Microvita and Other Spaces: Deepening Research through Intuitional Practice

Marcus Bussey
University of the Sunshine Coast
Australia

> Another language will perhaps one day help us to say better what still remains to be said about [the] metonymic figures of the unconditional. (Derrida, 2005, p.148)
> The encounter between different levels of Reality and different levels of perception engenders different levels of representation. Images corresponding to a certain level of representation have a different quality than images associated with another level of representation, because each quality is associated with a certain level of Reality and a certain level of perception. (Nicolescu, 2002, p.99)

The concept of microvita was first introduced to me in December 1987. I was visiting India and heard Prabhat Rainjan Sarkar discussing it with a large audience. Everyone seemed excited and bemused. What was it all about? This bemused look comes over people today when the concept comes up in conversation. Microvita acts as a category of 'otherness' that seems to flag something important and yet it is so hard to pin down. I think Derrida is pointing to this kind of space within the rational where other forms of language and expression grope towards alternative epistemic configurations that allow us to access quite other domains in our attempt to understand this world of ours. It is, as Nicolescu points out, a matter of working across perceptual domains which require alternative forms of representation. We, the perceivers, need to shift both our reasoning and our perceiving to accommodate an idea that still largely occupies a space beyond our civilisational horizon.

The first thing to note about the concept 'microvita' is that it is an interesting idea. Ideas are organising patterns that arrange information, perception and reason – in short, the world and how we navigate it. That means that ideas, concepts as Deleuze and Guattari call them, have effects. They affect us and our world, rendering elements as coherent or incoherent according to their proximity to the mimetic centre of one's context. A comic but insightful expression of this insight comes from , Douglas Adams (1982). In the third of his Hitchhiker's Guide to the Galaxy he lands a space craft in the middle of Lords Cricket Ground during a match and no one sees it because it is 'cloaked'. The cloaking devise is called an SEP – Somebody Else's Problem! As it is not our problem (so the reasoning goes), we cannot see it, just as poverty is largely invisible or peripheral to the wealthy in any society. Ideas and concepts, in short, bring coherence to the world by editing in or out what is conceivable and perceivable to those who function within it.

In the case of microvita it is a transgressive concept because it crosses borders – mixing science with the occult, eastern with western, physical with the spiritual. It moves across domains – what

Deleuze and Guattari call planes of consistency where the concept is constructed. In fact it is in the act of construction – a form of constructivism which grounds the concept in reality – that we find the unity between the relative and the absolute. Thus they note:

> "The relativity and absoluteness of the concept are like its pedagogy and its ontology, its creation and its self-positing, its ideality and its reality – the concept is real without being actual, ideal without being abstract" (1994, p.22).

This is the problem we face with microvita today it is both relative and absolute. The papers in this symposium are speculative and engage with the pedagogy of microvita – how to communicate it, critique it, construct it within a domain unused to metaphysical excursions into the physical. Microvita offers a third way between the linearity of positivism and the mystery of mysticism. In this way it moves us into the domain between relative and absolute and elicits a subjective approach with objective adjustment. This move demands an engagement with ontology – the inner story of a thing – so that we can introduce the story, an emergent meme, into our cultural and intellectual data base. I separate culture and intellect because microvita is as much about the heart and identity as it is about a new form of reasoning and perceiving. Microvita is an invitation to introduce intuitional practice and spiritual rationality back into mainstream discourse not via a metaphysical turn but by an expansion of what is inherent within the physical.

My contribution to this symposium is to offer an outline of a new approach to research and how we navigate the infosphere. I argue that microvita expands the domain of perception and thus demands of us new tools for engaging with 'reality'. Such tools would include imagination, intuition and meditation. Yet by using such tools I do not think we invalidate the basic tenets of the scientific method. What microvita does is invite us to deploy a subtle rigor when dealing with our research. The methods we develop will need to be replicable, available to peer review and rigorous scrutiny. For microvita to be taken seriously as a proposition about how consciousness can engage with the material, social and cultural worlds as domains of human action and natural process then it must meet basic empirical standards. Yet I believe that we must also change the game of empiricism to allow for an expanded transperception. This is what Niclosecu and Derrida are arguing from their different disciplines. To make this case I first step back a little and offer an overview of microvita and then contextualise it within the field of information science. I develop the idea further with reference to Brenda Dervin's elegant sense making research method.

