Critical Social Work

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Publication details, including instructions for authors and subscription information can be found at: <http://uwindsor.ca/criticalsocialwork>

Link to article:

<http://www.uwindsor.ca/criticalsocialwork/a-wholistic-paradigm-for-sustainability-are-social-workers-experts-or-partners#top>

Critical Social Work, 2010 Vol. 11, No. 3

Online publication date: October 2010

A Wholistic Paradigm for Sustainability: Are Social Workers Experts or Partners?

Critical Social Work 11(3)

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N.B. The author wishes to thank Paula J. desJardins for her knowledge and conceptual assistance particularly with the sections on the work of C.J. Jung, chaos theory, and fractal geometry, as well as for her editorial assistance.

Abstract

A new way of thinking is emerging that may help solve some of the serious environmental, economic, and social problems that must be engaged to create a sustainable world. The scientific, reductionist, individualist modern paradigm, with social workers in the expert role, has led to many benefits and costs in today's world. The emerging wholistic paradigm is based on interdependence, partnership, cooperation, and respect for the earth and all beings. Social workers in the role of partners are using approaches like systems theory, client strengths, partnership, and empowerment that reflect the wholistic paradigm. These wholistic social workers may also make use of other theories and methods such as chaos theory, fractal geometry, intuitive thinking, and practice wisdom to fulfill the profession's responsibility to help create a sustainable world.

Introduction

The environmental, social, and economic problems facing our world are legion: global climate change, economic crises, worldwide poverty, unemployment, foreclosures, wide disparities in wealth, toxic pollution, loss of indigenous cultures, species loss, soils poisoned and lost, diabetes and obesity, exploitation of immigrant and other low wage workers, to name but a few (Goleman, 2009). One of the most critical problems is the changes in global climate resulting from the burning of fossil fuels that threaten civilization and may make the earth unliveable for humans by the end of this century (Meta et al., 2007). Problems like these have developed under the modern reductionist paradigm—a way of thinking that has guided industrial development for hundreds of years. These problems are so complex, interrelated, and systemic that the traditional tools of the modern paradigm, such as scientific analysis through specialized academic disciplines, are no longer sufficient by themselves to meet the challenge of finding workable solutions.

Einstein's familiar statement, "We can't solve problems by using the same kind of thinking we used when we created them," (Senge, 2006, p. 10) suggests the need for altered ways of thinking, a shift in paradigm, and new tools of analysis. A paradigm is more comprehensive than a theory. It is a worldview, a way of thinking about problems, a way of conceptualizing the world based on values and assumptions that shape ideas and actions (Mary, 2008).

Sustainability means, in the classic United Nations Brundtland Commission (Brundtland, 1987) definition, "Meeting the needs of the present without compromising the ability of future generations to meet their own needs" (EPA, 2009, p. 1). For this paper, sustainability is defined broadly to include not only environmental concerns but also economic and social justice issues—the triple bottom line now being adopted in the business community. Sustainability is creating and maintaining institutions, communities, economies, and societies that can coexist in harmony with the natural world and with each other far into the future.

In addition to the shift in paradigm, some new—and rediscovered—theories and tools of analysis are needed to move toward understanding and creating a sustainable and just world. For example, Euclidean geometry and modern organizational theory are inadequate to describe large, complex natural and organizational systems. Fractal geometry and complex systems theory, also called chaos theory, provide better and more accurate models to describe systems such as these, which follow an organic change process (Hudson, 2000).

This paper will describe the modern paradigm and its outcomes, then consider what the alternative wholistic paradigm looks like and how it can support sustainability and social justice initiatives. The implications of using the wholistic paradigm for social work and other change efforts will also be explored. This shift in paradigms also implies a shift in the social worker's role from that of expert engaged in "scientific" evidence-based practice to the role of a partner working with clients to mutually create solutions so that clients also gain skills and power. Notice several caveats: 1) that this analysis uses the tools of the traditional modern paradigm such as linear prose, rational analysis, and dualistic thinking because they are useful and they are the tools of the academic world; 2) there are, of course, other paradigms than the two described here, but these two are characteristic of western civilization and useful for this paper; 3) the shift in paradigms goes back to antimodernism in the early 20th Century (Jackson Lears, 1981), and many in social work and other change-oriented areas have already adopted elements of the wholistic paradigm; 4) and any attempt to describe an emerging paradigm is necessarily incomplete since the paradigm is still evolving in different minds, in diverse cultures, and in different living situations all over the globe. It is the task of the reader to critique, refine, and move this discussion forward in new directions and in new realms; each in their own unique place, dealing with their own problems, crafting their own solutions, in partnership with others who are also contributing to the process. To begin, just what is the modern paradigm and how has it shaped social work practice?

