that 'we' have a monopoly on the knowledge of good and evil."[132]

The key obstacle in tackling violence is lack of understanding, and the mistaken moral position that "to understand all is to forgive all". Gilligan points out that explanations are not justifications. And forgiveness is beside the point, since it is meaningless if one hasn't condemned in the first place.

Gilligan emphasises that shame needs to be understood. We need to understand the conditions that stimulate shame and guilt on a socially and epidemiologically significant scale. Key factors include poverty, and race / age / sex discrimination. His studies of violent men reveal that they find shame, "the death of self" intolerable, and would even prefer physical death.[133]

We need to move beyond polarising and punitive notions of good and evil. This type of thinking has been self-defeating and keeps us trapped in a vicious cycle of shame and violence.

How will we achieve a more stable social order?

Elias suggests that we already know that much depends on achieving a better balance between self-restraint and self-fulfilment, but such a balance still eludes us. We know that we are able to live a more civilised existence, but not how to bring it about in our life.

Elias concludes that "Humans have to go through a long period of learning how to live with each other in peace. Our uncertainty, our inability to eliminate violence, are part of this learning process. No teachers are at hand. Outside help evidently is not forthcoming. Expressions of good will, exhortations to good behavior, are welcome but hardly effective. The professing of antagonistic ideals inflames rather than tempers violence. People have to learn for themselves how to live with each other."

He hopes it should not be beyond the reach of humanity in the thousand years ahead of us. The life of the sun about half-way. Perhaps one day in the distant future, if the human race hasn't destroyed itself or made the planet uninhabitable, we may be seen as the "late Barbarians."[134]

G.H. Mead suggests in *Mind, Self and Society* that organised custom represents what we call morality. He says that there is a link between morality and pragmatism, whereby a moral act is a social act that addresses wider interests. But is morality just a reward system with empirical evidence or manifestation of deeply held unconscious beliefs that altruistic acts will lead to divine reward? And is that enough?

[131] Norbert Elias, *The Symbol Theory,* Sage, London, 1991
[132] James Gilligan, *Violence: Our Deadly Epidemic and Its Causes,* 1996
[133] James Gilligan, *Violence: Our Deadly Epidemic and Its Causes,* 1996
[134] Norbert Elias, *The Symbol Theory,* Sage, London, 1991

3.4 The evolution of society

Compassion and a much greater understanding will be needed to tackle our most serious social, environmental and systemic problems. There is a moral code that goes beyond the "enlightened self-interest" morality of organised custom. We need to make a deeper connection with our natural empathy, and our respect for each other and all living species.

Ken Wilber argues that the basic moral intuition needs to be to "protect and promote the greatest depth for the greatest span".[135] Each epoch runs into its own inherent limitations. No epoch is privileged, "we are all tomorrow's food".[136]

Gregory Bateson asks how we might work towards "a sacred unity of the biosphere with fewer epistemological errors". He emphasises that there is no point in returning to more primitive times as this would involve the loss of the wisdom that prompted the return and would only start the whole process over.[137]

Self organization is the root source of order.

Writing in the early nineteenth century, German philosopher Gustav Fechner described how "the whole universe is alive", and plants have a "soul-life". Even the shortest moment of conscious life produces a circle of influence around it. No action or effect is utterly destroyed, but goes on producing new effects of its kind forever.[138]

These ideas seem strangely prescient of modern complexity theories, and highlight the interconnectedness of all life. Agents acting locally and in accordance with their own principles, in the absence of any overall blueprint, produce complex adaptive systems. Applying these principles to human organisations, Roger Lewin argues that self organisation underpins business. He describes businesses as complex adaptive systems. And the emergent order is richer and more adaptable if there is diversity in the system.[139]

Kauffman emphasises that self organization is the root source of order. "Order is free, it just happens". He points to the importance of cooperation over competition, creating a state of dynamic equilibrium.

There is a limit to the number of parameters a system can juggle, however, and still find homeostasis.[140] The cumulative impact of decisions made for short term reasons of self-interest is putting massive strain on our ecological system, and leading to irreversible changes to the environment.

How do we avoid potential catastrophic consequences? Kauffman suggests that all we can do is be locally wise, even though our own best efforts will ultimately create the conditions that lead to our transformation to utterly unforeseen ways of being.[141]

[135]Ken Wilber, *A Brief History of Everything,* Shambhala, 2000
[136]Ken Wilber, *A Brief History of Everything,* Shambhala, 2000
[137]Gregory Bateson, *Steps to an Ecology of Mind, 1972,* University of Chicago Press, 2000
[138]Gustav Fechner, *On Life After Death, 1835,* The Open Court Publishing Co. Chicago, 1906
[139]Roger Lewin, *Complexity: Life at the Edge of Chaos,* Phoenix London, 1993
[140]Stuart Kauffman, *At Home in the Universe,* OUP, Oxford, 1995
[141]Stuart Kauffman, *At Home in the Universe,* OUP, Oxford, 1995

Further information

Claire Haigh's paintings are inspired by a deep desire for positive change, and by her belief that for real and lasting change to occur we need to begin with ourselves. She became interested in the early 1990s in exploring the nature of thought and consciousness through art, believing that paintings could provide a new window of understanding. This led to her embarking upon ***The Tabula Project.***

She has had five solo exhibitions in central London.[14] Her work has been bought by private and corporate collectors including NatWest, Marks & Spencer and the Boston Consulting Group. She has also completed many notable portrait commissions, including Sir Peter Hendy, Chairman of Network Rail; Ken Livingston, Mayor of London (2008); and, Tim O'Toole CBE, CEO FirstGroup PLC.

She is Chief Executive of Greener Journeys, a campaign dedicated to encouraging people to make more sustainable travel choices.

She is also a Director of the Low Carbon Vehicle Partnership, and a columnist for the magazine Transport Times. She is a Fellow of the Royal Society for the Encouragement of Arts, Manufactures & Commerce (FRSA), and a Chartered Fellow of the Chartered Institute of Logistics and Transport (FCILT).

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