Definitions

It is necessary to contextualise and define microvita as it is a term with emergent but as yet largely untested possibilities (Gautier, 1999; Towsey, 1995a). It was proposed as a theory of consciousness in the late 1980s by the Indian mystic and philosopher Prabhat Rainjan Sarkar (1991). An enigmatic figure Sarkar straddles East and West as a polymath and controversial visionary. His life (1921-1990) brings into clear

focus the fascinating dialogue that globalization has initiated between the 'West and the rest' as he fuses in his social and philosophical work concepts previously contextualised within discrete civilizational processes. So, as Inayatullah observes, Sarkar exists both in Modernist time as philosopher and social activist and outside time (in eternal time) as guru (2002, p.1-2). Sarkar brings to a discussion of information the interpretive lens of Tantra. It is Tantra that supplies the context for understanding microvita.

Epistemologically Tantra is a pragmatic and process oriented position that situates sense making in the between that is so often overlooked in our dualistic European culture whose geophilosophical understanding of reality is heavily shaped by Judeo-Christian traditions (Guha, 2002; Nandy, 2007). It has much in common with Brenda Dervin's definition of sense making within information science:

> "Sense-Making thrusts itself between chaos and order, structure and person, facts and illusions, external worlds and inner, universals and particulars. Sense-Making posits reality as ordered in part, chaotic in part, evolving in part" (1999b, p.730)

Tantra largely agrees with this reading, thus Sarkar approaches reality as multiple: "the real is physical, mental and spiritual" (Inayatullah, 2002, p.8). For Sarkar the focus is on transformative possibilities within context as revealed by the ontological trajectory of consciousness across the material-mental-spiritual domains of human existence. In Tantric discourse it is consciousness not humanity that holds centre stage. Information, from this perspective moves across a spectrum that includes everything from passive data to transformative memes. Tantra has been popularly associated in the West with exotic and often sexual practices (Bjonnes, 2010). It is however much more than this derivative form and offers an inclusive vision of reality that accounts for individual and collective evolution as an ongoing expression of consciousness in dialogue within its multiple forms (Bussey, 1998, 2006). This dialogue is often fraught with struggle and paradox yet informs both individual and collective expression with a sense of depth and meaning that empowers individuals and collectivities with a sense of purpose and supplies conceptual tools and also physical and spiritual practices to engage more fully with the life-world.

Microvita is one such tool. The term means micro = small + vita = life. For Sarkar (1991) microvita are essentially the building blocks of the universe. Much smaller then atoms, they are the vibrational bridge between the non-physical and matter. Modern physics is exploring the nature of reality as vibrational energy fields – here as astrophysicist Eric Chaisson (2006) points out, we find quarks and dark matter at work in quite mysterious ways. This is a contested field, and still marginal within the dominant paradigm of scientific orthodoxy which remains resolutely materialist. Yet scientists such as Towsey and Ghista challenge this paradigm and argue that mind and consciousness are much more than epiphenomenon of the physical world (1995a, p.335, 1995b). The vibrational quality of matter points towards nascent consciousness that require of the observer subtler modes of consciousness in order to perceive it. Thus we find scientists acknowledging that much of this work requires intuitive reasoning based not on direct material evidence but on the effects of these propositions (Kaku, 2005; Randall, 2006; Talbot, 1996).

Similarly Sarkar argued that microvita could only be recognised by highly developed intuitional minds who account for such subtle phenomena via their effects (Sarkar, 1991). He advocated meditation to develop intuitive power and the sensibility required to observe consciousness at work in matter. Thus he suggests microvita as a form of cosmic intelligence at work throughout the entire universe. As Gautier notes:

> Microvita, as mediators of cosmic intelligence, are responsible for the creation and evolution of other living beings in the universe, and the formation of the chemical elements as well. Microvita move unbarred through the physical universe, and some can travel through the medium of mind as well (1999, p.169).

