Integrated Intelligence: The Future of Intelligence?

Marcus Anthony
University of the Sunshine Coast
Australia

Abstract

Many classical depictions of intelligence suggest that individual human intelligence is part of a greater transpersonal consciousness. The concept of this integrated intelligence has resurfaced in contemporary times in a number of fields. This paper presents the ideas of four thinkers whose works incorporate integrated intelligence - Broomfield, Dossey, Wilber and Zohar. Inayatullah’s Causal Layered Analysis is used to deconstruct them. The four authors and their texts are compared and contrasted on some of their major themes. Finally, some of the most significant issues associated with integrated intelligence are introduced.

Introduction

While most contemporary academic and scientific research tends to depict consciousness and intelligence in localised and mechanistic terms, an increasing number of researchers, scientists, writers and philosophers from many fields are beginning to describe intelligence in non-localised and universal terms. Once generally considered purely the domain of New Agers and mystics, integrated intelligence is a strongly emerging issue at the dawn of the twenty-first century.

This paper introduces four different thinkers, who incorporate integrated intelligence into their discourse: Larry Dossey, Ken Wilber, Danah Zohar, and John Bloomfield. They are, to some degree, all iconoclasts and outsiders - sometimes even within their respective fields. Yet because of recent developments across a multitude of disciplines, and the emerging issue of spirituality and consciousness, they represent important voices. They represent but a minute fraction of those writing about integrated intelligence. However, they have been chosen from amongst the many for the following reasons.

1. Each has a background within a different discipline. Dossey is a medical doctor. Wilber is a transpersonal psychologist. Zohar is a writer whose primary interest has been the links between quantum physics and social and individual development. Finally Bloomfield is an Historian who has turned his attention to other ways of knowing. As a collective these people represent a diversity of experience and knowledge within different fields, and thus suggest the extent to which integrated intelligence is being discussed in contemporary thought.

2. Each approaches the issue of integrated intelligence in different ways. For Wilber integrated intelligence is posited as the culminating process of the evolution of consciousness. His claims come backed by vast and diverse research that bridges a plethora of disciplines. Bloomfield approaches the topic in highly anecdotal style, providing numerous specific examples of the way integrated intelligence works in everyday life. Zohar prefers the abstract approach, working scrupulously to establish a scientific and neurological foundation for her theory of spiritual intelli-
gence. Dossey writes as an outsider within the medical profession, and mixes the personal with the scientific.

This paper examines these authors' works whilst posing the following questions. What exactly are these people saying, and where are they situated with respect to a civilisational view of knowledge? How do they differ in their ideas, their worldviews, and their methods? What are the strengths and weaknesses of their arguments and what are the general problematics pervading this burgeoning field of enquiry?

The Methodology

Developed by Sohail Inayatullah, Causal Layered Analysis (CLA) is a post-structuralist methodology which probes the deeper meanings imbedded within texts through an exploration of four specific components. It allows for the acknowledgement of other ways of knowing. (Inayatullah 1998: 815) The first component of CLA examines the litany or the rational/scientific, factual and quantitative aspects of a text. The second component of CLA is the social and systems level. This uncovers the economic, cultural, political and historical issues. The third aspect of CLA examines the discourse/worldview of the author. This level identifies the assumptions of the author, and attempts to discern the deeper social, linguistic and cultural structures which emerge from the individual's view of reality. This makes visible the writer's map of reality which underpins his/her work. The final component is the mythical/metaphorical level. This attempts to uncover hidden and explicit mythologies, narratives, symbols and metaphors within the text. There may be emotional, unconscious and archetypal components at this level. (Inayatullah 1998: 820-821)

Causal Layered Analysis is particularly useful as a research method as a means to conduct inquiry into the nature of past, present and future. It opens up the present and the past to create the possibility of alternative futures. (Inayatullah, 1998: 815) It is for this reason that it has been chosen as an ideal tool to deconstruct the ideas of the following four thinkers.

What is Integrated Intelligence?

Throughout this essay the term "integrated intelligence" is used. Integrated intelligence is a transpersonal intelligence that transcends the boundaries of the individual. It is in effect a collective human and universal intelligence. Historically it has most commonly been depicted in spiritual and mystical texts and forms a part of all mystical traditions. In ancient cultures such as the Roman, Greek, Egyptian, Chinese, Indian and Tibetan, integrated intelligence was an implicit aspect of their worldviews. (Grof 1995) Many indigenous cultures, both contemporary and past, also incorporate integrated intelligence into their ontologies. (Groff 1995, Pearsall 1998, Wildman 1997) As Dossey writes:

The idea that the human mind is infinite or nonlocal - that at some level it cannot be confined to specific points in space, such as the brain and body, or in time, such as the present, is ancient (Dossey 1999B).

Though its elusive nature renders it highly problematic within the dominant rational/empirical scientific discourse, integrated intelligence is becoming more frequently used in various guises in contemporary discussions within science, the humanities and spiritual discourses. It differs from most contemporary depictions of intelligence and consciousness in that it is non-localised, and acknowledges sources of inspiration and knowledge that are physically and/or metaphysically external to the individual. It implies that the brain is a permeable organ imbedded within a sea of consciousness.

In this paper integrated intelligence is divided into two distinct but related components. The first is higher order perceptions of wholeness and integration, what Ken Wilber calls the subtle, causal, and nondual aspects of consciousness (Wilber 2000C). This is the direct experience of the integrated nature of the universe and consciousness. Hereafter this shall be referred to as "primary level integrated intelligence." The second is various "paranormal" perceptual phenomena such as ESP, clairvoyance, and visionary...
experience; what is popularly known as the "psychic" realm. Such phenomena suggest the plausibility of non-localised consciousness. These shall be referred to as "secondary level integrated intelligence." The phenomena associated with secondary level integrated intelligence can be deemed "secondary" as it may be argued that their existence is dependent upon the existence of an holistic, non-dual consciousness.

