

**Re-actualizing the Leadership of Professional Accountants in Business:  
The New Sciences and Human Governance Way**

by

Arfah Salleh, PhD, FCPA

Aziuddin Ahmad, PhD

**Introduction**

Professional accountants in business play a profound role in the success of their organizations. Their performance is critical to the reputation and credibility of the business firm, its management and the accountancy profession (IFAC, 2005). Hence, it is not unexpected when the standing of the accountancy profession has earned misgivings as a result of the repercussions of the world corporate crisis. More recent financial meltdown has only managed to dissipate any gain from previous confidence-building initiatives to counter the consequences of earlier accounting fiascos in the likes of Enron and WorldCom. Accountants, whether as leaders in organizations or acting in their professional capacity as individual accountants in organizations therefore cannot just stand aside and pretend that they are mere observers. They must take accountability for their behavior as leaders and leaders of organizations. The question that follows is how these accountants can and should actualize their leadership role in being responsible leaders towards creating a credible profession.

This article examines the issue of leadership for accountants in business. In order to prepare for the future, we go backward in origin into the past to learn of the business philosophy that has shaped today's business; the meaning of leadership and the vocation of accountancy. The differentiating factor in this work is that we revisit the advances in science to understand the current worldview of reality and to establish whether the fundamentals of accounting based on the classical mechanistic Newtonian-Cartesian science is appropriate in today's business landscape. Justification for a shift in the mindset of accountants as leaders to adopt the axioms of quantum physics founded upon the interconnectedness model of the universe is provided. Based on the assessment of the current governance structure, the way forward for accountants to actualize meaningful leadership is proposed.

## **The Philosophy of Business**

The 17<sup>th</sup> and 18<sup>th</sup> Century saw the creation of the intellectual foundation upon which modern business and capitalism was built. Of primacy was the notion of free-will within business practice and economic theory which later formed the basis of entrepreneurship and consumer behavior. Entrepreneurs and consumers alike were looked at as free agents who were free to choose risky business in the hope for reward and to choose what to purchase, respectively. The underlying assumption of rationality prevailed where people were assumed to behave in a rational manner.

Given that modern business practice and theory were developed during the era of classical scientific discoveries where many of the physical sciences' basic tenets were replicated as the underlying axioms for human and social sciences, the philosophy of business was equally largely classical science-based. Where matter was seen as made up of atoms, businesses were viewed as a collection of mechanistic autonomous, independent clockwork parts with human as machines detached of spiritual attachment, emotion and values. The business community and society appeared as aggregation of the sum of individual separate entities rather than organic collective of individuals who interconnect. Silo fragmented thinking and linearity approach among managers and leaders in solving problems became dominant. Since epistemology was restricted to observed knowledge and devoid of revealed knowledge, the method on knowing was limited to the devices of the sense perception with intellection less relied upon, while the contemplation of heart, hardly listened to.

This atomistic mind set has led to the advocating of the reductionist approach to solving social, management and business phenomena. Briefly, reductionism posits that a phenomenon can be reduced to the individual parts so that the behavior of the whole can be learned by reconstituting the parts. The idea with reductionism was based on Newton's view of the material reality of the universe where its operation could be understood by taking matter apart and studying its bits and pieces (Salleh and Ahmad, 2008).

Other primary canons of the classical Newtonian-Cartesian traditions like locality, determinism, causality, value-free and objectivity too, became the pillars of management theories and the philosophy of business. In essence, the principle of locality states that distant objects cannot have direct influence on one another, that is, an object is influenced directly only by its immediate surroundings. Subscribing to the notion of determinism, where every future event is

necessitated by present and past events, classical scientists believed that knowledge of the universe parts and their interaction could allow science to predict and control nature. Causality denotes a necessary relationship between one event (cause) and another event (effect) which is the direct consequence (result) of the first. Science was assumed value-free to fit into the objectivity rationale in order to remove observer biasness and prejudices.