Sarkar's (1991) overview of microvita is couched in Sanskrit terms and highly speculative. He argued that the concept was emergent and would take centuries to be clarified. In the scientific arena much needs to happen in order for any clarity to be reached, as such it should be considered a weak signal flagging a possible development inherent to epistemological encounters across civilizational and temporal space. However, he did describe features of microvita that were already intelligible to us, or would be so in the near future.

To begin with, we can say that microvita are:

- A new way of understanding consciousness
- Living entities, thus they follow the standard life cycle
- Perceived inferentially, i.e. by their effects
- Sub atomic but varies greatly in size
- Either negative, positive or neutral in effect
- Found along a continuum, with the crudest being viral in nature (and behave so); the subtlest are ideas (and act as such)
- Vibrational not concrete (perhaps like crystals or fractals)

Now this last point indicates that microvita are self organizing. Consciousness in Tantra is understood as pattern that oscillates at a frequency and reflects levels of complexity (Sarkar, 1993). Microvita move across these levels and become more complex and more subtle, or less complex and less subtle according to context. They attract consciousness and on each encounter become something new. Thus microvita can be understood as fluid, hybrid, perhaps even fractal. They seek order amidst disequilibrium but order is always relative rather than absolute (Bussey, 2011 Forthcoming). Hence Towsey and Ghista argue the dynamic of instability within order (entropy) is such that evolution from matter to consciousness relates to increasingly complex systems in which we move from self-organisation to self-realisation with its concomitant self-awareness. This implies the ever present possibility of consciousness in all matter and suggests a theoretical basis for microvita within the physical sciences (1995a, p.343).

Microvita as Patterned Information

Sarkar saw microvita as patterns in energy – physical or mental or spiritual. He argued that these can replicate or die out over time, they can hybridize and metamorphose, they can move from simple to complex and from complex to simple (1991) fol-

lowing lines of flight that are not bounded but open ended in the way Deleuze and Guattari (1994) construct planes of immanence as a multiplicity of continuous and discontinuous fields. The complexity – the relative density or subtlety – of the microvita determine whether they are more of a physical, mental or spiritual nature. Yet their effect is to arrange perceptual fields around organising principles. In this way they are analogous to Floridi's 'fully tessellated infosphere' (cited in Herold, 2003, p.557) in which relationships between physical, mental and spiritual are fluid, morphing across domains.

Microvita theory allows us to rethink the relationship between individual and collective, the agent within the context of an ever flowing, permanently in flux infosphere (Floridi, 2004). The infosphere is the domain of human perceptual significance. Microvita allows for a dynamic relationship with meaning making and the way information is understood within context. All signals within the infosphere are microvital in nature. The mind simply filters, selects and privileges according to a mix of shared cultural and unique subjective criteria. In all this habit and conditioning are not to be underestimated.

Because microvita theory accounts for both the 'white noise' of background context, the data from which information emerges, as well as the role of consciousness in the development and maintenance of context, the questions and concerns shift towards holistic and metaphysical issues pertaining to order, chaos, hybridity, and the challenge the spiritual poses to normative assumptions about the real and how information might function in it. Part of this shift is in the reconceptualization of the individual – or more specifically the reconceptualization of parts in relation to wholes. The theory suggests that parts only exist because of their relationship to wholes. Now there are contexts in which parts and wholes behave according to specific rules: the universe is governed by the rules of physics and these rules are played out via its constituent parts; our planet is constituted by a range of spheres (biosphere, hydrosphere, infosphere, etc) and these all apply rules and meaning to the constituent parts; a nation is organized around laws and customs and its citizens draw meaning and identity from these; an institution too is a composite of functions and a mores or ethos and meaning and purpose are drawn from these.

Thus we can see that at the existential and phenomenological levels microvita theory shifts the emphasis from the individual developing autonomous Self (upper case is intentional) to the individual developing collective self. This generates what Herold (2003, p.557), following von Foerster, calls a relational data base from which the 'collective individual', if self aware, is able to observe and interact with the collective consciousness of any social structure in such a way that their independence and power is maintained, yet their sensitivity and connection to the collective process is not lost. Such an individual, whom Sarkar identified as Sadvipra (Bussey, 2010; Inayatullah, 2002; Sarkar, 1992), has within their power the ability to act upon the dominant microvita of an institution in order to bring about constructive change.