Modern Paradigm

Historically, during the medieval period and the earlier pre-historical period, people lived in small communities and nomadic bands so they were in intimate contact with nature most of the time. The material and spiritual worlds were interdependent and these realms tended to

overlap in daily life. Knowledge was commonly derived from direct experience, trial and error, historical lessons, intuition, and spiritual revelation. This period embodied a paradigm that was based on ideas about nature, community, and spirituality that were quite different from the modern paradigm that was to follow.

A new paradigm came into being with the enlightenment and then with the scientific and industrial revolutions. This paradigm was characterized by the belief that nature and society could be conceptualized as machines with interchangeable parts, including concepts of differentiation and specialization of roles (Schrive, 2003), for example, the idea that children at risk can be removed from their own family, placed in any qualified surrogate family, and thrive. Pink (2006) describes how even the human brain is being analyzed as if it were a machine. This approach casts social workers and physicians in the role of expert mechanics who use their knowledge and expertise to repair the malfunctioning machine.

This mechanistic paradigm also came to include the beliefs of modernism described above, particularly, reliance on science, rational thinking, dualism, and specialized knowledge. These developments led to the creation of university departments that fragment knowledge into disciplines. While useful, this fragmentation can make it more difficult to study complex, multi-faceted problems that require integrated inter-disciplinary approaches.

Modern Paradigm—Description

The traditional, dominant, modern paradigm is based on at least seven basic values and theories, as described by a number of authors. It is, of course, culture bound and therefore applies most clearly to western industrial society, although it has pervaded much of the world.

First, *reductionism* involves understanding the whole by analyzing its constituent parts. Second, and related, *dualism* is a habit of thought that tends to see things as discrete opposites such as male/female, good/bad, for us/against us, either/or. This way of thinking tends to separate people from each other and from the natural world (Coates, 2005). Third, *individualism* or *separatism*, related to dualism, leads people to prioritize individual needs over group or family needs and private property over the commons or community property (Bourne, 2008; Donahue, 2001). Fourth, there is a *human-centered or self-centered* quality in contemporary Western society that values human needs above those of the natural world and above those of groups other than one's own. When humans see themselves as separate it's easier to justify exploiting nature (Coates, 2003). Fifth, *economic progress* and consumption of material goods are widely associated with human well-being and personal happiness, in spite of solid research data to the contrary (Lappé, 2006).

Sixth, *science, rational problem solving, and quantitative research* constitute the primary methods of generating knowledge in modern times. Scientific knowledge is verified by repeating experiments. This scientific methodology has generated remarkable knowledge about the world. Seventh, Wiebe (2009) argues that *efficiency, low cost, and the profit motive* are driving definitions of value in a race to the bottom, where large food producers and other corporations drive smaller, local, higher cost, and higher quality producers out of the market. What has this paradigm brought us?

Outcomes and Costs of the Modern Paradigm

The modern paradigm has led to great progress through the application of technology and the human capacity, and sense of entitlement, to consume natural resources. It has created prosperity, a rising standard of living, and access to material goods for many privileged people. This prosperity has increased human levels of comfort, and has reduced poverty worldwide. Thus materialism has become associated with happiness. Advances in knowledge and technology have led to medical care that has increased life span, decreased infant mortality, and controlled many infectious diseases. New technologies in areas like agriculture, genetics, nanotechnology, and electronics have benefited humans in many ways. For example, advances in fossil-fueled distribution systems allow consumers access to inexpensive clothing and out-of-season foods.

The modern, scientific, individualistic, human-centered paradigm also has some costs associated with it. Less privileged people are disproportionately vulnerable to some outcomes of industrial society including toxic pollution and its related health costs, escalating energy costs, and global climate change, as exemplified by low-income people suffering disproportionately from the effects of hurricane Katrina. Industrial societies have exploited the earth's resources and its peoples with practices such as mountain top removal coal mining, pollution of soil and water by industrial agriculture, and utilizing a low wage work force in dangerous occupations (Coates, 2005; Korten, 2006).

Individualism, separatism, and domination—stemming from power differences and the relatively unregulated profit-driven economy—have resulted in a modern society marked by violence, warfare, economic crises, loss of living-wage jobs, an inequitable and costly health care system, great disparities in wealth, and inequality of access to the necessities of life (Eisler, 1995; Mary, 2008; McKibben, 2007). People complain about the stress of modern life. Wheatley and Kellner-Rogers (1999) suggest that belief in the Darwinian notion of the survival of the fittest leads to competition and a fear of taking risks since evolutionary adaptations that fail will die. Kingsolver (2009) compares our society to the story of Jules Verne's character, Phileas Fogg, who, while trying to travel around the world in eighty days, orders his wooden steamship torn apart to fuel the boiler that has run out of coal as he races across the Atlantic on the seventy-ninth day.