From the perspective of the purpose of business, shareholders' interest as captured in the doctrine of privity of contract formed the focus of business practices for centuries. Maximization of profit through various strategies such as meeting customers' satisfaction became a sought after goal. But more recently, the actualization of social contract by business entities was insisted by society so that corporate social responsibility and business ethics are new buzz words. With the demand by society for ethical conduct, the business landscape over the last two decades has seen the imposition of more stringent rules governing the behavior of business entities including accountants in business organizations through corporate governance.

But do accountants really need to be governed by such rule-based and parameter driven structure when accountants in their true meaning are holders of public trust? We do not think so. The fundamental point we wish to stress is that accountants are in essence ethical professionals by virtue of being professional accountants. Regardless of their practicing accountancy in the capacity of accountant leaders or business and organizational leaders, accountants have pledged to undertake ethical behavior unconditionally prior to going into practice. Two issues thus warrant investigation here: i) why do accountants subscribe to an external "control" mechanism of legislation? and ii) what would be a more influential approach to motivate and sustain accountants to self-actualize ethical and meaningful leadership? To find answers to the questions, we next examine the subject of the leadership of professional accountants in business.

### **Leadership and Professional Accountants in Business**

With the backings of archaeological findings, historians now accept that accountancy's infancy dates back to the time of human agriculture and civilization during the Sumerian and Egyptian Old Kingdom. Method to record accurate measurements for agriculture produce was formalized by 2000 BC. Christian and Muslim empires further provided evidence of accounting practices. Later proof of more intensive application of accounting methodology was seen during Medieval Italy when merchants began to record business transactions. Despite the uncertainty of the

source of double-entry practice, historians agree that the technique originated in the Genoa-Venice-Florence triangle in the years from 1200 to 1350 (Mills, 1994). However, it was not until 1494 when Pacioli's manuscript was published that the foundation of today's accountancy took formal shape. "So overwhelming is Pacioli's book that he is celebrated as the "father" of modern accounting, and the conventional wisdom is such that accounting as a profession is typically dated from 1494" (Mills, 1994: 81).

Based on the above discussion, it can be deduced that accountancy is very much business interrelated. From its inception, accountancy has been a profound feature of business. Business decision-making processes are largely dependent upon the financial information prepared by accountants. As such, the integrity of accountants in performing their role cannot be compromised. Where accountants are leaders of businesses and other organizations, their role is extended to be the key decision-making player. Acting in the capacity of leaders, these accountants too have to actualize their roles with the highest level of integrity. We thus see that in any case, accountants *are* the custodian of public trust. Financial reports must be reliable and accountants need to be wary that their conduct impacts the world at large. Accountants must not only internalize their stewardship function but more importantly actualize it. Hence, it is imperative that the etymology of stewardship is understood.

Stewardship, from the original word 'steward' is derived from the Latin *senescallus* meaning 'the lord's officer whose duties included presiding at the sittings of the manor court'. In old English, 'steward' is derived from *stigweard* that is, *stig* for 'house or part of a house' and *weard* for 'keeper'. "A steward is thus an official who controls the domestic affairs of a household, supervising the service of his master's table, directing the domestics, and regulating household expenditure" (The Compact Oxford English Dictionary, 1989: 1901). While modern day stewardship connotes taking care of the property, meals and safety of others, stewardship in a theological perspective refers to the responsibility in maintaining and using wisely the gifts that God has bestowed. Regardless of whether a steward's role is to other human being or to God, stewardship signifies accountability, trust and leadership all at once. The interconnectedness or oneness of the accountants and the global business world means that accountants bear great responsibility in ensuring the well-being of the business community. And by virtue that businesses too affect the man in the street, accountants thus have responsibility to society at large. Therefore, accountants not only need to translate their stewardship role into a conduct that demonstrates values, ethics and moral obligations but in the first place, must themselves *be*

ethical, of good values and high moral. This is because the source of an action in an individual is the “being” or ontology of that individual. For accountants, it is about the identity of the individual accountant as leader. Accountants, as leaders, cannot assume a position separate from the organization nor from the community and the planet and its people. As asserted by Wheatley (1999), “No one can hope to lead an organization by standing outside or ignoring the web of relationships through which all work is accomplished.”