In such contexts information can be highly influential in bringing about change as the phenomena of wikileaks illustrates. This is because it is no longer simply an epiphenomenon of context but a charged and vibrationally alive unit of energy consciousness. No longer is it neutral or passive. Context itself and the dynamic interac-

tivity of the minds in situ bring a range of readings to bear. Sarkar (Sarkar, 1991, p.43) points out that at some point in the future we will be able to read microvita in such a way that it can be measured. Thus a unit of information may be charged in some way we are yet unable to read. Yet it can be understood by its effects. For example the name Allah might bring anxiety to a resident of New York and elation to a resident of Mecca. The context, of course, determines the reading but the use of the word – the intent links up and releases specific vibrational responses that emerge out of the microvital field.

The question of intent indicates that consciousness is always implicit in information and its uses and abuses. The purpose of any inquiry into information at a spiritual level suggests that we need to turn our attention to the deeper issue of consciousness as interlocutor with context (Rowley, 1998). Spirituality is a way of understanding Being that reaches beyond the forms of the material expression of the Universe to incorporate atemporal, ideative and immutable conditions. Yet it acknowledges the physical grounding for all such considerations and demands of us that we engage in deepened critique – what Giri (2006, p.5) calls 'spiritual criticism'. As a form of practical spirituality we then can understand critique as a way of moving beyond what Bourdieu (1971, p.184) called habitus in order to practically shoulder our collective responsibility to context.

To transcend habitus and engage a grounded spirituality that has critical force calls for a reading of consciousness that incorporates the relational nature of meaning generation. The standard representation of data-information-knowledge-wisdom (DIKW) as a hierarchy only partly suggests this (Rowley, 2006). Sarkar (1991) proposes that microvita exist along this continuum and that the human being can engage in a range of spiritual practices and disciplines that enable access to and engagement with these fields of activity: the field of data (raw existence or litany), the field of information (system/structure and the domain of habitus), the field of knowledge (worldview and paradigm) and the field of wisdom (integrative Being that works with metaphor and causal mythic process). Such a break down correlates well with Causal Layered Analysis (CLA), the research approach developed by Inayatullah (2004), and suggests that tools are already emerging for thinking about the relationship between consciousness and context. Such tools will become even more effective when we better understand microvita's relationship to engaged consciousness, memes and intuitive inquiry.

Those of us who have worked as facilitators are aware of how important it is to channel the collective energy of a group toward creative, inclusive and open ended explorations of consciousness. Such work is a form of social and transformative pedagogy that involves microvita, as engaged consciousness, in opening the habituated consciousness of a group up to innovation and the reimagining of the world of 'business as usual'. Such learning contexts can be described as forms of Causal Layered Pedagogy (CLP) and again demonstrate the possibilities from thinking about the patterning of consciousness as it flows through a group (Bussey, 2009a). The role of mind, consciousness and the facilitator as the one who holds the space cannot be underestimated. So it can be argued that Microvita, as modes of conscious organisation, respond to consciousness and the reverse also holds.

Consciousness when cast as a spiritual engagement with context becomes a medium for engaging with the world in such a way that information expands to incorporate Floridi's (2004, p.560) three domains of information 1. reality, 2. about reality and 3. for reality, to also include a dialectical relationship in which both 'reality' and agent play with one another. This 'play' is essentially ideational in nature and is realised as a political and ethical project across the domains Floridi identifies and the DIKW describes. It calls forth a specific kind of consciousness that interacts with reality for the all round development of its possibilities (Bussey, 2010). This calls forth what Giri calls an aesthetic ethics of self transformation in which the subject grounds service to the other in a service to the self (2009b, p.511). Sarkar also promoted this ethical dimension to consciousness transformation (1982). Such a project highlights the critical role information has in the broader libratory agenda of spiritual activism. Microvita theory brings to information science the paradoxical mixture of a transcendental reading of reality with a commitment to the grounded and unique nature of context. Deleuze (1994) establishes the philosophical foundations for such an epistemological shift by proposing a transcendental empiricism.

