

TOWARDS A SYSTEMS BASED SPIRITUAL PHILOSOPHY FOR THE 21ST CENTURY

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ABSTRACT

In the Western World over the last 300 years or so, spirituality has become a casualty in the development of human knowledge. Traditional Christian religion has tended to become rigid in its formulation, maintaining a worldview that sees the earth as the centre of the universe and 'man' as God's special creation given dominion over the earth and everything in it. Reductionist science has taken us to the opposite extreme, seeing the world as a mere rock in an obscure and unimportant part of the cosmos brought into being by sheer random events. Both traditional religion and reductionist science separate us from the world we live in and see the earth and everything in it as available for our use as we please.

These views have led to immense levels of pain and destruction at all levels of being. We need a new vision that returns our dignity as human beings so we can truly play our role as integral parts of a bountiful planet and a meaningful universe.

There are many other spiritual visions that have been with us for thousands of years that retain our links to the environment and have much to offer us and may help us regain our balance. We can incorporate aspects of these forms of ancient wisdom into our vision for this new century.

Systems Theory introduces a new way of looking at the world where we recognise that the old ways of separating ourselves from our world will no longer work. We must accept our place in nature and acknowledge and work with the complexity that is inherent at all levels of our existence.

The new science of Systems Theory may help provide a framework for such a worldview and guide us as we co-create a spiritual vision to lead us into the extremely challenging 21st century. A systems view embeds us firmly within nature and places a responsibility on us to work appropriately with each other and with our natural environment. It gives us a place of dignity in our world. A systems based approach recognises the place of chaos in our lives and gives us the hope of emergent possibilities of what we can become. This paper explores these ideas and develops some principles that may help see how Systems Theory might play its role in redefining ourselves for the coming years.

Keywords: spirituality, philosophy, worldview, chaos, emergence, complexity

INTRODUCTION

"The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew and act anew." Abraham Lincoln

Systems Theory approaches have the potential to significantly change the way we see our world and how we operate within it. Coming from the scientific domain, most work in Systems Theory has been to provide solutions to practical problems in the real, material world. Because of the wide interdisciplinary scope of systems based approaches, they also have the potential to offer new perspectives in areas not usually considered to be in the domain of a scientific theory.

One such area is spirituality. Previous linear based spiritual philosophies, which have guided millions of people for hundreds of years, are rapidly losing meaning to large areas of society. We need to explore the possibilities of a new spiritual philosophy to assist people to make sense of an increasingly chaotic and complex world.

Given the many challenges facing us in the early part of this century that could have catastrophic effects on a global level, it is extremely important that we develop a spiritual ethos, which can act as a guiding life principle appropriate to the world we live in. Without an underlying philosophy making sense of our world and providing a basis for action, we will continue on our path of destruction.

This new understanding needs to become so much a part of people's new vision that it becomes taken for granted, and thus unremarkable. This paper explores the role systems based approaches might help provide such a worldview.

EXISTING WORLDVIEWS

We human beings are sense making creatures. We interact with our environment using the tools we have available within our physical, emotional, mental and spiritual being and find patterns. We use our cognitive abilities to communicate a shared understanding of those patterns which constellate as emergent cultural forms. We make these forms real in our minds to give us a sense of our world and enable us to function effectively in a complex environment (Gunderson and Holling, 2002). As our world changes, so must our worldview, so that our sense making structures remain sufficiently aligned to enable our continued effective functioning. Over time therefore, many different world views have emerged to adapt to our changing world.

Systems respond based on past information that is 'remembered' in order to generate a response for the present to take them into the future. Since it takes time for a system to formulate that memory and translate it into action, there is always a lag so the system is always responding to the world as it was in the past. When there is a significant lag in the system, anxiety will be generated as the bio-psycho-social apparatus (Beck and Cowan, 1999) struggles to readjust its sense making faculties to a new structure.