Following on from the preceding argument, accountants as leaders and leaders of businesses and organizations should have within them, leadership traits. Given that today, businesses have taken over the role of the government in effecting the well-being of society, it gives more reason for accountants to accept their leadership role as that which transcends the self. But what are the traits of a leader and to whom should a leader be responsible? To answer this question, we revisit Plato’s work on leadership. Plato examined the issue of leadership in the context of sailing a ship. He stated that neither physical strength nor popularity with the sailors would keep a ship afloat. The true captain who is in control of the ship must consider the seasons of the year, the time of the day, the sky, the stars and the winds, and all the other subjects appropriate to his profession (Plato, 360 BC). Hence, a leader from Plato’s viewpoint is the one who knows. Leadership need not be hereditary since one is not born knowledgeable. Knowledge according to Plato’s teaching is knowledge of an idea rather than just the technical. In light of today’s misdeeds by accountants, the extension of the domain of knowledge transcending the technical is most apt. Accountants must not only be knowledgeable individuals from the technical sense, but more importantly must be knowledgeable of the idea of being a leader. It is the knowledge of the idea of leadership and its role that can distinguish the leader accountants from those who are not. And fundamental to the idea of leadership is integrity.

The word ‘integrity’ derived from the Latin *integritas* means ‘integer’ or whole or complete as in one. Again, we see the philosophy of interconnectedness or oneness being elemental in the concept of integrity. The interconnectedness, wholeness or oneness concept is also of primacy in non-linear systems thinking where it the relationship between the parts that is emphasized instead of the objects per se. But as underscored in earlier sections, this oneness phenomenon contradicts the physical laws of the Western-based Newtonian-Cartesian science which has assumed a fragmented universe of separate parts and from which the business including accountancy model has been shaped. Classical science axioms too, form the base from which

many management and entrepreneurship frameworks have been developed. And more importantly, leadership thoughts have also been sculpted along the same principles where leaders' role was confined to the self. Therefore, we strongly believe that in order to form an understanding of what true leadership is about, we cannot, but highlight what the true model of reality is, based on science. Through appreciating the advances in science, the non-applicability of the dogmas of classical science to today's business context can be learned and respected by accountants and other human and social scientists alike.

### **The New Sciences - Worldview of Reality and Implications**

The 20<sup>th</sup> century marked a revolution in scientific thought with the discovery of quantum physics, that is, a branch of physics which concerns itself with the study of the subatomic realm. What started as anomalies that could not be explained by classical physics such as the non-happening of ultra-violet catastrophe in black body radiation phenomenon as predicted by the classical Raleigh-Jeans laws became instrumental in opening the door to a new horizon of scientific advancement. Einstein's contention of the constancy of the speed of light was another compelling axiom totally inconceivable, under classical physics laws where it was space and time that were deemed absolute. Given that in science, experimentation is the final arbiter, new quantum theories that were experimentally verified charted the way forward. With quantum physics too, the worldview of objective reality and other assumptions of classical science were proven inadequate. The birth of quantum physics not only had allowed the understanding of many world phenomena, physical and meta-physical, cosmic and sub-atomic, but also led to the post-modern scientific revolution beyond the imagination of earlier minds.

According to Gough and Shacklett (1994), the most distinctive feature that distinguishes quantum physics from earlier classical physics is the principle of non-locality. Contrary to the locality axiom, with non-locality, distant objects can have direct influence on one another. This means that an instantaneous influence or communication can be brought about without any exchange of signals through space-time. The underlying foundation in quantum physics is unbroken wholeness or non-separability that transcends space-time unlike classical science that views parts of a whole as separate individual entities.