Transcendental Empiricism

A transcendental empiricism needs to be approached with some caution. Much depends, however, on this idea. Empiricism has long been the ground for solid, rigorous and authoritative science. Of course science and scientists have changed over time in response to the world and the information flows that have been navigated. Scientists (Laszlo, 2001; Loye, 2004), well some of them anyway, are now less enamoured of their method and more willing to acknowledge a range of possible post-normal scientific arrangements. For instance, the social scientist Ananta Kumar Giri (2009a) is working on the connection between social activism and personal change. In a fascinating ethnography of activists he demonstrates the role of conscious change at the personal level and its necessity for transformative action in the social and cultural domains. Such an account indicates that empirical reality is not a discrete domain but deeply connected to the consciousnesses of those who seek to engage it either as activists or as scientists.

Smith (2010) sees post-normal science as being part of an 'evolution of scientific process' in which rigor is maintained but allowance is made for uncertainty, the value positions of the researchers and for participatory encounters in knowledge formation (see also: Ravetz, 2011). Deleuze allows us to read such an extension as a form of dialogical empiricism. Empiricism, Deleuze and Guattari assert, "knows only events and other people" (1994, p.48) yet, they argue, both events and people are multiple, being in a constant process of becoming. This becoming is contextual, occurring in dialogue with site or what Deleuze and Guattari call the plane of immanence. Empiricism thus invokes the 'and' in relation to the becoming-subjects' experience of the outside/real. This 'and' reminds actors that there is always something immanent, awaiting emergence from the plane of context. Thus the subject's story is never complete, never whole: hence we are always becoming (1987, p.6ff). The plane that grounds such becoming is multiple and fluid. The real is never stable nor as it appears. There is a

non-personal, trans-perceptual and intra-cultural dimension involved with the practice of reality. Information, in this reading, becomes streams of possibilities coursing across a domain of becoming.

Such a perspective allows us to see that the act of accessing information immediately alters both the researcher and the information. Consciousness becomes its own reflexive process and yet, Deleuze is insistent, this must be grounded and not shaped via an a priori assumption of ideology as lens. He works across concrete domains as a pragmatist who understands reality as self referential in the sense that Kaku (2005) implies. Thus both the universe and its observer come, as the result of reflection, into existence. Therefore Deleuze argues in the Logic of Sense "Only empiricism knows how to transcend the experiential dimension of the visible without falling into Ideas, and how to track down, invoke, and perhaps produce a phantom" (cited in Semetsky, 2006, p.34). This makes the DIKW hierarchy fraught with contradictions – the first being that there is some kind of linear process at work in ordering meaning. CLA helps us here because it understands the world, and by implication DIKW, as process and situates actors in relation to their zone of activity. In this way there is no linear demand, only context. This is a research method that responds to Sarkar's description of microvita as a field of living consciousness in which we are all implicated in the sense making that always occurs when people are involved.

By challenging the DIKW hierarchy Deleuze frees empiricism and the act of information gathering from direct environmental conditioning. This is the transcendental quality of Deleuze's understanding of empiricism and has direct implications for how microvita can be applied to any thinking or engagement with 'reality'. The concept of the rhizome is another way to think about what is occurring as consciousness flows through the infosphere. Deleuze and Guattari (1987) discuss rhizomes at length in an attempt, via analogy, to capture this process at work. In applying the concept to microvita it can be seen that they behave rhizomically as streams of consciousness, vibrational nodes, data entry and exit points that construct any representation of reality. They can be accessed empirically by studying their effects in the same way scientists are trying to approach dark matter. Sarkar asserts they are part of the physical universe, they are simply as yet obscured by the crude methods we bring to bear in our empirical engagement with context. While quantum physics is making headway, I argue elsewhere that the idea also requires a shamanic disposition to open up context to subtler readings of process (Bussey, 2009b). In such a space it is possible that meditation can become a tool for probing deeper realms of being. Certainly microvita theory opens up such a possibility in which the mind goes inward in order to understand the transperceptual field. Thus the transcendental dimension of empirical process is simply an expansion of the human quest for information.