Six Depictions of Integrated Intelligence

1. Danah Zohar

What does she say about integrated intelligence, and where does it fit into her map?

Zohar attempts to create an empirical basis for spiritual experience and perception in her book Spiritual Intelligence. Spiritual intelligence, or SQ is: "the intelligence with which we address and solve problems of meaning and value...with which we can place our lives in a wider, richer meaning-giving context...with which we can access that one course of action or one life-path that is more meaningful than another" (Zohar, 2000: 3-4). SQ is, according to Zohar, our ultimate intelligence. 'Mere IQ or rational intelligence isn't enough', she writes (Zohar, 2000: 21).

Zohar's attitude to integrated intelligence is somewhat confusing, unclear and contradictory. On the one hand Zohar seems to acknowledge integrated intelligence and transpersonal consciousness, as when she writes that SQ "is an internal, innate ability of the human brain and psyche, drawing its deepest resources from the heart of the universe itself" (Zohar, 2000: 9). Zohar also backs "the proto-consciousness view" - that consciousness is a fundamental property of all matter and the universe (Zohar, 2000: 82).

Yet there are contradictions within the text in regard to integrated intelligence, both stated and implied. For example she writes:

There is a God's eye view, but it is available only to God. The best that we can do is to gain knowledge of as many perspectives as we can, and acknowledge a whole that is greater than we can perceive (Zohar, 2000: 204).

This clearly implies a single, localised and individualised point of perception, consistent with a non-transpersonal model of consciousness. This is distinctly different from integrated intelligence.

A further aspect of Zohar's model that suggests her model of consciousness is non-integrated is that it is highly organic, and often highly reductionist. She writes that consciousness originates in "the synchronous 40Hz oscillations...that unify data in the brain". These oscillations are the source of SQ (Zohar, 2000: 7). Despite the aforementioned transcendent aspects of consciousness in Zohar's model, hers is a brain-based depiction of consciousness:

(the brain) produces the mystery of the conscious mind, our awareness of ourselves and our world and our ability to make free choices about engaging in the world. It generates and structures our thoughts, enables us to have emotions and mediates our spiritual lives" (Zohar, 2000: 39-40).

Zohar's largely organic model would be more legitimate if her text did not expand SQs domain beyond the original rather mundane definition (as written above). The original definition was about "addressing" such things as "meaning", "value" and "context". There is nothing transcendent or mystical in that definition, which extols the virtues of SQ as a hermeneutic tool, a means of "recontextualising" experience. Hermeneutics is implicitly interpretative, a mental/intellectual activity, not a transcendent one.

The Litany

There are, according to Zohar, three kinds of intelligence. The first is the rational/logical intelligence which she associates with the way in which individual neurons in the brain fire and connect sequentially (Zohar, 2000: 12). The second intelligence is: "the emotion-driven, pattern recognizing, habit-building intelligence" (Zohar, 2000: 12). Entire segments of the brain fire together simultaneously and electrical activity occurs across the brain in patterns in response to various kinds of experiences (Zohar, 2000: 11-13).
Zohar then identifies a third kind of intelligence, namely spiritual intelligence (SQ). Zohar employs reference to brain research to support her argument. She refers to Austrian neurologist Wolf Singer's work on "the binding problem," which suggests that there is "a neural process in the brain devoted to uniting and giving meaning to our experience" (Zohar, 2000: 12). She also refers to the research of Rodolfo Linas on sleeping and waking consciousness and the binding of cognitive events in the brain; and to biological anthropologist Terrance Deacon's work on the origins of language (Zohar, 2000: 12).

The potential connection between the localised self-equals-brain (Zohar's equation) and transcendent consciousness is briefly explored via quantum theory. Zohar examines some of the evidence for the possible existence of quantum level electrical fluctuations and Bose-Einstein condensates in the brain. She largely dismisses the research thus far done into quantum theories of consciousness since the 1930s, because they have focused their gaze upon micro-phenomena such as the neuronal structures within the brain. Instead Zohar believes that larger-scale neural phenomena, such as cross-brain electrical activity, are more likely to produce useful evidence for the quantum consciousness school (Zohar, 2000: 84-90). Finally Zohar speculates that the Higgs-Field, the fast oscillating energy field that emerges from the quantum vacuum, may be the key to validating the proto-consciousness argument.

If proto-consciousness in the universe is a fundamental property of the universe, then there is proto-consciousness in the Higgs Field, and the quantum vacuum becomes very like what mystics have called the 'immanant God', the God within all (Zohar, 2000: 90).

This in turn would link the 40Hz oscillations in the brain to "God" (Zohar, 2000: 90).

Social Level

Zohar outlines some of the reasons why SQ has not yet featured heavily in contemporary discourses. The "dominating IQ paradigm has overshadowed further enquiry into their [intelligence researchers'] own data", she states (Zohar, 2000: 11). Further she claims that the social sciences since the seventeenth century have "reinforced the certainties of Newtonian absolutism" (Zohar, 2000: 201). These trends were further reinforced by custom, tradition, family and community (Zohar, 2000: 202).

Zohar also points to "the poverty of western humanism," criticizing it for its anthropocentrism. Enlightenment thinkers followed Aristotelian model and defined humans as rational animals (Zohar, 2000: 32). Social and political philosophers followed this lead, as did society at large. We became alienated from nature, magic and mystery by reductionist scientific thought, and from the center of the self, as psychology also defined humanity in terms of the isolated ego (Zohar, 2000: 32).

Zohar touches upon another social issue when she explains that SQ can help young people from making the same mistakes as their parents did. It can aid in the search for meaning, and this is fundamental in our lives (Zohar, 2000: 20-21).

Worldview

Like Bloomfield (below), Zohar spends time in Nepal. She relates that the rich and colorful Hindu and Buddhist cultures there have "certainly influenced many of the thoughts I express throughout the book" (Zohar, 2000: 23). She integrates mystical concepts such as the Hindu chakra system (her model of personality types), subtle energies of the body, and quotes from Eastern sages such as Tagore, Lao Zi and Mahatma Gandhi. She also makes references to Jewish, Islamic and Christian teachings and in particular their mystical aspects. These references are scattered sparsely in the first four parts of the book. It is in the last part, where she outlines the more practical aspects and applications of SQ, that these mystical influences become more explicit in the text.