The new science of quantum physics also challenged the then-popular belief that light is a wave phenomenon by suggesting that light exists in discrete packets or quantum. In order to support

the latter, light should behave as particles. The double slit experiment confirms the duality of the property of light both as wave and particle. Goswami (1995) explained that whenever we measure a quantum object, it appears at some single place as a particle. The probability distribution simply identifies that place where it is likely to be found when we do measure it. However, when we do not measure it, the quantum object spreads and exists in more than one place at the same time, in a way that a wave or cloud does. This implies that the mere act of observing a quantum particle will “disturb” it. The observer cannot be separated from the observed. Based on this property, Heisenberg concluded that “what we see is not nature but nature exposed to our method of questioning”. The uncertainty factor with respect to the fundamental particles of matter led to the acceptance of science which is subjective, contextual, value-laden and non-deterministic rather than objective, non-contextual or value-free and deterministic. The causality principle is also strongly challenged. While classical science prides itself with the ability to predict based on past and present events, the notion is abandoned with quantum physics. With non-locality and context-dependent behavior of atoms, any future event cannot be predicted with certainty or is controllable.

From the explanation of the progress from the classical to quantum science, we see a paradigm shift in the worldview of science and reality. We acknowledge that since the times of Descartes, Galileo and Newton, the dominant worldview of Western science has been that the universe is like a huge physical (material) machine working on a clockwork mechanism with the human in it also viewed as machine. The locality and causal-effect principles further discounted the need to accept the presence of non-matter element including consciousness. But the successful demonstration of the ‘quantum entanglement’ property of subatomic structure proves a major limitation with the locality principle. The unearthing of quantum entanglement shows that the universe is an inseparable whole or web consisting of interconnected parts that are related intrinsically by unknown factors; and that the whole is greater than the sum of the component objects. This basically describes the oneness of the universe. It is the oneness property too that becomes the basis for chaos and complexity theory. What then are the implications of the paradigm shift in science on the leadership role of accountants?

### **Our Diagnosis**

On the basis of the progress in science, it is now an established fact that the mechanical worldview of nature upon which the current model of business is built has been debunked. It has been subsumed by the new sciences of quantum physics, chaos and complexity theory

(Ahmad and Salleh, 2008). Quantum physics is not an alternative but the science of the day. Yet accountants, like many other social scientists are still very classical science-based in both mindset and manifestation. We continue to observe to this very day how fixated accountants are with the objectivity postulate and quantitative measures. Accountants continue to manifest belief of the potency of the command-control leadership and the rationality of human behavior. Conventional management and economic theories founded upon classical science thinking of the West were accepted unquestioningly. To Capra, the tendency to model scientific concepts in the current era after those of Newtonian physics has become a severe handicap in the social sciences. The Cartesian framework is often inappropriate and has become increasingly unrealistic especially in economics (Capra, 1988).

Although calls are continually made for accountants to transform in order to be relevant to the global business environment, leadership issue in accountancy has yet to query the underlying worldview of reality upon which the philosophy of accounting is shaped. The tendency has been to accept in totality a prescribed set of assumptions as a given. All these, to us, are the root cause of the problem of why accountants succumb to the existing belief of human being “controllable” and that the only way of governance is through more extensive legislations. It appears somewhat that accountants fail to accept the logical notion that if a model is founded upon the wrong mould with assumptions that defy nature, eventually the theory will wilt over time. The very purpose of modeling is to create a representation of reality. Hence, if the model does not uphold the properties of the real world, the applicability of the model should be questioned.