We in the Western world in particular are in such a time of change. Old worldviews are proving to be inadequate to meet the needs of a rapidly changing, complex global human system. While there are alternative worldviews emerging, there is still much room for the development of new philosophies that will enable us to regain our sense of meaning in our lives.

Two great world views from our past that have been extremely powerful and effective in the past are those of traditional religion and reductionist science. Christianity was a major force in unifying the Roman Empire and western civilisation may well have collapsed during the

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Middle Ages without the infrastructure and social cohesion engendered by Christian beliefs. In those times people were generally willing to have their beliefs prescribed by the Church.

Christianity placed man at the centre of the universe as the special creation of an all powerful male God, separating us from God. 'Man' on earth was considered to be at the centre of the universe. He was given dominion over the natural environment and even over women. Evil and sin was seen as resulting from mankind choosing its own path away from God. God was someone who had to be obeyed and not obeying God would result in divine retribution.

After the Reformation and the Enlightenment, the traditional Christian worldview was supplanted by the reductionist scientific worldview. Martin Luther claimed that mankind did not need a Pope to have a relationship with God and others then questioned the need for a God. Mankind now took centre stage since the reductionist scientific world view has no God. The focus shifted to controlling nature.

Rather than existing at the centre of the universe, we are banished to a remote corner of the universe, living on a world formed through randomness and chance. Evil is seen as either caused by our own actions or by random chance. The focus in life shifted from the spiritual world to the material world. Business, commerce and the accumulation of wealth became more important.

Over time we have become less willing to adopt a set of beliefs simply because they were set down by a particular authority. The individual has become more important and people feel the need to make up their own minds about what they will believe in. The worldviews of traditional religion and reductionist science began to lose traction as people increasingly sought out a new vision to help them make sense of the world they were living in.

Both traditional religions and science have the ability to restructure themselves so the worldview they present is still relevant to people today. Many different Christian denominations and sects have developed over time and the traditional churches have made changes to adapt to modern life, but there remains a gap for so many people today.

Similarly, science continues to develop the reductionist vision. While it has offered us so much in present day life, particularly with an enormous array of technological advances, so many people are still left feeling unfulfilled in their lives.

Indeed, systems science is a part of mainstream science, but still exists on the fringe and certainly is not well known or understood among the general populace. The average person in the street still understands the scientific world through a linear, Newtonian paradigm. While many people may have a basic understanding of more recent areas of science such as relativity or quantum mechanics, the worldview is generally still firmly rooted within Newtonian thinking.

The reductionist scientific worldview, intimately interwoven with the capitalist free market paradigm has accentuated the importance of power and control and the accumulation of material goods to meet our needs. While we certainly do have those needs, other equally, and arguably more important, aspects of life have been glossed over. This has left Western civilisation in an impoverished state compared to the wholeness to which we can attain if we view life from a wider perspective.

The green movement and New Age philosophies have forged new ways of seeing the world that have made sense for many people, but both of these tend to have developed as a

reaction firstly against religion and authority structures, and secondly against science and commerce. While such beliefs present a radically new way of seeing the world, they are limited by the level of rejection what has been of value from the past.

There are many indigenous cultures with spiritual beliefs that have much to offer the modern seeker of a spiritual pathway. In particular, indigenous spiritual beliefs share a common understanding of humanity's role within the natural environment and close links with the past that is often lacking in more sophisticated cultures.

There are also ancient beliefs such as the perennial philosophy, which offer a vision of a co-created reality emerging from a wider reality beyond time and space. Indigenous beliefs and beliefs such as the perennial philosophy already have some similarity with the concepts of Systems Theory, stressing the importance of interdependence and connectivity.

Ralph Abraham (Abraham, 1994) in his book *Chaos, Gaia, Eros* shows the links to chaos as a Palaeolithic mother goddess without any of the negative connotations we have of chaos today. She was linked to creativity and was revered for thousands of years before the male dominated patriarchal religions came onto prominence. Their emphasis shifted to one of the domination and control of chaos, so chaos is often depicted as an evil serpent to be destroyed by a male god. Abraham looks forward to the time when chaos will be revered again in her true light.