Zohar points out that science is "bottom up truth," based on observation (Zohar, 2000: 203). However she valorises the "bottom-up truth" religions and spiritual traditions such as the mystics
of the Abrahamic religions, Taoists, Hindus, Buddhists and Quakers (Zohar, 2000: 203). She values the spiritual approaches that emphasise inner truth and inner experience as a means to the sacred. They insist that we must work on ourselves to find some inner light (Zohar, 2000: 203). Thus Zohar ultimately has a place in her worldview for both reductionist empirical science, and for mysticism.

However, Spiritual Intelligence cannot be easily labelled "New Age", despite the fact that the Bloomsbury edition categorises it as 'Self Help/New Age/Business'. While the subject matter is spiritual, the method is predominantly otherwise.

Mythical/Metaphorical Level

Zohar's text is dotted with mechanistic metaphors of consciousness and the brain, despite Zohar's comments on the limitations of the brain as computer metaphor (Zohar, 2000: 54-55). Zohar uses the terms "wiring," "rewiring" (pp.41, 52, 197) and "hardwiring" (pp.40, 41, 94, 106) to explicate neuro-physiology. Such mechanistic terminology places Zohar's work implicitly closer to mechanistic science than the explicit claims of her thesis would suggest.

Zohar employs a steady stream of metaphors as she attempts to explicate SQ. She takes traditional spiritual metaphors, and then substitutes them with scientific metaphors in an attempt to clarify the spiritual principles. Thus Zohar is in effect writing about spirituality within the scientific discourse. An example of this metaphor swapping is the following, where she writes about 'God':

"...the source of self that is beyond awareness (that) is both the ground of being itself, the source of all manifestation, and the ultimate source of the energy which becomes conscious and unconscious mind. In twenty-first-century science, this source of both existence and self is associated with the quantum vacuum, the still, ground energy state of the universe. In the Lotus of Self, I depict it as the primal mud out of which the lotus' roots and stem grow (Zohar, 2000: 127)."

Zohar has utilized a classical eastern motif, the lotus, as metaphor for "self" but inserted a scientific metaphor ("the quantum vacuum") into the middle of it, to replace the idea of God.

Later, Zohar critiques a parable from the Surangama Sutra, where the Buddha talks to Ananda, his chief disciple. In the story Ananda asks why the unity and oneness of the universe "appears as so very many emanations." To explain this, the Buddha takes out a handkerchief and ties it into six knots and explains "Then we have her six knots, but it is still one handkerchief" (Zohar, 2000: 159). To this Zohar responds:

"Today such accounts don't speak to the modern mind. Today such questions demand 'scientific' answers, brain phenomena that we can weigh and measure, experiments that we can read about" (Zohar, 2000: 159).

Here we have an explanation of why Zohar employs scientific metaphors such as the following.

These (40 Hz oscillations) are the 'center' of the self, the neurological source from which 'I' emerge (Zohar, 2000: 159).

You and I, the chairs on which we sit, and the food we eat are all patterns of this energy...oscillating on) a still 'ocean' or background state of unexcited energy called the quantum vacuum (Zohar, 2000: 160).

We are 'waves' on the 'ocean' of the vacuum; the vacuum is the ultimate center and source of the self (Zohar, 2000: 160).

It is debatable whether Zohar's metaphors are as effective as the originals. The idea that we must connect with "the center" (Zohar, 2000: 162) is not a terribly attractive option when that center is called "the quantum vacuum." The original metaphors such as "God", "the sun", "the lotus" etc. are all archetypal motifs within human consciousness, and are comprehended at a deep level by the non-conscious mind, (if one is to follow Jungian psychology). Zohar's metaphors are superficial intellectual abstractions which are
most likely nonsensical to the vast majority of the world's population who do not dabble in quantum physics.

Further, Zohar's text, as with Wilber's, does not mention her direct spiritual experiences or perceptions. According to the references in her text, she gleans her knowledge of spirituality from ancient and modern mystics - Lao Tzu, Sufi mystic poet Rumi, St John of the Cross, as well as Western figures like Plato, Socrates, the story of Faust, and the mystical traditions mentioned above.

The lack of personal reference is one of the most notable features of Zohar's texts. She shares only one deeply personal anecdote in Spiritual Intelligence, where she relates her own struggle with some highly personal issues to do with her past, in particular her father (Zohar, 2000: 186-191). Yet there are very few personal anecdotes that follow. The effect of this is to depersonalise the text. Perhaps this is Zohar's intention, to keep it with the scientific tradition of "objectivity." Yet it raises the question of how much personal experience Zohar actually has with spiritual intelligence.

Whereas classical and New Age texts with spiritual or mystical import tend to refer to and incorporate supernatural phenomena and deistic references, Zohar's text is almost completely devoid of such references. The former allow (or insist upon) the possibility that thoughts can be generated or at least influenced by sources beyond the brain - from other individuals, spiritual entities, deific sources and even animals, places, nature and the Earth as Gaia. Zohar's shallow treatment of secondary level integrated intelligence is surprising in a book about spiritual intelligence, considering the importance of the numinous experience historically detailed in religious and spiritual texts, including Dosssey's and Broomfield's (below).

In section five of her book (the final section), Zohar takes a dramatic about-face and her method changes radically. Suddenly Zohar begins a steady employment of myths and anecdotes, quoting mystics and poets numerous times. It is an almost disconcerting change, given the heavy scientific and intellectual flavor of the previous four sections. However, this section still avoids personal references to Zohar herself.

Some concluding remarks on Zohar

Zohar exhorts: "I shall propose a model of self that is intended to be both broader and deeper than any postulated before" (Zohar, 2000: 115). Yet it is difficult to see where her thesis is so unique. As far as depth goes, it lacks the hierarchical depth of Wilber's model, whose vertical dimension is far more sophisticated and concise.