Effects on Social Work

These seven values and theories define and drive the traditional modern paradigm and today's industrial society. How has this paradigm shaped the profession of social work and the role that social workers play? Mary (2008) describes a number of elements of social work that are rooted in the modern, scientific paradigm. The *medical model* is widely used, particularly in psychiatric social work, and suggests that professionals can fix the problem with expert diagnosis and treatment. This model puts the social worker in the powerful role of *expert* in relation to what is often called a *patient* thereby disempowering the consumer of services.

Many social workers operate on an *individual change model* with the focus on solving problems by changing the individual (Coates, 2003; Zapf, 2009). Even licensure categories, such as the Licensed Independent Social Worker (LISW), embrace the individual change model as

exemplified by an exam that contains many questions on psychiatric diagnosis and treatment.

Evidence based practice aims to create treatment regimes based on logical analysis and scientific research evidence (McNeill, 2006). While it is clearly desirable for social workers to know whether the interventions they use are effective, there are limits to the ability of scientific, usually quantitative, research methods to deal adequately with the multi-faceted complexity of human behavior at different systems levels. Reliance on scientific evidence in published journals also casts the social worker in the role of expert and encourages the client to be compliant with the professional's prescribed treatment methods. This process generally empowers the social worker more than the client. Since Flexner (1915) called for a more scientific social work, social workers have come to believe they can gain professional status and legitimacy by adopting a modern scientific approach to practice (Coates, 2003). Scientific methodology also can result in a necessarily narrow focus for research questions and methods so that the larger context and complexity of the environment surrounding the person may not be adequately considered (Mary, 2008).

So what, then, does the alternative wholistic paradigm look like and how does it affect social work practice?

Wholistic Paradigm

Along with creating remarkable progress and wealth, the modern paradigm has inflicted considerable harm on people, other species, and the Earth. Kingsolver (2009) says, "Our paradigm has met its match" (p. 1). Brown (2001) argues for a shift in worldview, similar to the shift that occurred when Copernicus asserted that the earth revolved around the sun and transformed thinking about the place of humankind in the universe. There is another paradigm: the emerging, wholistic paradigm is based on interdependence, partnership, cooperation, sharing of power, use of strengths, respect for nature, and a belief in the unity of all things. Coates (2000) suggests some of the elements of a wholistic, sustainability paradigm when he says that to move toward a more sustainable world, we need a, "different ideological foundation... (that) focuses on interdependence and collectivity rather than individualism, on connectedness rather than dualism, and on holism rather than reductionism" (p. 1). Many authors, noted below, have been working to conceptualize this wholistic paradigm that can drive efforts to create a more sustainable and socially just world, and help shift social work practice toward a partnership model rather than an expert/medical model.

Some, using the dialectical approach, would argue that this critique (antithesis) of modernism (thesis) leads to a wholistic synthesis, which is not yet a new paradigm. Like other writers, this author chooses to refer to this wholistic orientation as a paradigm since it reflects a fundamentally different realignment of priorities and values. This paradigm is not new. Social workers and others have been using many of its elements for some time. Many people and organizations already operate under a wholistic paradigm, as they work to build a more just and sustainable society.

Actually, the roots of the wholistic paradigm go back to a variety of sources including indigenous peoples, prehistoric cultures (Eisler, 1995), early environmentalists who established

America's national parks, the antimodernism movement of the early 20th Century mentioned earlier (Jackson Lears, 1981), Carson's (1962) seminal book, *Silent Spring*, which criticized corporations for putting toxic chemicals in the environment, the bioregionalist movement in the 1970s that focused attention on watersheds and spawned the Green Party (Berg & Dasmann, 1977), and Pope John Paul II's (1990) World Day of Peace message on caring for creation.

This wholistic paradigm, like the modern one, is also culture bound and, as such, is most clearly applicable to Western cultures, although it embodies many concepts from other cultures (Mary, 2008). In addition, the two paradigms are not as unique and distinct as this dualistic presentation suggests. They overlap in many situations, as the old ways transition into the new (Fish, personal communication, May 8, 2009). For example, a social worker might give a client with a serious mental illness a DSM diagnosis and support use of medication, while also assisting their extended family in the creation of a multi-faceted support system using natural helpers. Both approaches can be used simultaneously to good effect.