QUALITIES REQUIRED FOR A NEW PHILOSOPHY

Any new spiritual philosophy would need to meet the needs of people living in today's world. People today are far more individual and need to be able to make up their own mind. They need a worldview that recognises the complexity of 21st century life. The right to challenge and disagree with ideas and beliefs is generally expected. Prescribed belief systems will not endure in today's social climate.

There is no Esperanto-like, single set of beliefs that everyone will feel comfortable accepting as might have been the case with Christian beliefs in the Middle Ages. There will, of course, be many millions of adherents to particular sets of beliefs, who would vehemently disagree with this statement, but trends show support for traditional religions is rapidly waning (ReligiousTolerance.org, 2009). There is also a growing number of people described as culture creatives by Paul Ray (Ray 2000), who are seeking new ways of making sense of the world. What is needed is some form of general framework or set of principles whereby individuals can retain their existing beliefs but see them in a wider context.

The relationship with nature is very important, so any new belief system and it needs to be developed in a way that is respectful of nature and works in harmony with natural systems. The old ways of dominating and controlling nature need to give way to a co-creative partnership that recognises the importance of living in ways that do not harm nature and ourselves. Ecological concerns and issues such as climate change, recycling, and pollution will need to be adequately addressed.

The belief in the equality of all humans must be seen to be in practice. Groups such as indigenous races, women, the disabled and the elderly need to be recognised as having a full role to play in society.

Science is changing the shape of life today and so any philosophy needs to be in harmony with the scientific understanding of our age. A spiritual philosophy that cannot embrace modern scientific concepts will not be acceptable by most people today.

A spiritual philosophy suitable for this age needs to be flexible enough to cope with the wide diversity of beliefs and value systems. On the other hand it also needs to retain enough of the sacredness from the past, so the positive aspects of our spiritual development over the millennia are not lost. As the old mythologies continue to lose traction, a new philosophy needs to emerge to inform a new mythology as a guiding principle.

A CONTINUUM OF PERSPECTIVES

Systems Theory in itself does not lend itself to any particular interpretation or world view. This makes it suitable as an overarching framework without restricting people to any particular set of beliefs. Post-modernists look at the way the agents within a complex system are interdependent and see a link to their emphasis on relativity and the lack of any absolute reality. Libertarians look at the way self organisation can emerge from a chaotic system and make links to their beliefs that the market should be left to control itself without external interference from a government or similar such organisation.

We can construct a continuum of spiritual perspectives that link to systems based approaches. At one end we have people such as Stuart Kauffman, who presented his sacred vision in his book, *Reinventing the Sacred*. His vision is totally based in our universe of matter and energy. He does not see the need for any reality beyond that which we can see and measure, but within that and through the dynamics of complex systems, he observes a sense of sacredness that can form a cohesive perspective on reality.

At the other end we have people such as Ervin Laszlo with an overt belief in a spiritual reality originating beyond time and space and infusing our world of matter and energy and providing the driving power for the dynamics of emergence.

Stuart Kauffman

Stuart Kauffman presents his vision of sacredness in his book, *Reinventing the Sacred* (Kauffman, 2008). He states that biology can not be reduced to physics. If we apply all the laws of physics and try to use that as a basis to understand biology, we will be left with a gap and that gap is what happens through emergence. There is a “magical” something other that is added to inorganic systems in order for them to have life. Similarly, we can not understand consciousness through the reductionist understanding of biology. Consciousness is something more. This makes the mind “a meaning and doing organic system”.

Kauffman also suggest that the operation of the mind might be found within quantum mechanics and that somewhere in the balance between coherence and de-coherence might be a dynamic balance point, somewhat like the edge of chaos as a dynamic balance, that enables the emergence of consciousness that can seek meaning.

Kauffman encourages us to “break the Galilean spell”, or awaken from the reductionist dream and acknowledge that much of religion is mere human creation and then embrace a new dream and find the sacredness in the magic of the world in which we live. This might be finding God in nature or just marvelling in nature itself. Whatever we choose, Kauffman

states clearly that we need a new ethic for the 21st century and ably shows us one of the possible paths for attaining this.