But, where is the end state that accountants wish to reach? Will accountants continue to be oblivious to the transformation of the mindset that has occurred within the scientific domain or would accountants instead wish to behave like quantum physicists? Despite the deep-rooted materialism, objectivity and atomistic dogmas being synonymous with the thinking of science for three centuries, physical scientists were willing to abandon them in favor of a more realistic and complete representation of the universe. Even the medical profession is witnessing many transformational acts among its practitioners to reflect the reality of the world as found by quantum physics. In this regard, would accountants want to reduce themselves to be mere spectators only? Wouldn't accountants want to take the lead among social scientists to reframe the underlying building blocks of a new worldview that depicts reality as it is, and not as what it was thought to be since the 17<sup>th</sup> century? After all, accountants, by their very profession *are*

leaders in business. And business leaders should be *knowledgeable* enough to know when a product's useful life has expired. It appears incorrigible for accountants to continue to uphold to the causal-effect, command-control blueprint when even the behavior of inanimate object has been shown not to follow a distinct pattern following quantum physics. The tight grip on the maxim of objectivity as the cornerstone of accounting theory and practice needs re-assessing. The response to these issues will be instrumental not only in influencing the type of leader and leadership role that accountants will play from now on but also in finding a meaningful approach that could motivate and sustain accountants to self-actualize ethical behavior.

### **The Need for a Paradigm Shift in Mindset for Accountants**

Central to our argument for a paradigm shift for accountants is the substantiveness of the implications of the oneness of the universe and its non-matter aspect. Evidence from new sciences shows that ordinary physical and observable matter makes up less than 5% of the universe. Dark matter which is non-observable and mysterious dark energy makes up the rest (Salleh and Ahmad, 2008). The inference from this discovery is phenomenal. While social scientists, accountants alike, continuously attempt to make meaning of human behavior through limiting their conceptual models to observable, empirically tested and measurable constructs or variables only in order to remove subjective biasness, the reality is that the subjectivity of the universe is about 95%! How reliable is a model which could account for only some percentage within 5% of a phenomenon since not all that counts can be measured!

Accountancy is about leadership and ethical professionals with values. Human values, consciousness and human to ancient philosophers were the heart to societal well-being hence, held sacred. Yet, human was degraded to machine under the Newtonian-Cartesian regime. This mechanistic model dismissed any non-material aspect of human. Consciousness too was removed from science. If accountants wish to bring back values, it is imperative that human takes centre-stage in the accountancy domain. Ironically, the business model of the world brings to primacy the corporation by giving it legal personality. Many unintended consequences ensued, including attempts to govern the corporations externally with legislations for lacking *human* values through corporate governance. When this governance structure fails, accountants, rather than refocusing on the human needs within the corporations, continued to devise more stringent 'control' stratagems on to the non-natural but legal person. Upholding to the classical science fundamentals without human and humanness traits, accountants would not be able to bring back human values into their ambit. They must shift their fundamental belief

and value system to the new sciences'. According to Stapp (2007), what we value depends on what we believe, and what we believe is strongly influenced by science. Quantum physics rescinds the materialistic/mechanistic conception of human beings. Since quantum physics can bring back and explain the concept of consciousness (Stapp, 1995), quantum physics thus is the door to reinstate values and credibility to the accounting profession.

We thus posit that the first step needed is for the accountancy profession to actualize a paradigm shift in their mindset. Like the engineering profession with the maxim of "go back to first principles", accountants too should go back into origin and question the applicability of the underlying philosophy crafted upon incomplete picture of the universe. Accepting quantum physics is the first prerequisite. Next, human needs a redefinition moving from the physical, machine concept to one where the psychological non-material soul is the core and embodied in the physical. It is the former that makes human, human.

### **Our Proposed Model for Leadership and Governance**

The oneness of the universe is manifested in the presence of paradoxes and dyadic state of affairs. These paradoxes rather than needing an "either-or" decision, presents a continuum state of situation. Balancing of the paradoxes usually results in a series of dilemmas and requires taking the right action that is applicable to the whole (universe) not just a part of the whole. In accounting leadership context, this will involve being responsible to all three strands at once: the self, as individual accountant; the corporation, as leaders of organizations; and the planet and its people.