The limited representation of the mystical and numinous in Spiritual Intelligence suggests a lack of courage on her behalf of Zohar to explore "strange things," to borrow Broomfield's terminology. Her goal is to establish a working model for consciousness that incorporates the spiritual, but she is ultimately handicapped by the methodology she employs. Most mystical traditions have upheld the view that spiritual experience is by its nature non-organic, transcendent, and transpersonal. Zohar's insistence on using predominantly scientifically credited research and concepts to build her case restricts her thesis.

Yet perhaps the most self-limiting problematic apparent in Zohar's work is her insistence that spiritual insight is simply "recontextualising" (Zohar, 2000: 65). For Zohar the transcendent is equated with "putting things in wider context" (Zohar, 2000: 68). It is difficult to believe that this is what "gives us a taste of the extraordinary, the infinite, within ourselves or within the world around us," as she claims (Zohar, 2000: 69). Wilber has pointed out that many of the newer maps of reality and the universe, particularly in systems theory, introduce greater breadth, but not depth (Wilber, 2000D: 147-149).

It seems Zohar largely falls into this category. Re-contextualisation, at least if we follow Wilber's view, is inadequate as an explanation for transcendent consciousness, as it lacks anything more than a simplistic hierarchical aspect and does not adequately account for expanded and non-ordinary states of consciousness. Indeed transpersonal and integrated intelligence would appear to require an entire expansion of consciousness beyond the boundaries of the self. According to many transpersonalists, mystics
and thinkers such as Wilber (2000A, 2000B, 2000C, 2000D), Bucke (2001), Hawkins (1995), and Grof (1995), this is not a cognitive/intellectual process. It is a process requiring transcendence, a shift to a higher level of consciousness.

2. Larry Dossey

What does he say about integrated intelligence, and where does it fit into his map?

Larry Dossey’s research specialty is non-localised consciousness, especially within contemporary medicine. A medical doctor, Dossey once held a standard mechanistic worldview in his practice of medicine. However, as he describes in the introduction to Reinventing Medicine, a series of dreams that he had early in his career shifted his perspective, and indeed his worldview. These dreams “revealed” information about his patients that he states he could not have known consciously (Dossey, 1999). After this point in time he began to research “distant intentionality” and non-localised intelligence.

Though voices such as his are marginalised in modern medicine and science, he is not alone. Other writers such as Deepak Chopra (1992), Caroline Myss (2001), and Elizabeth Kubler-Ross (1997) have also enjoyed success writing in related fields.

The world that Dossey writes about is replete with integrated consciousness. He believes that prayer can directly lead to healing of the sick, that consciousness can influence the growth of plants, that spiritual beings exist and communicate with human beings, and that clairvoyance, telepathy and ESP are extant. He also comes down in favor of the idea that healing is spiritual, which he defines as:

"...the sense of connectedness with a factor in the universe that is wiser and more powerful than the individual sense of self and that is infinite in space and time. I choose to refer to this factor as the Absolute. In the great religions it is often referred to as God, Goddess, Allah, the Tao, Universe, and so on" (Dossey, 2002).

The Litany

As a trained medical practitioner, Dossey has a sound understanding of science and scientific methodology. He has conducted empirical experiments into the effects of non-localised consciousness in healing, specifically the effects of prayer on healing. His texts often delve into the empirical level of non-localised consciousness. He makes references to papers that indicate that people can consciously inhibit the growth of fungus through mental intention, can influence the growth of yeast in test tubes, and cure mice of cancer via “laying on of hands” (Dossey, 1999b). Many of his published papers include extensive notes and references to specific scientific studies of non-local intelligence and its associated phenomena. His bibliographical publication with Stephen A. Schwartz features some 21 pages of bibliographical notes and references (Dossey, 1999b). He states that the scientific evidence for distant intentionality deserves far more attention than it is currently being given in the scientific community.

Dossey also makes reference to the possible links between distant intentionality and developments in quantum physics. He often quotes physicists such as Sir John Eccles, John Wheeler and Henry P. Stapp. The latter is quoted as stating that human thoughts are “efficacious” (Dossey, 2002).

Social Level

One of Dossey’s seminal points in his papers and books is “the science blues” - how his initial love for contemporary science has been replaced by “wariness and suspicion” because of science’s narrow parameters, its failure to acknowledge psi phenomena, its hidden dangers, and scientists’ tendencies to ignore and hide data that contradicts their worldview or endangers their research grants. Further, Dossey laments that science has become alienated from public consciousness and has lost touch with “awe” and the “genuine mysteries” (Dossey, 2000). Like other writers writing at the interface of science, consciousness and spirituality, he recounts various cases of prejudice and scorn that he has experienced because of his particular research field. Criticism of science is a central
theme in Dossey's work, not surprising as his worldview and that of science are often diametrically opposed. He labels scientists narrow minded and bigoted. He relates an incident, involving a radio interview where he stated that dreams could be an integral part of healing for "which there is much historical precedent and a growing body of experimental and clinical evidence." However the journalist interviewing him later consulted a noted academic who dismissed Dossey's argument as a "dream" in itself (Dossey, 2000). Dossey repeatedly refers to examples of how scientists and scientific institutions and publications unfairly reject and ridicule religious and spiritual beliefs, and research related to psi, and in particular consciousness and its non-localised effects (Dossey, 2000). The sheer contempt in which Dossey sometimes regards contemporary science is perhaps best represented by his statement that: "scientists typically understand science about as well as fish understand hydrodynamics" (Dossey, 2000).

Dossey argues that "opening to the psyche's nonrational dimensions would lead to the fulfillment of science, not its ruin, as some critics charge" (Dossey, 2000). He sees the need in medicine and science for an integration of the rational and intuitive ways of knowing.