The context Deleuze describes is open ended. It is also multi-tangential, i.e. rhizomic, in that depth is understood as inherent to context but not structured around any particular axis. Layers therefore are not so much structural – as in the onion for instance – but trans-structural. Microvita flow across such layers and bring meaning and substance to our experiences. The real now is not only the physical universe which surrounds us, nor is it simply the product of our reflective engagement with

time, place and space but rather it is an extension of the perceptual field to inference and vibration which is supra-physical.

Transformative Knowledge

Microvita theory offers a transformative epistemology which links spirituality with both inductive and deductive reasoning. In this it allows for intuition as a form of inquiry into reality. It greatly extends the categories of the real to incorporate what Inayatullah describes as the "non-local field of awareness that makes sense of reality" (2008, p.6). It does so by offering a transcendental empiricism akin to Deleuze but grounded in the Tantric metaphysics of Sarkar's ontological orientation. Sarkar had a knack for neologisms. Each new term he developed with conscious historical and cultural referents. Microvita evokes the vitalist theory by suggesting a dimension to life that lies beyond biological explanations (Sarkar, 1991, p.89ff). Yet it escapes the need vitalists felt to demonstrate the truth of this insight within the mechanistic scientific framework of scientific thought. This side stepping is not a slight of hand, or the result of 'lazy thinking' but due to the fact that its core assumptions about reality come not from the Graeco-Roman scientific tradition but from the Tantric tradition of India.

Microvita helps us make sense of an expanded reality because all sense making is understood as patterned by/as consciousness. Thus microvita theory extends Dervin's (1999a) elegant work on sense making to include the role of consciousness in navigating a complex and layered reality. This is best demonstrated with reference to Dervin's outline of the eight historical narratives that describe the unfolding human relationship with information design. Here she describes the shift in scholarly attention away from order towards an acceptance that order is relative and always at the mercy of entropy (see also Flood, 1999). The eights steps are as follows:

1. Information describes an ordered reality
2. Information describes an ordered reality but can be 'found' only by those with the proper observational skills and technology
3. Information describes an ordered reality that varies across time and space
4. Information describes an ordered reality that varies across time and place
5. Information describes an ordered reality that varies from person to person
6. Information is an instrument of power imposed in discourse on those without power
7. Information imposes order on a chaotic reality
8. Information is a tool designed by human beings to make sense of a reality assumed to be both chaotic and orderly (Dervin, 1999a, p.37-39).

We can see the epistemological terrain moving from the security of an Enlightenment rationality, through disciplinary knowledge, to increasingly less stable configurations affected by existential angst and phenomenological sensitivity, to post-structural attacks on the links between power and knowledge, and finally to a pragmatic acknowledgement of the use value of a tool in an uncertain world.

Yet this trajectory has not ended, nor does Dervin claim it has, as we are now contemplating information and its relationship to expanded consciousness. This shift, as with the other shifts described by Dervin, hinges on how we understand the human

condition and what it means to be human. As noted earlier how we are constructing reality civilizationally is altering as philosophical currents are hybridizing as a result of globalization. Similarly, science itself is facing a post-normal future and many creative scientists are considering various modalities for understanding depth (Capra, 1984; Laszlo, 2001; Sheldrake, 2004). This all points to another qualitative shift in how we think about information. Perhaps we could add a ninth step to Dervin's sense making continuum, one which links more 'sense' with more 'information'. When we rethink information through microvita theory we find other spaces opening up and can consider a ninth step to Dervin's continuum as not only tenable but a significant expansion to the possibilities of understanding our world. Thus we can add:

9. Information is a product of consciousness: expand our consciousness and we expand the information available to us.

Conclusion

Microvita offers researchers wider access to information about our world, how we make sense of it. It allows intuition to become part of inquiry, opening up new spaces for us to explore the role of consciousness in our world thus expanding our thinking about what might constitute a valid research method. As we develop the field of microvita research and its terms of reference we are creating a set of tools that allow for peer review and a subtle rigor. Introducing spirituality and spiritual practice into this work is a major step forward yet it is problematic because of course it is hard to assess. Again we need to look to the effects of this form of research on the context of the research and the forging of a reliable epistemic domain. Spiritual science, to use Sarkar's (1993) term, needs to be validated according to the rules of empirical inquiry. This requires new categories and terms of reference. This might fall under the banner of a transcendental empiricism in which transperception becomes a tool for deepened inquiry into the nature of consciousness and our dialogical relationship with the full spectrum of our Being.