Values and Theories

The values and theories underlying and defining the wholistic paradigm include the following: a commitment to (a) *long-term sustainability*, with a global perspective that sees the Earth as a balanced system, and requires humans to be as intentional about maintaining the conditions for life as they have been about exploiting the Earth's resources (Coates, 2000). This approach will require finding a sustainable balance among peoples' economic needs, social needs, and the survival of the eco-systems that support life. The Great Law of the Iroquois states, "In every deliberation, we must consider the impact on the seventh generation," thus instilling long-term thinking (Iroquois, 2009, p. 1). Social workers advocating for such a long-term perspective could assist young people in making decisions that consider future consequences.

The belief in (b) the *unity of all*, that is, the belief that the entire planet and universe can be considered one unified system (some would say living system), supports a wholistic way of thinking (Macy, 2009). Elgin (2009) presents evidence that the entire universe is alive. Canda and Furman (2010) describe how the unity of all is a basic concept found in many religions around the globe. The unity of all is often sensed in personal experience such as seeing the photos of Earth taken by Apollo 11 astronauts from the moon. John Seed, a rainforest activist, reported standing between an oncoming bulldozer and a huge tree and realizing that he no longer thought of himself as John protecting the rainforest but as the rainforest protecting itself (Seed, Macy, & Fleming, 2007). Social workers who hold this inclusive perception of spiritual awareness may find it easier to work with clients from diverse cultural and religious backgrounds.

(c) *Deep ecology* writers have argued since the 1970s that humans are not separate but are deeply connected to all other forms of life and that environment includes all beings and systems in the cosmos. This includes both human and non-human beings, as well as the idea that humans can be aware of and connected to all these levels of being via transpersonal experience (Bache, 2000; Naess, 1989). Progoff (1953) explains how the psychologist Carl Jung viewed humans as deeply connected to the larger world. Deep ecology is broader than the person-in-environment idea, that has been so important in social work theory, but which tends to be limited

to the immediate psycho-social environment of the person.

Deep ecology writers suggest that people become more connected to their natural environment as they learn about their local human and natural history and become more rooted in the place where they live (Besthorn & Canda, 2002). Faldet's (2009) story of the natural and human history of the Upper Iowa River watershed helps people in that area to feel connected to their place, their bioregion. A therapist might find that people suffering from alienation and loneliness could benefit by becoming more connected to their home community through studying the history and experiencing the natural beauty of the area.

(d) There is an important *spiritual and moral* dimension to the wholistic paradigm. The concept of the unity of all described above stems from spiritual beliefs common to many religions. People's search for meaning and happiness may lead to a shift in values—that are often religious—away from materialism, individualism, and wanting “more” for themselves, and toward equalitarianism and involvement with one's family and community (Elgin, 1998). This shift represents an opportunity for social workers to strengthen family and community life.

Ecological destruction and the threat of global climate change are increasingly seen as moral issues, partly because religious groups have identified this work as caring for God's creation (Bingham, 2008) and partly because people are realizing that their own society and economic system are damaging the planet, and therefore they have a moral responsibility to help solve the problems. Some see a moral imperative to redistribute wealth and develop a moderate lifestyle based on the value of *sufficiency* rather than always wanting more (Princen, 2005). Social work activists could advocate for a change in values and lobby for policies of economic social justice like those described above.

Science and spirituality are increasingly being linked. For example, there are some remarkable similarities between the descriptions of reality written by Eastern mystics and by high energy physicists describing the behavior of particles in the nucleus of the atom (Capra, 2000; Zukav, 2001). Faith, compassion, and a sense of mystery are also seen as being of value in understanding human behavior and in practicing social work (Canda & Furman, 2010).

(e) *Intuitive ways of knowing, non-linear thinking, and emotional intelligence* are seen as valid routes to knowledge along with rationality and experimentation. Intuitive thinking can simultaneously encompass many sources of information, including historical experience, visceral sensations, and cognitive thoughts, enabling one to reach conclusions very rapidly (Levine, 1997). Practice wisdom from accumulated experience that sometimes develops through intuitive processes can be an important source of information for social workers.

The field of emotional intelligence suggests that while the left brain tends to use logic and sequential thinking (characteristic of modern paradigm thinking) the right brain functions on the basis of emotion, intuition, and images (modalities that fit with the wholistic paradigm) (Goleman, 2006).