**Worldview**

Dossey holds what perhaps can best be termed a scientific/New Age worldview. (1) He upholds much of the rigor of scientific methodology and research and refers to numerous case studies, but admonishes science for its myopic perspectives on the more esoteric aspects of life, especially consciousness and spirituality. His work draws upon various non-empirical epistemologies, such as indigenous cultures, shamanism, spiritual traditions and New Age thinking. He believes in the power of prayer and spiritual healing, valorizes spiritual experiences and is an advocate of the idea of the primacy of consciousness in the universe.

**Mythical/Metaphorical Level**

It is through anecdotes that Dossey communicates some of his most powerful insights. He uses autobiographical references to elaborate much of his experience and understanding, such as the case (mentioned above) where he "saw" a child patient experiencing problems in a medical consultation with another doctor the day before it actually happened (Dossey, 1999). When pointing out the problems with finding appropriate terms to describe psi phenomena, he tells the story of a friend who had problems selling beef stroganoff in his restaurant because nobody in that area knew what that particular dish was. When the item's name was changed to "beef and noodles," it sold well. The point being made was: "If you want to sell something, be careful what you call it" (Dossey, 2002).

Dossey also compares his loss of faith in contemporary science to being like a "jilted lover," an extended metaphor he uses in his essay "The Science Blues" (2000).

Science teased and seduced me, adorning herself with layers of paint and glitter that concealed flaws I never suspected. Her emissaries, sent ahead to make introductions, lied out of their teeth. They exaggerated her dowry, inflating what she had to contribute to our arrangement. I could have endured a few lies; it was when the actual abuse set in that I began to wake up (Dossey, 2000).

Such metaphors as these bring a personalized dimension to Dossey's work which make it more accessible to the general public. They also serve to emphasize Dossey's message. In the case of the jilted lover metaphor, that message is the degree of his anger and sense of betrayal at science.

**Some concluding remarks on Dossey**

Dossey's problems in gaining acceptance with the general medical and scientific community, and the adversarial nature of his relationship with them, indicates the difficulty of introducing the discourse on integrated intelligence to these traditional bastions of the mechanistic paradigm. Yet his work is highly accessible, as his methods can be considered highly readable for a wide public audience.

**3. John Broomfield**

What does he say about integrated intelligence, and where does it fit into his map?
John Broomfield's Other Ways of Knowing is a text which aims to expand the parameters of what currently constitutes valid means of perception amidst the dominant scientific discourse. First published in 1997, this book is aimed at the popular market.

Integrated intelligence features heavily in Broomfield's world. Broomfield is quick to insist that indigenous peoples' beliefs in an intelligent and vitalistic universe are legitimate. Humans and nature are not separated, but are in 'unity' (Broomfield, 1997: 96). Nature communicates with us in subtle ways as well as through "audible messages and visible appearances" (Broomfield, 1997: 113). This is a world in which animals are endowed with vibrant intelligence, and non-verbal communication with them is possible. It is also a universe of angels, deities and "nature entities" (Broomfield, 1997: 110); a universe where Polynesians communicate with spirit guides to navigate their way around the Pacific (Broomfield, 1997: 2-4, 106); and where Australian Aborigines follow the songlines of the land and of their ancestors (Broomfield, 1997: 105-106). It is the Western and modern world that has forgotten these ways of knowing, according to Broomfield.

Thus nature can teach us spiritual enlightenment (Broomfield, 1997: 5). It is in dances (p.106), dreams (pp. 101, 156), songs (pp.105-106), meditations and in the connection with 'the sacred unconscious' (p.79) that the vitalistic spirit of the universe opens up to us, argues Broomfield.

**Empirical Level**

Like many "New Age" texts in the wake of Capra's The Tao of Physics, Broomfield likes to make analogies with quantum physics to bring a scientific bent to his ideas. For example in order to validate the idea that consciousness and matter are not dualistic, he refers to John Wheeler's theory of the "participator," where mind and matter are intricately intertwined, the former "co-creating" the universe at a personal as well as universal level (Broomfield, 1997: 38). Broomfield also skims over the works and theories of David Bohm and his holographic universe, Ilya Prigogine's dissipative structures, Rupert Sheldrake's morphogenetic fields, and dots the text with quotes such as holographic brain theorist and neurologist Karl Pribram's maxim that: "Mental properties are the pervasive organizing principles of the universe" (Broomfield, 1997: 72).

To support his case for extrasensory perception, Broomfield briefly refers to the research of the Mobius society and SRI International in California, Mundelein College in Chicago, and the Princeton Engineering Anomalies Research programme, which have each achieved modest results in attempting to empirically validate psi phenomena such as scientific remote viewing and ESP (Broomfield, 1997: 116, 157).

Yet this is not a text that valorizes the empirical, and its means is true to its ends. The empirical level constitutes only a small part of the book.

**Social Level**

Broomfield's text examines various cultural depictions of intelligence, and different "ways of knowing." He examines indigenous and ancient belief structures, and uses their myths and stories as a means to demonstrate his points.

Broomfield then contrasts these ways of knowing with modern scientific depictions of intelligence. It is in the wake of the enlightenment philosophers such as Descartes, Bacon and Newton that modern science began to reject integrated conceptions of the universe, and consciousness itself. Modern science has become increasingly fragmented in its approach, and linear in its constructions of time and place (Broomfield 1997: 32-37; 13-17). Broomfield is heavily critical of many aspects of modern life and "our scientific perception of segmented materialism" (Broomfield, 1997: 30). We have "boxed ourselves in" with linear schemata, linear causation and temporal linearity (Broomfield, 1997: 30). Scientists must become holistic and develop 'inner awareness,' Broomfield argues (Broomfield, 1997: 75).