Ervin Laszlo

Ervin Laszlo links complexity into a wider picture, where mesoscopic expressions of complexity are only able to demonstrate emergence because of some of the properties observed at the quantum level. In quantum mechanics, the quantum vacuum is seen as the underlying foundation of all that exists within time and space. Everything we can know and experience within time and space has emerged from the quantum vacuum and will return to it at some point. Laszlo sees the macroscopic realities of black holes and white holes as further expressions of the emergent properties of the quantum vacuum.

Contrary to most scientists, Ervin Laszlo makes the further claim that the quantum vacuum, the foundation of all that is in our universe, is in itself conscious. Our human consciousness then, is a reflection of the universal consciousness and our consciousness can only exist, because there is an underlying consciousness to the whole fabric of the universe.

Laszlo equates the quantum vacuum with the Akashic field of the ancient Hindu beliefs. His vision is a vision of an imminent guiding intelligence existing in all parts of the universe in all times providing the basis parameters for what can come to take form in our world. Laszlo's approach is more overtly spiritual, particularly with its assumption that the quantum vacuum is itself conscious. Time will tell whether his assumption is realistic, but it still opens viable avenues to explore.

Teilhard de Chardin

Teilhard de Chardin, the Catholic priest and palaeontologist, presented a spiritual vision that has much in common with Ervin Laszlo's ideas (Teilhard de Chardin, 2008). He sees creation as having entered time and space at an alpha point. From there a great chain of being unfolds with increasing complexification of levels of consciousness. From the lithosphere emerges the biosphere, and from the biosphere emerges the noosphere (sphere of mind). Consciousness further evolves until it reaches the highest state he called the omega point. We see clear links to Hierarchy Theory in his vision. Teilhard de Chardin calls this whole process of evolving into full consciousness "The Body of Christ", creating a radically different interpretation of a very ancient religious concept.

Teilhard de Chardin's omega point presupposes a final state towards which we are evolving, which would not be predicted from a systems perspective or from the principles of evolution, but would make sense if seen from Ervin Laszlo's perspective of time and space being a projection out of the quantum vacuum. The whole of creation could then be seen as emerging from the quantum vacuum at the alpha point and returning to the quantum vacuum at the omega point.

James Gardner

James Gardner (2003) sees the universe as a Biocosm. He also sees the basic structure of the universe to be intelligent and "life friendly". He sees the entire universe as a self-organising structure. He makes links to Richard Dawkins' *Selfish Gene* and proposes that the universe is a selfish biocosm maintaining its own existence. Through the development of consciousness we are a part of the journey towards reaching what Gardner calls, the *Eschaton*, which is equivalent to Teilhard de Chardin's omega point.

PRINCIPLES OF SYSTEMS THEORY THAT MAY ASSIST IN THE DEVELOPMENT OF A SYSTEMS BASED PHILOSOPHY

There are many empirically determined properties of complex systems that may point to philosophical principles that are useful to this discussion.

Autonomy and Connectivity

For any complex system to operate effectively it must have an effective balance between autonomy and connectivity. When each agent is autonomous, the system builds diversity, which allows the system flexibility to meet situations that might arise (Ashby, 1956). In human systems this means that a wide range of skills and resources becomes available for the whole system to cope with any perturbations that might occur. A system that is too ordered becomes inflexible because the lack of diversity reduces the breadth of responses possible. Connectivity is equally important to an effective system. No amount of diversity is useful, if the individual agents are not effectively communicating and moving resources. There needs to be enough structure connecting the agents to maintain the integrity and coherence of the system. Again, too much connectivity leads to a top heavy bureaucracy where too many resources are dedicated to maintaining the infrastructure.