(f) *Feminist and ecofeminist* thought supports the wholistic paradigm through a critique that argues for equality and social justice in the context of humans' connections to the natural

world (Besthorn & McMillen, 2002; van Wormer, Besthorn, & Keefe, 2007). What Eisler has called the *dominator* model of human relations describes some of the ways economic, political, and military power has been used to privilege hierarchies of power throughout history and is characteristic of the modern paradigm. Eisler's (1995, 2008) *partnership* model describes an equalitarian pre-historic time and a new caring economics that values the needs and contributions of women and impoverished people and fits with the emerging wholistic paradigm.

Fifteen years ago, Hoff & McNutt (1994) called for a new paradigm, based on ecological and feminist thinking, that would inform social work practice. Even earlier, Merchant (1990) argued that nature should be seen as a nurturing mother rather than a machine—that the mechanistic view was an ideology that was not based in reality. Social workers creating equalitarian, sustainable community development strategies might find these ideas useful.

(g) *Cooperation* is more characteristic of the wholistic paradigm than is competition. Darwinian thinking, that tends to focus on the competition inherent in the idea of the survival of the fittest, overshadows the reality that natural systems as a whole are very cooperative—every element is interdependent with every other element in the system. Villages and communities contain many organizations, institutions, families, and groups that, while they compete sometimes, generally must cooperate with each other for these highly interrelated systems to stay in equilibrium and survive (Mary, 2008; van Wormer et al., 2007). Dylan (2009) describes French contact with the Wendat (Huron) in the early 17th Century. Wendat society was characterized by cooperation, diversity, equalitarian social relations, and decisions made by consensus—what Eisler (2008) would consider a partnership model. Wendat people taken to France were reported not to understand how there could be beggars on the streets of Paris (Dylan, 2009).

(h) *Equality of power* and equality in distribution of wealth and resources tend to be characteristic of the wholistic paradigm, which is also supported by the greater balance, equality, and sharing of power that characterize partnership model groups. Inequalities of power, wealth, and resources tend to be characteristic of dominator model societies and groups operating under the modern paradigm (Mary, 2008). These models might be useful for social and economic policy advocates working toward social justice through the redistribution of wealth and resources at community, national, and global levels (Coates, 2005).

The (i) *strengths*, or asset-based, approach to solving problems, which is widely used in social work (Saleebey, 1997, 2000), is a wholistic approach and represents one of the ways that social work has been developing and adopting the wholistic paradigm. The strengths model tends to take a partnership approach to developing solutions using local resources rather than fixing problems with outside experts and resources. In community development, Kretzmann and McKnight (1993) show how communities can identify and tap their own internal resources thus empowering people to develop their own local solutions (Butterfield, Kebede, & Gessesse, 2009).

What are some other characteristics of the wholistic paradigm?

Complexity and Interdependence

There are a number of characteristics of the wholistic paradigm that relate to the complexity and interdependence of biological and similar systems. To begin with, such systems are (a) highly *interconnected*. For example, there are documented connections among poverty, social injustice, shame, and the use of personal and state violence (Bradshaw, 2005). In another example, the American government's deregulation of the banking industry arguably led to ripple effects throughout the highly interconnected global economy, resulting in foreclosures, unemployment, loss of health insurance, and family violence.

(b) Natural and *biological models* are increasingly being used to understand the complexities of global systems. Capra (1997) uses systems theory to describe the interconnected web of life. The Gaia hypothesis (Lovelock, 2000) suggests that the earth can be considered a living system—see more below. Benyus (2002) describes the new field of *biomimicry*, the many ways living things and processes are serving as models for the design of new products. Wheatley, a management theorist and consultant, says life creates ordered systems where each possibility creates more possibilities with high degrees of interdependence with their neighbors, in a very systemic and intricately connected structure (Wheatley & Kellner-Rogers, 1999).

Hawken (2007) points out that there is no waste in nature—everything is recycled. Fuller (1969, 2008) created the concept of spaceship earth so people could see what it means to be a self-sufficient planet, isolated in space. McDonough and Braungart (2002) describe a new approach to designing products that mimics nature's way of reusing every part of a product. Several authors point out how it is life's goal to optimize, not maximize; that the goal should be *sufficiency* rather than perpetual growth—that is, not always wanting more (Princen, 2005). All of these efforts can help social work activists move their communities toward strategies of sustainable community development by using systems theory and biological models.

Social workers have long employed (c) *social systems theory* to help understand human behavior, and so have learned to think systemically, recognizing that all elements are interconnected and that diversity can bring strength to systems. For example, a diverse community with a variety of socio-economic classes, occupations, housing types and mortgage lenders is more able to withstand an economic crisis than is a more homogeneous suburb (Schrivver, 2003; vanWormer et al., 2007).