Broomfield believes that a society and politics based on divine guidance is possible. He uses Gandhi's ideology of satyagraha as his example of a political "vehicle for transforming the consciousness of a nation" (Broomfield,
According to Broomfield, politics must be based on a "recognition that consciousness makes reality, that our politics is a manifestation of the state of our individual and collective awareness." In turn, politics shapes consciousness. Social and economic policies must follow from these principles. It is a "spiritual politics." Self-empowerment of individuals and groups must take precedence over power over others (Broomfield 1997: 180-181). Economics must also be based upon an "attunement to seasonal rhythms," not just human reason. He praises E.F. Schumacher (Broomfield, 1997: 196,197, 202, 203) and the "loving economy" of Wendell Berry (Broomfield, 1997: 206-207).

In his discussion on education Broomfield states that this is a universe where "the whole sends messages to the parts." In such a world the teacher's role is to encourage exploration, learning and growth. Broomfield thus criticises the "banking concept" of education. This concept assumes that knowledge is a gift passed from those who know, down to those who know nothing. This, argues Broomfield, stultifies the development of the desire to learn or "to create independent, self-confident, whole people" (Broomfield, 1997: 213). He maintains that such disempowerment of the young is not what is needed in a rapidly changing world.

Knowledge is not simply intellectualisation, but must have "inner knowing," Broomfield states that: "deep wisdom is available to us if we will but listen intently to our bodies" (Broomfield, 1997: 219). Teachers must encourage students to "trust their gut understandings, their intuitions" (Broomfield, 1997: 219). The symbolic realms such as found in the universal archetypes in the form of dreams, daydreams, meditations and altered states, fables, and fairy tales, poetry, music, dance sculpture and painting must be explored by students (Broomfield, 1997: 219). Further these must be reinforced by experience (Broomfield, 1997:220). Students and teachers should spend time in wild and sacred places to restore "direct awareness of the intricate interconnections that sustain life" (Broomfield, 1997: 220). Our education must work to restore the relationships between things (Broomfield, 1997: 221).

**Worldview**

Broomfield was Professor of Modern Indian History at the University of Michigan for twenty years. However he has delved deeply into alternative and spiritual methodologies and practices. He studied shamanism with Michael Harner and Sandra Ingerman, and was also President of the California Institute of Integral Studies (one of America's most prominent alternative philosophy academic institutions) from 1983 until 1990. Further, as he elaborates in his book, he now spends significant time in the foothills of the Himalayas on spiritual retreats.

Considering his biography it is not surprising that Broomfield's worldview and universe is a deeply spiritual one, and bristles with life and spirit at every level. His is a deeply vitalistic philosophy. It is a world of life after death, interspecies and spirit communication, psi and supernatural phenomena. He writes that evolution "can be seen as the never-ceasing dance of life-energy shaping vital, interconnected patterns - a vivid kaleidoscope of opportunities for creative spirit in matter" (Broomfield, 1997: 172).

**Mythical/Metaphorical Level**

"Classical science and history will not suffice as the mythologies of the twenty-first century", writes Broomfield. For these are the stories of colonization, domination and segmentation, and "Judeo-Christian millenarianism" (Broomfield, 1997: 53). Broomfield states explicitly that mythology and story are legitimate ways of knowing. They create a "connected knowing" that stands in contrast to the "separate knowing" of fragmented reason (Broomfield, 1997: 218). Many of his points are elaborated with stories, and many with actual mythologies of indigenous peoples. In order to validate his remark that all things in the universe are connected, Broomfield does not refer to empirical data, but re-tells the Maori myth of the beginning of the universe involving Mother, Papa, and the Father Rangi, and their three children. A resulting family squabble saw the children take the forms of the ocean (Tangaroa), sky (Tawhirimatea), and the forest (Tane). Other relatives took on the forms of the birds, fish and land animals (Broomfield, 1997: 97-98).
Some concluding remarks on Broomfield

Broomfield's text is the most "radical" and New Age of the four writers deconstructed here. He does not baulk at introducing seemingly paranormal phenomena into his arguments and anecdotes. No doubt Wilber would criticize his ready employment of mythology and dreams as method, in that Broomfield makes no distinction between higher and lower, pre-personal and transpersonal realms of consciousness. (2) Yet the text is heavily personal, bringing to life many of his arguments. It valorizes the native and the shaman, the indigenous worldview, and seemingly asks us to return to a simpler lifestyle, which in turn features a more integrated consciousness.

4. Ken Wilber

What does he say about integrated intelligence, and where does it fit into his map?

Transpersonal psychologist Ken Wilber's model of consciousness is an incredibly detailed, complex, and intellectual one. In Integral Psychology he attempts to posit a comprehensive map of consciousness and psychology which "honors and embraces every legitimate aspect of human consciousness..." (Wilber, 2000C: 2). His is a layered or hierarchical system, where human consciousness develops from the pre-personal undifferentiated modes, through to rational, and then into the transpersonal realms. In this model phylogenetic and ontogenetic evolution mirror each other (Wilber, 2000D: 153-154). Put rather simply, this development of consciousness also corresponds to his three ways of knowing: the "eye of flesh" (sensorimotor), the "eye of reason" (mental/rational), and the "eye of contemplation" (spiritual/mystical) (Wilber, 2000B: 2-6). It is in the contemplative and transpersonal realms where Wilber locates the aspects of consciousness which relate to integrated intelligence. These, in sequence, are the psychic, subtle, causal and non-dual (Wilber, 2000C: 197). Each of these later stages in Wilber's model represents part of the soul's journey from ego to spirit.

Wilber makes the important distinction between the psychic, or paranormal aspects of perception, and the actual state of integrated awareness that characterizes the final stages of spiritual development in his model. This is a more sophisticated model than general New Age literature, which often fails to distinguish clearly between the two, and often valorises psychic development as a vital goal in spiritual development (if not the most vital goal).

Thus Wilber acknowledges both the psychic and transpersonal realms of consciousness, yet goes little into detail about the former. Indeed his 'psychic' level of consciousness does not refer specifically to clairvoyant perception, but to an expanded concept of self that transcends ego, although psychic experiences may comprise an aspect of it (Wilber, 2000A: 183). The psychic is not valorised in Wilber's model. Wilber's attitude towards the psychic is typical of the Buddhist attitude towards psychic phenomena, which acknowledges it, but sees it as relatively insignificant or a distraction in the journey to enlightenment. Instead his texts valorise experiences of primary level integrated intelligence. Indeed his entire argument is predicated upon the evolution of consciousness and transcendent consciousness in general.