The balance between autonomy and connectivity is a dynamic balance, so at any time there may be more autonomy than connectivity and vice versa. A Yin-Yang type dance emerges where moving to excess in either autonomy or connectivity will draw the system back into its complement. When a system balances autonomy and connectivity effectively, it is more likely that emergence occurs. This stands in stark contrast to the Newtonian view of the world as a giant, linear machine just obeying its rules.

This balance between autonomy and connectivity reflects a worldview where there is an imperative for members of a group to be granted the freedom to develop their own unique skills and abilities. People are encouraged to be different and over regimentation should be avoided.

Conversely, individual members also need to be prepared to sacrifice some of their autonomy in order to play their part in forming a shared understanding of the group's function and follow the rule set that defines the limits of behaviour and works to maintain the attractors holding the system together. A systems approach, being aware of the need of connectivity, emphasises the human need for community to which we can have a sense of belonging.

Catastrophe and Emergence

Systems Theory recognises that complex systems do sometimes lapse into chaos and can have catastrophic collapses. This ties into the question of where evil originated. Traditional religion tends to state that evil came about because of human disobedience and that we must all suffer because of the original sin committed by Adam and Eve. Reductionist science tends to see some evil as caused by our inability to control our internal compulsions, or from random events that could happen at any time.

Rather than springing from the vengeance of an angry God, chaos and the possibility of catastrophe are not only inherent in complex systems but are vital to the overall functioning of a complex system. Gunderson and Holling (2001) present an adaptive cycle whereby complex systems rotate through a four fold cycle of exploitation, conservation, release and

reorganisation. They propose that systems grow through a phase of exploitation, which cannot be sustained, driving it into conservation and release, where the system breaks down and loses connectivity and effectiveness. It must then self organise to restructure itself to move into the next cycle. Release and loss are therefore a part of nature, which we must accept as a part of life. Without that breakdown, the new structure cannot emerge. The older generation must give way to the new generation. The new generation must always be brought up to learn the skills needed to lead the system into the new cycle.

Chaos also gives us a sense of unpredictability, which generates anxiety. Stacey (1996) talks about anxiety containment as our ability to contain the anxiety we feel, so it does not become a hindrance to coping with situations we encounter. It is though we had a container within us with new anxiety dripping in at the top and old anxiety with which we can now cope dripping out the bottom. If the changes in the levels of the liquid in the container do not reach the top, all is well, but if the container overflows, we tend to fall into maladaptive strategies, such as addictions. Whatever we can do to increase the size of our container, will therefore make us more effective at playing our role within our society. We will then hopefully avoid fall into maladaptive strategies that can be so destructive personally and on those about us. A part of increasing the size of our container is accepting and coming to feel comfortable with the fact that unpredictability is a natural, inherent force in our lives. Indeed, if there is no stress, we also wither away.

Emergence, on the other hand, might be related to the concept of Grace. A previously unimagined, positive possibility may occur that feels undeserved. We could also see emergence as bringing a sense of magic into our lives, because that which we had not conceived, has come to be. While we cannot make emergence happen in our lives, we can live in such a way that emergence is more likely to occur. Harking back to autonomy and connectivity, behaving in ways which enhance our autonomy and connectivity and their effective balance makes emergence more likely. Having an open mind and listening to others, being generous, taking time to consider other's needs, being genuine in our work, and following our bliss (Campbell, 1991), are all ways that will assist the likelihood of the process of emergence. Campbell states:

If you follow your bliss, you put yourself on a kind of track that has been there all the while, waiting for you, and the life that you ought to be living is the one you are living. Wherever you are -- if you are following your bliss, you are enjoying that refreshment, that life within you, all the time.

Emergence can lead to a person moving to a whole new level of consciousness, where they understand the underlying realities of life on a deeper level and can be far more effective in what they do. They are more aware of how, in spite of all our best intentions, we all too often generate suffering for ourselves and others. This knowing can hopefully help us avoid many of the pitfalls that someone at a lower level of understanding would be more likely to fall into.