Acknowledgement

The author wants to thanks Sohail Inayatullah, Michael Towsey, and Jose Ramos for offering critique and suggestions as this paper developed. He also wishes to acknowledge the inspiration of the city of Visby, Sweden where this paper was completed.

Correspondence

Marcus Bussey
University of the Sunshine Coast
Locked Bag 4
Maroochydore DC, QLD 4558
Australia
Email: MBussey@usc.edu.au

References

Adams, Douglas. (1982). *Life, the Universe and Everything*. London: Pan Macmillan.

Bjonnes, Roar. (2010). *Tantra and Veda: The untold story*. Integral World, retrieved May 17, 2011, from http://www.integralworld.net/bjonnes1.html

Bourdieu, Pierre. (1971). "Intellectual field and creative project." In M. F. D. Young (Ed.), *Knowledge and Control: New Directions for the Sociology of Education* (pp.161-189). London: Collier Macmillan.

Bussey, Marcus. (1998). "Tantra as Episteme: A pedagogy of the future." *Futures, 30*(7), 705-716.

Bussey, Marcus. (2006). "Neohumanism: Critical spirituality, Tantra and education." In Sohail Inayatullah, Marcus Bussey, & Ivana Milojevic. (Ed.), *Neohumanist Educational Futures: Liberating the Pedagogical Intellect* (pp.80-95). Taipei, Taiwan: Tamkang University Press.

Bussey, Marcus. (2009a). "Causal layered pedagogy: Rethinking curricula practice." *Journal of Futures Studies, 13*(3), 19-32.

Bussey, Marcus. (2009b). "Six shamanic concepts: Exploring the between in futures work." *Foresight, 11*(2), 29-42.

Bussey, Marcus. (2010). "Education for liberation." In Jake Karlyle, & Michael Towsey (Ed.), *Understanding Prout: Essays on Sustainability and Transformation, Vol.1*, pp.77-104. Maleny, Australia: Proutist Universal.

Bussey, Marcus. (2011 Forthcoming). "Forms to dream by: New histories, new research, and a neo humanity." In Ananta Kumar Giri (Ed.), *Pathways of Creative Research: Towards a Festival of Dialogues*.

Capra, Fritjof. (1984). *The Turning Point: Science, Society, and the Rising Culture*. New York: Bantam.

Chaisson, Eric. (2006). *Epic of Evolution: Seven Ages of the Chosmos*. New York: Columbia University Press.

Deleuze, Gilles. (1994). *Difference and Repetition* (P. Patton, Trans.). New York: Columbia University Press.

Deleuze, Gilles, & Felix Guattari. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia* (B. Massumi, Trans.). London & New York: Continuum.

Deleuze, Gilles, & Felix Guattari. (1994). *What is Philosophy?* New York: Columbia University Press.

Derrida, Jacques. (2005). *Rogues: Two Essays on Reason*. Stanford, California: Stanford University Press.

Dervin, Brenda. (1999a). "Chaos, order and sense-making: A proposed theory for information design." In Robert Jacobson (Ed.), *Information Design* (pp.35-57). Cambridge, Mass.: MIT Press.

Dervin, Brenda. (1999b). "On studying information seeking methodologically: The implications of connecting metatheory to method". *Information Processing and Management, 35*(6), 727-750.

Flood, Robert L. (1999). *Rethinking the Fifth Discipline: Learning within the unknowable*. London & New York: Routledge.

Floridi, Luciano. (2004). "Open problems in the philosophy of information." *Metaphilosophy, 35*(4), 554-582.

Gautier, Richard. (1999). "The cosmic cycle of creation and microvita." In Sohail Inayatullah, & Jennifer Fitzgerald (Ed.), *Transcending Boundaries: Prabhat Rainjan Sarkar's Theories of Individual and Social Transformatio*n (pp.167-176). Maleny, Australia: Gurukula Press.

Giri, Ananta K. (2006). *New Horizons of Social Theory: Conversations, Transformations and Beyond*. Jaipur, India: Rawat Publications.