In spite of its complexity, (d) *chaos theory*—also known as *complex systems theory*—is emerging as a valuable organizing framework for understanding dynamic, non-linear, complex systems such as weather, large organizations, economics, and human communities (Hudson, 2000). The theory asserts that small changes can have large effects as in Lorenz's suggestion that the beat of a butterfly's wings in Brazil could theoretically lead to a tornado in Texas (Lorenz, 1972). Included is the notion of tipping points where, for example, a small rise in average global temperature could trigger massive melting of glacial and polar ice.

Chaos theory also describes how species in nature *self-organize* into diverse, interdependent cooperative communities such as prairie and forest ecosystems, without needing any outside influence or central authority to make this happen (Coates, 2000). Wheatley argues

that self-organization can develop in organizations when shared initial conditions—such as goals—harness the creativity of workers through many iterations such as meetings, trials, errors, and sometimes chaos so that patterns and order gradually emerge without top down or outside control (Wheatley, 2006). Organization developers can use concepts of chaos theory and self-organization to work in partnership, creating more equalitarian organizational structures with reduced hierarchical management.

Hawken (2007) describes how nature and organizations work in cycles with *self-correcting feedback loops*—from systems and chaos theory—that use information gathered from within the system to make changes needed for it to function more effectively. This process, known in organizational practice as *continuous quality improvement or total quality management*, is used in many hospitals, businesses, and accredited schools of social work. It can be conducted by people at many levels in the system with little top down direction (Deming, 2000; Holloway, 2008).

Hudson (2000) describes how complex systems theory can explain social evolution through the mechanism of periods of reinforcing feedback loops—such as norms and rules that restrict deviance—alternating with periods of revolutionary change characterized by stimulating feedback loops such as radical art, music, and literature. Social workers can identify and analyze these feedback loops to pinpoint the opportunities for intervention in order to bring about social change.

Another attribute of natural systems, as seen through the lens of complex systems theory, is *self-similarity* found at different levels of a system—what Hudson refers to as *parallel process*. It can occur when a behavior pattern such as scapegoating occurs at different levels in a large organization, including top management, line workers, and staff relations with clients (Hudson, 2000).

Some authors suggest that practitioners can utilize *uncertainty* and instability as opportunities for *emergence*, to create change with clients (Keenan, Kranz, & Hayes, 2009). Working within the wholistic paradigm often involves an acceptance of what Macy (2009) calls the *gift of uncertainty* or what Antioch College students used to call developing a *tolerance for ambiguity*. The complexity and intractability of problems can require that people seize what Bender called *moments of creative instability*, when the chaos of events creates opportunities for major changes (Bender, 1971). The political version of this principle now current in the Obama administration is, in the words of Secretary of State Hillary Clinton, “Never waste a good crisis” (Harrison, 2009, p. 1). Crises present opportunities to move public opinion in significant ways.

In the 1970s, Mandelbrot developed (e) *fractal geometry*, which is a mathematics that can represent the natural world because it can model complex, irregularly shaped natural forms such as coastlines, clouds, and vascular systems that Euclidean geometry cannot describe. Computers can graph millions of repeatedly iterated solutions to simple recursive formulas creating interesting and beautiful fractal patterns. The patterns created by graphing these solutions at first appear to be random and chaotic, but as they accumulate over millions of iterations, they self-organize into remarkably beautiful forms. Like natural systems they demonstrate *self-similarity* at different scales, that is, the same patterns repeat at smaller and larger magnifications (Lesmoir-

Gordon, Rood, & Edney, 2006).

The computer generated Mandelbrot Set contains fractal patterns remarkably similar to those observed in stained glass windows, paisley cloth, Islamic art, Celtic designs, Gothic and religious designs, mandalas, and drawings that Jung's patients made from their unconscious images (Mandelbrot & Clarke, 2004). Jung suggested that mandalas were expressions of the unity of all, as perceived in many different cultures (Proffoff, 1953). Such fractal images can help us understand the application of complex systems theory to complicated social systems like communities and large organizations.

Jung's theory of the *objective or collective unconscious* part of the psyche as a preconscious, intuitive, and metaphorical repository of knowing that is accessed through dreams, myths, and art, aligns with the wholistic paradigm (Proffoff, 1953). Jung maintained that excessive reliance on only conscious sources of knowledge (including rational, scientific, linear, dualistic, and reductive thinking—that are characteristic of the modern paradigm) is the root of modern people's spiritual unrest (P. J. desJardins, personal communication, May 4, 2009). Jung's insights could be useful to therapists working with clients suffering from depression and alienation by helping them find meaning and a sense of connectedness with life and history. In Jung's view, humans are not alone and separate but exist in a social context—similar to what social work calls *person in environment* (Besthorn, 2002; Proffoff, 1953).