Leaders must create a sense of identity and integrity with those whom they lead. Leaders should value their position and must remain connected to those below them genuinely without aspiring for the trappings of aggrandizement, honor and prestige. "Leadership is authentic self-expression or influence that really creates value... It's about full awareness of self and full awareness of others" (Cashman, 2001: 20). "The hallmark of a community of truth is in its claim that reality is a web of communal relationships, and we can know reality only by being in community with it" (Palmer, 1998: 97). In order for leaders to actualize oneness in leadership, they must first internalize the complete interconnectedness and interdependence between them and those being led just like of all things in the universe. "Everything we have to say ... starts with understanding the nature of wholes, and how parts and wholes are interrelated" (Senge et al., 2005: 5). It is the unseen connections that are the essence of creativity (Knowles, 2001).

Leaders need to create an “edge of chaos” in order to drive innovation. Leaders cannot straightjacket their mind to be bound by the decisions on precedent. Prefabricated responses lack insight and run the risk of being inappropriate for the situation at hand. Leaders need to have the capacity to change, learn and adapt – to create complex adaptive systems through self-organization; to weave relationships; to transform akin to the morphing of the caterpillar to chrysalis to the butterfly. To us, leaders should not subscribe to a particular path but instead leave a trail where no path has been created. Hence, a holistic but humanistic approach to managing risks and solving problems is needed.

Towards achieving this end, accountants need to move away from only quantitative-based constructs dependent to include too, the qualitative. Numbers alone do not ensure honesty for quality cannot be expressed meaningfully as quantity, without loss of essential datum. Founded upon Western traditions which give privilege status to left-brain activities (Ornstein, 1997), classical science tend to have a predilection for standard operating procedures (SOPs) and is exoteric. In contrast, quantum physics brings consciousness and conscience through the right brain into the fore. This parallels the ancient Eastern right brain-based traditions, steep in spirituality and esoteric. While the left brain is linear, sequential, abstract and analytical, the right is the reservoir of imagination, originality, intuition, insights and inspirations (OECD, 2007). According to Sahtouris (2002), the Western culture uses and transforms nature to achieve human ends which is control whereas others live with nature harmoniously, recognizing human’s utter dependence on it. “A white man isolates a piece of nature and takes it into the laboratory to study it because he wants to control it. The red man goes into nature ... to integrate with it” (ibid: 3-4). A more holistic approach for accountants is therefore, to balance the use of both sides of the brains unlike currently which is heavily left-brain skewed. Accountants must balance the need for the analytical with the synthesis, the imitative with imaginative, the material with the spiritual, and the objective with the subjective. They need to temper their intelligence with the generosity of the spirit and liberalness of imagination for leadership is about influencing NOT control. But first, accountants as leaders and professionals must have the bravery, self-belief and faith to loosen their grip on old mindset. “Trace the word professional back to its origins and ... it refers to someone who makes a “profession of faith” in a disheartening world” (Palmer, 1998: 212).

In managing the paradoxes of the interconnected universe, accountants, as leaders and leaders of organizations, need to be governed by some form of governance framework. Since

leadership is about human, we propose an adherence to a governance structure that is human-centric and shaped upon trust in order to effectuate values-based human behavior. Therefore, we call upon accountants to embrace human governance as the core governance structure complemented with corporate governance. While corporate governance is manifested as an external, outside-in rules and regulations to legislate the corporations, human governance is an inside-out, principle- and values-based conviction to guide the human (Ahmad and Salleh, 2008).

We believe that the journey needs to start with the need to know the self through upholding an inner-out thinking perspective. Accountants need to acknowledge that the credibility of the profession can only be brought about by steward leaders who actualize leadership typified with high values, ethics and moral conduct, all internally-induced from the heart. But for change to occur there must be a change in meaning. And in order for accountant leaders to carry and live the meaning of stewardship as they are meant to, accountants need to shift back to a higher order mode of thinking, moving beyond “transactional” and “transformational” to the “transcendental” leadership. Leaders need to move from the lower Mercator projection to the globe, from map to terrain; and from an artist’s canvas to his or her inner vision, in other words, from the world of symbols to the world of meaning. And it is human governance, essentially, innate governance which emphasizes the spirit of the law that can reinstate human well-being.