Giri, Aanata K. (2009a). *Self-Development and Social Transformations? The vision and practice of the Self-Development study mobilization of Swadhyaya*. New York: Lexington Books.

Giri, Ananta K. (Ed.). (2009b). *The Modern Prince and the Modern Sage*. London: Sage.

Guha, Ranajit. (2002). *History at the Limit of World-History*. New York: Columbia University Press.

Herold, Ken. (2003). "An information continuum conjecture." *Minds and Machines, 13*(4), 553-566.

Inayatullah, Sohail. (2002). *Understanding Sarkar: The Indian Episteme, Macrohistory and Transformative Knowledge*. Leiden, The Netherlands: Brill.

Inayatullah, Sohail. (2008). "Six pillars: Futures thinking for transforming." *Foresight, 10*(1), 4-21.

Inayatullah, Sohail. (Ed.). (2004). *The Causal Layered Analysis (CLA) Reader: Theory and Case Studies of an Integrative and Transformative Methodology*. Tamsui, Taiwan: Tamkang University Press.

Kaku, Michio. (2005). *Parallel Worlds: The Science of Alternative Universes and Our Future in the Cosmos*. London: Allen Lane.

Laszlo, Ervin. (2001). *Macroshift: Navigating the Transformation to a Sustainable World*. San Francisco: Berrett-Koehler Publishers.

Loye, David. (Ed.). (2004). *The Great Adventure: Toward a Fully Human Theory of Evolution*. Albany, US: State University of New York Press.

Nandy, Ashis. (2007). *Time Treks: The Uncertain Future of Old and New Despotisms*. Ranikhet, India: Permanent Black.

Nicolescu, Basarab. (2002). *Manifesto of Transdisciplinarity* (Karen Clair Voss, Trans.). Albany, US: State University of New York Press.

Randall, Lisa. (2006). *Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions*. New York: Harper Perennial.

Ravetz, Jerome R. (2011). "Postnormal science and the maturing of the structural contradictions of modern European science." *Futures, 43*(2), 142-148.

Rowley, Jennifer. (1998). "What is information?" *Information Services & Use, 18*(4), 243-254.

Rowley, Jennifer. (2006). "The wisdom hierarchy: Representations of the DIKW hierarchy." *Journal of Information Science, 33*(2), 163-180.

Sarkar, Prabhat Ranjan. (1982). *The Liberation of Intellect: Neohumanism*. Calcutta, India: Ananda Marga Publications.

Sarkar, Prabhat Ranjan. (1991). *Microvita in a Nutshell*. Calcutta, India: AM Publications.

Sarkar, Prabhat Ranjan. (1992). *Proutist Economics: Discourses on Economic Liberation.* Calcutta, India: Ananda Marga Publications.

Sarkar, Prabhat Ranjan. (1993). *Discourses on Tantra (Vol.1)*. Calcutta, India: Ananda Marga Publications.

Semetsky, Inna. (2006). *Deleuze, Education and Becoming*. Rotterdam, The Netherlands: Sense Publishers.

Sheldrake, Rupert. (2004). *The Sense of Being Stared at: And Other Aspects of the Extended Mind*. Boulder, Co. USA: Three Rivers Press.

Smith, Timothy. (2010). "Beyond knowledge: A neo-research approach to climate change adaptation." In John Martin (Ed.), *Climate Change Responses Across Regional Australia: Social Learning and Adaptation*. Victoria, Australia: VURRN Press.

Talbot, Michael. (1996). *The Holographic Universe*. London: Harper Collins.

Towsey, Michael, & Dhanjoo N. Ghista. (1995a). "The Origins of Mind." In Dhanjoo N. Ghista (Ed.), *Proceedings of the Second Gauss Symposium: Biomedical and Life Phsyics* (pp.335-346). Munich, Germany: Verlag Viewveg.

Towsey, Michael, & Dhanjoo N. Ghista. (1995b). "Towards a science of consciousness." In Dhanjoo N. Ghista (Ed.), *Proceedings of the Second Gauss Symposium: Biomedical and Life Phsyics* (pp.417-428). Munich, Germany: Verlag Viewveg.