If a person lives their life in ways that do not increase the likelihood of emergence, chaos and catastrophe will play a far larger role in their lives. People whose lives revolve around meeting their egocentric desires irrespective of the effects on others, who display a lack of awareness of their living reality, show a lack of self discipline and live only for the day will tend to invite chaos into their lives and decrease the likelihood of any grace through emergence to guide their development.

There is an interesting balance between catastrophe and emergence. If there was only catastrophe, life would feel without hope, but the ever present possibility of catastrophe may drive us to find ways to avoid such a calamity and move towards emergence.

Autopoiesis

Autopoiesis (Maturana and Varela, 1991) describes “self producing” systems. The structural coupling that ties the structure and function of a complex system dynamically sustains it. The interdependence engendered by the ongoing interactions between the sub-systems that comprise the system enable it to take on a life of its own. As a dissipative structure, an autopoietic system exists within a wider environment, so the resulting dynamics appear more like a dance than a controlling mechanism. For millennia we have tried to cope with our existence by controlling our environment and each other.

Autopoiesis give us a different way of perceiving ourselves. If we see our selves as dancing partners, we still exert control and authority over our environment, but the way we do that is measured and occurs with an awareness of the whole system. Instead of forcing the system to be what we want, we can “trust” the system to operate effectively through self organisation. We are not external observers, or controllers. We must discern our place and play our role.

Defining goodness

Defining goodness is something that appears to be straight forward until we get down to details. Defining goodness in terms of systems thinking is even more fraught, since after thirty or more years systems scientists are really no closer to even defining what is meant by complexity.

Nevertheless, it may be a useful concept to look at defining goodness as that which enhances the likelihood of emergence within a system. All those human attributes we usually define as good: charity, generosity, compassion, diligence and so many more enhance a system and make it more likely that higher level emergent properties emerge. Harm then becomes that which impedes the likelihood of emergence within a system.

There are problems with such a definition, of course, such as the loyalty, single mindedness and strong sense of vision that enable Hitler to take power. Nevertheless, it would seem to be as valid as any other definition of goodness that has been explored through history, right from the time of Aristotle.

Diversity means inequality

The greater the diversity in a system, the more adaptable it is. As diversity increases the range of differences, and thus the inequality between the individual agents must also increase (Shirky, 2003). Particularly since complex systems will often move towards a power law distribution, the inequality between the agents is often large. It is paradoxical that we find inequality to be so abhorrent and rail against the social iniquities of inequality when it is an inherent quality of a well functioning complex system.

Integration

A human being is a complex adaptive system made up of a number of multi-levelled sub systems. As well as the physical levels from the molecular level through to cells, organs and

body system, we also have levels of being on the physical, emotional, mental and spiritual levels.

Beyond the individual, there are nested social dimensions ranging from the family through to the community, nation and planet and evolved levels of social structures as described, for example, by Spiral Dynamics (Beck and Cowan, 1991).

All of these various hierarchies need to be functioning effectively and in balance for a single human being to live a balanced life. Mason Durie (1994) formulated the Tapa Wha model based on Maori cultural values, but it is easily transferable to other cultures. It proposes that a human being comprises of four aspects: the physical, relationships, thoughts and feelings, and spirit. These are interdependent qualities that must be harmonised. Ken Wilber (2007) extended the four aspects out to eight being: body, mind, spirit, shadow, ethics, sex, work, emotions and relationships. Each of these aspects of what it is to be human needs to be valued and developed for anybody to live a harmonious, fulfilling life.

Free will and destiny

If we are to have free will, we must be able to choose from at least two alternatives and the choice must be real. If everything in our world were to be pre-determined then we could not have free will, because whatever we chose would have been already known. Free will can only be meaningful if there is uncertainty in our world. Even if there was uncertainty, but we had complete knowledge, we would hardly have free-will as we would be fully aware of the various outcomes of our possible choices.