## **Conclusion**

To surmise, we say that the premise upon which accountancy theory and practice is shaped no longer is appropriate to address the challenges of the 21<sup>st</sup> century business landscape. It is the belief system founded upon centuries-old mechanistic debunked model of reality based on classical science that led accountants to perceive the supremacy of an external “control” mechanism as a means to ensure ethical behavior. A more influential approach to motivate and sustain self-actualization of meaningful leadership is one that is inside-out, human-centric, principle-based and innate to human nature. But this cannot be realized unless accountants accept the unbroken wholeness epitome of the new sciences of quantum physics, chaos and complexity theory. A problem, according to Einstein, cannot be solved at the same level of consciousness that created it. Therefore a transformation of the mindset is profoundly necessary. Today’s business run on yesterday’s model risks its presence tomorrow.

## References

- Ahmad, A. and Salleh, A. (2008). *Soulful stewardship: Steering corporations through human governance*. Kuala Lumpur: The Malaysian Institute of Accountants
- Capra, F. (1988). *The turning point: Science, society, and the rising culture*. New York: Simon Schuster / Bantam
- Cashman, K. (2001). *Leadership from the inside out*. Provo: Executive Excellence Publishing
- Goswami, A., Reed, R.E. and Goswami, M. (1995). *The self-awareness universe: How consciousness creates the material world*. New York: Most Tarcher / Putnam
- Gough, W.C. and Shacklett, R.L. (1994). The science of connectiveness. *Foundation For Mind Being Research (FBMR)*. Retrieved 5 April, 2008, from <http://www.fibr.org/papers/sc2.php>
- Knowles, R. (2001) In Heurman, T. (2001). The new leaders: Humble warriors. *An interview with Richard Knowles*. Retrieved 11 December, 2008, from <http://www.selfhelpmagazine.com/articles/wf/newleaders3.html>
- IFAC (2005). *The roles and domain of the professional accountant in business*. New York: Professional Accountants in Business Committee, International Federation of Accountants
- Mills, G.T. (1994). Early accounting in Northern Italy: The role of research development and the printing press in the expansion of double-entry from Genoa, Florence and Venice. *The Accounting Historians Journal*, June 21 (1): 81-96
- Nadeau, R. and Kafatos, M. (1996). *The non-local universe: The new physics and matters of the mind*. Oxford: Oxford University Press

- OECD (2007). *Understanding the brain: The birth of a learning science*. Centre for Educational Research and Innovation, OECD
- Ornstein, R. (1997). *The right mind: Making sense of the hemispheres*. Orlando: Harcourt Brace & Company
- Palmer, P. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco: Jossey-Bass
- Plato (360, B.C.E). *The Republic*. Translation by Jowett, B. Retrieved 10 December, 2008, from <http://classics.mit.edu/Plato/republic.html>
- Sahtouris, (2002). In London, S. (2002) An interview with Elisabet Sahtouris. *Deeplanet Magazine*. Retrieved 29 November, 2008, from <http://www.deeplanet.com/magazine/printarticle.asp?ArticleID=35>
- Salleh, A. and Ahmad, A. (2008). *Human Governance: a paradigm shift in governing corporations*. Kuala Lumpur: MPH Group Publishing (M) Sdn Bhd
- Senge, P., Scharmer, C.O., Jaworski, J. and Flowers, B.S. (2005). *Presence*. London: Nicholas Brealey
- Stapp, H.P. (1995). Why classical mechanics cannot naturally accommodate consciousness but quantum mechanics can. *PSYCHE*, 2 (5) (May)
- Stapp, H. P. (2007). *Mindful universe: Quantum mechanics and the participatory observer*. Berlin: Springer
- The Compact Oxford English Dictionary* (1989). Second edition. London: BCA
- Wheatley, M. J. (2006). *Leadership and the New Science*. San Francisco: Barrett-Koehler Publishers, Inc.