Wilber correlates rationality and the 'mental' domains of consciousness with ego-centered, alienated self-consciousness. In Wilber's model, rationality, like all but the final nondual stage in the Great Chain of Being, is merely a stepping-stone to enlightenment, soon to be included, and transcended within higher states of consciousness.

Empirical Level

Wilber's texts are almost bursting with references and notations to scientific and academic research. Indeed Sex, Ecology and Spirituality features some 235 pages of end notes! These include references to a plethora of disciplines and research fields, including psychology, ecology, anthropology, cosmology, mysticism, theology, postmodernism, physics etc. The depth of his scholarship is immense. Thus Wilber is foremost a scholar. He makes this point himself in the semi-autobiographical Grace and Grit, claiming in a conversation with his late wife Treya Wilber that: "We both know I am no Buddha." He com-
pares himself instead to the ancient Buddhist scholars (Wilber, 2000E).

Wilber's hierarchical and developmental model of sociocultural evolution situates the various schools of psychology and consciousness and their respective thinkers upon the "Great Chain of Being." For example the work of Jurgen Habermas is inserted at the next-to-lower levels of the Chain (the phantasnic-emotional) and moves through to the final stages of the rational (vision-logic) level. Jean Piaget's work spans a slightly greater range, from the very beginning (sensorimotor) and also terminating at the visio-logic stage. The work of Duane Elgin begins at the phantasmic emotional level and moves right through to the final nondual level on Wilber's model (Wilber, 2000C: 215-216). But not only individuals fit into the model. Schools of thought are also situated on the map. For example he maps the various stages of Yoga Tantra in precisely the same way, spanning the entirety of the stages of the Great Chain of Being (Wilber, 2000C: 210).

Social Level

Wilber's is an integral model and the social dimensions are incorporated theoretically into his model. The cultural aspects of evolution constitute the lower left-hand quadrant of his four-quadrant system, while the social aspects are covered in the bottom left column. His breadth is impressive, but not the depth. There are no detailed explorations of specific social issues like crime, education, politics, or social welfare. Since his major focus is upon the evolution of consciousness, social issues are delved into only in respect to their influence on the history of ideas, religion, mysticism, science etc. Some of the issues he does touch upon include power structures in feminism (Wilber, 2000D: 393), science and global culture (Wilber, 2000D: 710-716), the development of postmodernism in the wake of modernist science (Wilber, 2000A: 54-64) and the men's movement (Wilber, 2000D: 258). The narrow treatment of such issues leaves Wilber open to the criticism that his books are more intellectual and theoretical than grounded in mundane or practical human concerns.

In a broader sense Wilber's books are all social commentary. Society and culture are subsumed within metaphysics in his model of evolution. The development of society and culture are embraced within the evolution of consciousness. Indeed according to Wilber, cultures and societies merely reflect the evolution of spirit. Just as individuals evolve, moving higher along the Great Chain of Being, societies evolve collectively, mirroring the evolution of the individual (Wilber, 2000D: 153-157).

Worldview

In Grace and Grit, Wilber compares his life before meeting his late wife Treya Wilber to that of a Zen monk. His worldview, like the postrational stages of his model of sociocultural evolution, is heavily influenced by Buddhist and mystical philosophies in general. He regularly refers to Buddhist, Sufi, Tantric, Gnostic and Hindu mystics in his texts.

Unlike Broomfield and to a certain degree Dossey, Wilber does not valorize indigenous ways of knowing. He recognizes themselves as essentially pre-personal levels of consciousness, which in effect means pre-rational (Wilber, 2000D: 244-247). Thus Wilber claims that indigenous peoples (with perhaps the exception of a few shamans) represent a lower level of consciousness that predates the current typical level of modern human consciousness. (3) He criticizes several contemporary theorists - including Jungians (such as Jung himself and James Hillman), the "romantics" and New Agers in general for failing to comprehend the distinction between pre-personal and transpersonal realms of consciousness (Wilber, 2000C: 104). Conversely he sees genuine mystics as operating within the transpersonal realms, beyond the level of the purely rational-logical.

Wilber's worldview may best be described as mystical/intellectual. The sheer depth of its research and critical inquiry distinguishes it clearly from typical New Age (and indeed mystical) thinking, and unlike New Ageism it is heavily intellectual.

Mythical/Metaphorical Level

The "story" that persists throughout Wilber's writings is not a new one. It is the story
of the journey from ignorance to enlightenment - the story of the spiritual journey. What Wilber does is take the spiritual and mythical element of the spiritual journey, and place them in a contemporary, rational and sometimes scientific guise.

In Grace and Grit (2000E), Wilber recounts the tragic tale of his wife Treya's fatal battle with cancer in spiritual terms. Finally, his wife finds her enlightenment, or so he believes. This belief he garner's from an interpretation of a dream he has shortly after her death.

Yet the rest of Wilber's texts lack an anecdotal/mythical dimension. This absence of the mythical and allegorical clearly distinguishes Wilber's works from those of the New Age, and classical spiritual texts. The reason for the absence is made implicit in Sex, Spirituality, Ecology (2000A). Here Wilber takes to task the work of such thinkers as Joseph Campbell and Carl Jung. Wilber deconstructs Campbell's claim that myth grants access to transrational apprehension, suggesting that "mythology can rightly lay claim only to the childhood of men and women" (Wilber, 2000D: 250). Mythology cannot be employed as a means to greater understanding without the aid of the rational mind, Wilber argues, thus identifying an inherent weakness in Campbell's argument that myth is the equal of science (Wilber, 2000D: 247-50) Writes Wilber:

...a myth is being a "real myth" when it is "not" being taken as true, when it is being held in an "as if" fashion. And Campbell knows perfectly well that an "as if" stance is possible only with formal operational awareness" (Wilber, 2000D: 247).