Free will only becomes a powerful force when we must choose between alternatives without complete knowledge. Nietzsche said we must, “live as if we knew” (Kauffman, 2008: P235). The wider the range of alternatives, the more free will we have in any situation. Since we need unpredictability, chaos is critical to free will. Unless catastrophe is a real potential outcome, our free will is limited. A system that is too chaotic would reach a point where the system loses coherence and we again lose free will because our choices become more random as the outcome becomes divorced from our choice.

DANCING WITH SYSTEMS

The image of a dance (Meadows, 2008) is a powerful image of our relationship with nature and ourselves. We cannot dance without a partner and our partner cannot dance without us. If we dance in ways that our dancing partner cannot work with, or vice versa, the dance breaks down. We need to change the way we live, because we have forgotten how to dance with nature. We need to learn to dance in such a way that what is liveable is also sustainable. Meadows presented a list of “system wisdoms”, which hold as good principles to use to assist us in our endeavour to live sustainable lives on our planet as well as being good spiritual principles.

- Get the Beat – observe a system before you disturb it.
- Listen to the wisdom of the system – aid the system to “run itself”
- Get your mental models to the open air – invite discussion
- Stay humble, stay a leader – complex systems are always full of surprises
- Honour and protect information – get the right information to understand the system
- Locate responsibility in the system – over centralised or under-centralised systems are inefficient

- Make feedback policies for feedback systems – feedback needs to be dynamic and responsive to changes
- Pay attention to what is important, not just what is quantifiable – we are good at focusing on what is quantifiable, often that is not enough.
- Go for the good of the whole – keep the whole system in mind
- Expand time horizons – so often today we only think until the next election or the next shareholder’s meeting. We need to look at larger time frames.
- Expand thought horizons – system dynamics need to be interdisciplinary and include other perspectives.
- Expand the boundary of caring – Again think of the whole system and be aware of the degree to which an individuals actions can have widespread implications
- Celebrate complexity– a part of us would like to avoid the messiness and chaotic nature of complex systems, but we need to embrace and celebrate complexity
- Hold fast to the goal of goodness – remain strong and use systems ideas in a positive moral way.

SPIRITUAL CONCEPTS AND SYSTEMS THEORY

There are a number of concepts that consistently appear in spiritual traditions. It is of value to see how some of those concepts might fit into a Systems Theory perspective.

Faith

Faith can be seen as a blind belief without evidence, or even in spite of evidence to the contrary. Another way of seeing faith is as a strategy to cope with uncertainty in the world. With faith, even though the outcome of any situation is unknown, a person will still remain positive and work towards a positive resolution, whereas a person without faith is more likely to give up.

Forgiveness

A complex system takes information gleaned in the past to help it cope with the present and future situations it may arise. The history of a system, therefore, has an enormous impact on its current functioning. That includes the history both externally and internally. If events from the past have generated animosity or created barriers to the efficient functioning of the system, forgiveness is a strategy that may be invoked to free human systems up again and resume effective functioning. One can forgive others, but equally one can forgive ones self. Past hurt is released, re-linking agents and thus increasing the connectivity of the system.

Trust

Trust also has links to the history of the system. Through trust there is a willingness to make the sacrifices necessary to increase the level of co-operation within the system or with another system. Trust is a power mechanism for increasing a system’s connectivity. It does not usually happen immediately, but must be earned. Game theory has much to teach us about how trust might operate in a system. Game theory also shows us what happens when agents defect from a trusting relationship and break the social contract. The more a system builds a positive trusting relationship amongst the agents that comprise it, the more opportunity it creates for other agents to break the trust for personal gain. Society places a high value on positive trusting behaviours in an attempt to reduce defections form the social contract.

Compassion

Generosity and helping others is also highly valued in society as a means of promoting behaviours that increase the effectiveness of any social group. An agent never stands alone, so the relationship to the group is critical. Any system that has a mechanism to encourage an agent to assist other agents out of free-will will be more effective. Compassion can actually reach the point, where an individual agent will sacrifice themselves for the good of others or the whole system.