Implications of the Wholistic Paradigm

Having reviewed characteristics of the wholistic paradigm now allows us to look at some of the implications for social workers who take partnership rather than expert approaches, and who use the wholistic paradigm for developing more sustainable and socially just systems. Some of these implications are somewhat speculative but may spark more creative thinking. The *Gaia hypothesis* developed by two climate scientists, Lovelock and Margolis, suggests that the earth's atmosphere and other systems act as if they are alive, as they utilize self-correcting feedback loops and self-regenerative systems to maintain the conditions necessary to sustain life (Lovelock, 2000).

As an economist, Hawken describes the wholistic paradigm as driving a movement of over one million local grassroots groups around the globe that are working in three areas: environment, social justice, and indigenous people's rights. These self-organizing groups are partnering to solve their own problems using mostly local resources and sometimes connecting over the Internet. Hawken suggests that, if the Earth is thought of as a living organism, these local groups may be functioning as the Earth's immune system, responding to toxins, environmental disasters, economic crises, political corruption, and exploitation of workers and immigrants. Hawken (2007) says that these groups are "social antibodies that attach to the pathologies of power." (p. 145). So social work change agents might ask themselves how they could strengthen a community's "immune system".

Examples of the work of these grassroots groups include Wangari Maathai's Green Belt Movement that began organizing women in Africa to plant trees twenty years ago and now provides training and organizational support to women's groups around the globe (Maathai,

2006), and Majora Carter's work greening the South Bronx, where she has organized programs to build parks, create green businesses, and employ youth in greening work (Carter, 2009). An organization called INFORSE, operating out of a Danish ecovillage serves to network such organizations and help them learn from each other through their online newsletter, *Sustainable Energy News* (Olesen & Szoleczky, 2009).

So, how do the decentralized grassroots groups that Hawken describes form and develop in ways that seem to be closely related to each other, without very much evident direct communication? Chaos theory and fractal geometry suggest a possible process for the development of such groups and this movement: the process emerges through many different activities in many different locations based on widely shared social, economic, and environmental values. Examples include a respect for life, caring for other people, protecting the environment, and fairness in economic relations. Such basic shared values are the initial conditions that in chaos theory specify the parameters for the growth and development of the many iterations that eventually create self-organizing systems out of what appears to be chaotic random activity all over the globe.

Patterns begin to emerge from the chaos as advocacy groups develop into small businesses building more efficient cook stoves in Bangladesh, groups of women planting trees in Africa, or tenants organizing for safer housing in Chicago. Through the creative energies of individual people and groups and through many iterations of trial and error, complex self-organizing systems develop that are tailored to local needs and niche markets (Sirolli, 1999). Such a process unfolds without top down, hierarchical authority or control—similar to the development of a forest or prairie—because it is governed by shared values, just as a forest follows the laws of nature as it develops, with no manager. Social workers can help to stimulate these changes by helping to identify and specify the initial conditions as embodied in shared values, mission statements, goals, and strategic planning.

Jung suggests a reason for the emergence of the movement made up of these many life-affirming local groups when he describes the importance of individuals having a sense of meaning in their lives. He says that a sense of meaning often springs from religious beliefs but that movements may emerge to provide new meaning in people's lives when religion does not provide it (Progoff, 1953). Such may be the case with the worldwide sustainability movement described above. Perhaps it is emerging partly because it provides a sense of meaning for people as they work to solve local problems in the context of their shared values. And perhaps, contrary to Jung, some of this sense of meaning in environmental work also comes from religious belief, for example, among church people who see themselves as caring for God's creation (Bingham, 2008).

Now, how do all the disparate elements of these social and environmental movements coordinate when many of them don't even know of each other's existence? Some of them are linked over the internet and meet at international gatherings, as seen in the work of INFORSE noted earlier (Olesen & Szoleczky, 2009). Jung might suggest that people in different areas may all tap into a common well of human experience and cultural memory leading to similar activities (Progoff, 1953). A Taoist might suggest that as a person or group becomes more aware of itself and its place in the world, it begins to move with the Tao, the flow of the river of life,

and thereby acts in harmony with other people in the world (Lao-Tsu, 1989).