Thus, argues Wilber, a myth can only be understood properly when it has been transcended by rationality. In Wilber's model the mythic is transcended by the rational, and then the rational is transcended by the transpersonal. The Jungians' elevation of myth in cognitive status is thus a function of the "pre-trans fallacy" (Wilber, 2000D: 247).

Ironically it is the lack of a personal/anecdotal dimension which is one of the most problematical aspects of Wilber's work. As Richard Slaughter has pointed out, it is unclear how Wilber came to the insights he represents in his work, and thus how valid his understanding of higher levels of consciousness is (Slaughter, 2000: 349). It is arguably inconsistent of Wilber to criticise systems theories as being unable to offer a unified theory of everything because they have ignored the personal and the inner (Wilber, 2000C: 147), when his own work reduces spiritual experiences to approximations and linguistic abstractions (e.g. "the nondual", "subtle," "causal" etc.) without anecdote or personal insight. By doing so, in part he reduces his books to the very "flatland" dimension that he criticises systems theorists for.

Wilber's books most often comprise page after page of interpretation of other scientists, thinkers and sages, positing them within his spiritual framework, but lacking in any explicit experiential dimension. The means of Wilber's perception are mental/rational (the eye of reason), as analysis, interpretation and synthesis of data are the dominant cognitive tools employed in the construction of his thesis. Since Wilber has explicitly stated that the eye of reason is an inadequate means to comprehend the mystical/transrational, he creates an inherent contradiction in his thesis. His failure to explicate his own transrational experiences of consciousness seems rather incredible, in view of his stated valorisation of mystical experience in comprehending the higher stages of consciousness. Thus it is not at all clear that he has had any direct experience of transrational consciousness, as there is not a single reference to any such experience in his five books listed in the bibliography of this paper. These books largely comprise his most recent works.

Some concluding remarks on Wilber

Books, theories and empirical/rational research are the tools of the dominant scientific discourse. The task of writers like Wilber in attempting to posit trans-rational ideas in rational/linguistic format thus becomes highly problematical. The fact that his texts are highly intellectual and abstract does not help his cause. The question thus needs to be asked: what is the value of a text whose thesis is predicated upon
transrational consciousness, when the mode of delivery is overtly rational, thus stultifying the possibility that the subject matter can be fully comprehended by its intended academic audience?

Conclusion

The issue of effectively communicating insights gleaned from mystical experience in the overtly mental/rational medium of books and academic papers, is but one of the problematicas pervading texts on integrated intelligence. There are various others. Briefly some of those issues include the lack of an established terminology, confusion of what comprises the litany, the problematic nature of establishing empirical validity, a tendency to over rely on analogies with quantum physics, and the scorn of many skeptics, academics and those working within mainstream science and academia.

Still, many are embracing the challenge, researching and writing about integrated intelligence. This paper has presented just four thinkers in four different disciplines who are taking the notion of integrated intelligence seriously. Just a handful of the many others across various fields include: John Wheeler, Erwin Schrodinger, Brian Josephson (physics); Kurt Godel, S.J.S. Clarke, David J. Chalmers (logic and mathematics); John Searle, Gillian Ross (philosophy); Rupert Sheldrake, Elisabet Sahtouris, Theodore Rozak, James Lovelock (biology and ecology); Ervin Laszlo (systems theory); Jean Houston, David R. Hawkins, Stanislav Grof (psychology and psychiatry); Karl Pribram, Chilton Pierce, Roger Penrose (neuro-science and consciousness); and J. Soltw, GK Watkins, R. Wells (parapsychology). Further, this list does not mention the countless writers and thinkers writing in the popular New Age, theological and spiritual discourses.

Thus the trend towards depicting intelligence in integrated terms is gaining momentum in numerous fields. Integrated intelligence can no longer be dismissed as irrelevant, purely mystical or anachronistic to the current age. This movement is pervasive and profound in its implications. Integrated intelligence cannot simply be incorporated into our map of reality like a new discipline or an emerging field, as artificial intelligence theory or genetic theory have been, for example. These fields reside firmly within the mechanistic reductionist paradigm which legitimates them and elevates them to valorised positions within modernist space. Conversely integrated intelligence is paradigm shaking. It threatens to destabilise the foundations of our maps of the universe. It promises to expand our minds beyond the boundaries of self. And as Einstein once stated, a mind once expanded by a new idea, can never return to its former size.

Correspondence

University of the Sunshine Coast
Faculty of Arts and Sciences
Maroochydore, 4557, Queensland, Australia
m_a004@student.usc.edu.au

Notes

1 Possibly Dossey and others categorised here under the 'New Age' label would be unhappy with the term. However I use the term because the New Age shares some similarities with the thinkers referred to here, namely:
   * A spiritual, metaphysical focus, which often includes acknowledgment of other levels of existence beyond the physical, as well as paranoid phenomena; and possibly non-physical life-forms such as spirits, angels and demons.
   * The incorporation of transpersonal themes.
   * The acknowledgement of inner worlds and consciousness as crucial or highly significant, within any given discourse.
   * Eclecticism - drawing from wide ranges of sources for information and inspiration. However there are several ways in which the thinkers mentioned here typically differ from popular New Age thinkers:
     * They also value critical and analytical thinking.
     * They have a tendency to rely just as much (or more) on scientific and empirically validated knowledge and research as personal (spiritual) experience.
     * Their worldviews and arguments are reflective, self-critical and discursive and (at least in theory) malleable.
2 Wilber is particularly severe in criticising Romantic, New Age and Jungian writers for failing to make clear the distinction between lower and higher psychic impulses. He calls this error "the pre-trans fallacy" (Wilber, 2000A: 244-50).

3 Wilber believes that average human consciousness is now moving into the vision-logic phase of consciousness evolution. This represents the beginnings of the transcendence of rationality (Wilber, 2000A: 266-269).

References


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