Discipline

Personal discipline to regulate our behaviour in lines with the social contract helps to ensure that agents' behaviours remain within the attractors that maintain group cohesiveness. If the discipline is internal, the system does not need to use valuable resources ensuring compliance.

Life after death

This is a common theme in virtually all spiritual traditions. There is nothing within Systems Theory that would indicate the possibility of life after death unless, for example, we are willing to accept a claim such as that of Ervin Laszlo that the quantum vacuum is itself conscious and the quantum vacuum could therefore be the vehicle for continuing consciousness past the point of physical death.

Mindfulness

The more we are aware or mindful about our situation, the more likely it is that we will behave in the most adaptive way. If we have a high level of mindfulness of our own needs and the needs of others, threats to the system, or opportunities for growth we are in a better position to assist the overall system to function. Mindfulness encourages the full use of all the faculties available to us to life full, rich lives.

LIVEABILITY AND SUSTAINABILITY

There are many issues underlying the liveability and sustainability of our present day lifestyle. Reductionist science and the technology it has engendered, combined with the free market business model has brought us to the point that our ability to sustain our present lifestyle is severely in question. This whole mix of science and business has embedded a philosophy within humanity towards the world which sees nature as something external to be exploited to meet our desires. This philosophy has led to climate change, pollution, the breakdown of community, and a lost sense of purpose in life. We must change this set of beliefs about the world if we are to survive on a physical level in this planet. Unless the underlying philosophy of life is challenged and changed with something more appropriate, the changes will not be seen in the real world.

Philosophical principles that support a sustainable and liveable lifestyle need to be a part of any spiritual philosophy that will be appropriate for the 21st century. The principles of systems dynamics can help meet this need. A systems approach recognises our position within nature as a co-creator. Gunderson and Holling in their book, *Panarchy* (2002) demonstrate how we need to be more responsive to the dynamics of both natural and human systems. They note that what is different about human systems is our ability to be aware of the patterns within nature and to change the natural cycles towards what we perceive as

being with our best interests. All too often that has not been done in ways that support and work with nature.

Gunderson and Holling propose a co-creative relationship where we are aware of the various nested and hierarchical levels within nature and within human organisations, so as to be able to best estimate an effective intervention strategy. Often there is a mismatch between levels that means a particular approach is not effective. If there is a problem that occurs at a regional level within the environment, then it needs to be approached at a regional level within the human structures. Trying to solve a regional natural problem at a local human level is not likely to be successful.

If a systems based worldview were to be taken up, it would be in many ways unremarkable. It would occur in the minds of people, not leaving a visible trace in the outside world. It could, however, lead to substantial changes of lifestyle that have the potential to be truly remarkable.

CONCLUSIONS

Our modern world is at a cross roads. Old methods are fast failing us as life becomes increasingly complex and chaotic. We have lived according to worn out belief systems that take us ever closer to globally catastrophic outcomes. We are now reaping the results of our lifestyles, based on a materialistic ethic, which sees humanity as the conqueror over nature and led to excessive consumption of our earth's resources.

Many of the concepts which have been empirically determined as a part of Systems Theory can be useful in the development of a new worldview. Rather than a linear system aiming to control nature, a systems approach is to observe the system and gain an understanding of the dynamics. The image of a dance is more appropriate when dealing with complex systems as it acknowledges the interdependence of the agents. We need to come to accept that there is uncertainty within complex systems and thus all through our lives. Rather than fight the uncertainty, we can examine the dynamics inherent in the system and see how we can use them to our benefit.

Concepts such as autonomy and connectivity, catastrophe and emergence, and autopoiesis are all relevant to the development of a new worldview. Systems Theory in itself does not indicate any set system of belief, but can be interpreted anywhere along a whole continuum of beliefs. This is in fact a strength, because Systems Theory then becomes a flexible guideline rather than just another set of beliefs.

Without a significant change in today's dominant value system, we risk continuing the devastation of our environment that threatens our very existence. In time, a more full development of Systems Theory as a framework for a spiritual philosophy could see it as an important part of the overall strategy of coping with the challenges before us.

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