Before looking at where this wholistic paradigm can lead us, there is a danger that the notion of the wholistic paradigm will be co-opted by supporters of the modern paradigm much as major oil companies now advertise themselves as being “green”. Some resistance to this cooptation may come from the many small, decentralized groups of citizens that will simply reject such corporate claims about being “green”. There will also be large sustainability organizations that will have the resources to publically counter such claims, much as some large corporate advertising is now labeled “greenwashing” by large environmental organizations.

Social Work and a Look Forward

Having discussed both the modern and the wholistic paradigms, it remains to discuss how the paradigm shift affects social work practice, how the two paradigms work together, and to identify some of the ramifications and changes that can be expected going forward. The shift toward the wholistic paradigm is a gradual process that has been occurring as more people begin to think systemically; adopt a global, long-term perspective; appreciate the need to live in harmony with each other, nature, and the planet; become good stewards of all that the planet offers; respect the diversity and strengths of all beings in the world; work in respectful partnership with each other; and ensure that everyone has equal access to the resources that meet their needs. Since these changes are a good fit with social work values, such a transition can be relatively smooth for social workers, many of who already operate from a wholistic partnership approach.

Social work has been moving toward a more wholistic approach since at least the late 1970s when Germain began advocating for an ecological social work (Germain, 1976) and Anderson and Carter and others began using systems theory in human behavior textbooks (Anderson & Carter, 2008). In the last fifteen years a number of social work scholars have been writing about the relationship between social work and the environment from a wholistic perspective including: Besthorn, Canda and Furman, Coates, Hoff, McNutt, Rogge, and others (Coates, 2005; McKinnon, 2008).

The NASW environmental policy statement has for some years said that social work has an important role to play in combating the disproportionate impact of environmental problems on the poor and protecting the environment in general (Kelly & Clark, 2009). McKinnon (2008) asserts, from the perspective of Australian and international social work, that the profession should see itself intimately connected with the natural world and must play an important role in environmental protection.

One example of the many ways sustainability can be incorporated into the teaching and practice of social work is how the deep ecology perspective, that sees everything as connected with everything else in an expansive web of life, can be used to help build support networks or incorporated into human behavior courses as part of the discussion of systems theory (Besthorn & Canda, 2002; vanWormer et al., 2007). Ungar (2002) applies deep ecology and social ecology (Bookchin, 1980) to create principles of social work practice that value diversity, empower clients, and advocate for activism in promoting social change.

Social workers, particularly in the field of mental health, may function in the expert role in which they are responsible for diagnosing and prescribing treatment using the medical model approach rooted in the modern paradigm. This model assumes a relatively passive client who is expected to comply with the expert's decisions.

In areas where the strengths-based approach is being used and has become integrated into social work practice, the role of the social worker shifts to that of a partner who assists clients in solving their own problems—an empowering approach—sometimes through action research (Butterfield et al., 2009; Kretzmann & McKnight, 1993; Saleebey, 1997, 2000). Examples of the partner role include situations where clients largely create their own treatment plans, community organizations develop their own leadership and set their own goals, and task groups write their own guidelines and define their own issues.

The two paradigms sometimes overlap and transition one into the other. Both may be used to work on some issues as when a social worker, working with a depressed client, might use medication and psychotherapy, as well as assisting the client in building a support network—drawing on the two paradigms as both expert and partner. When the Intergovernmental Panel on Climate Change issues its reports, it speaks with the authority of documented scientific research that is very persuasive (Meta et al., 2007). Yet, when people seek new ways of bringing people together to tap local creativity and ingenuity to solve environmental problems, the wholistic paradigm is shaping this creative and empowering work (Hawken, 2007).

Different methodologies are also associated with the different paradigms. For example, qualitative and participatory action research methods are more closely related to the wholistic paradigm, and allow for the consideration of more complex and less understood problems as well as the empowerment of research participants, respectively. The scientific method and quantitative research methods often require a simplification of the issues so that results will be valid and reliable, yet they can prove a hypothesis in a way that qualitative research cannot. Wholistic thinking is more likely to accept social work practice wisdom from the field and honor the wisdom found in elders' stories (Butterfield et al., 2009).

Social workers using the inclusive partnership approach based on the wholistic paradigm can work effectively at the micro level with individual clients and also at the macro level to create solutions to complex problems, such as solutions aimed at creating a sustainable world where people are respected and human needs are met, and where social, economic, and environmental justice are all possible.

The wholistic paradigm provides a context within which individuals, small groups, and communities can partner to work effectively in their own local areas using local resources, initiative, leadership, and creativity while similar groups are working in similar ways based on shared values all over the globe. Social workers can partner with these groups and bring their unique knowledge, skills, and ethics to the challenges of building a sustainable world that is rooted in a sustainable and socially just economy, sufficiency in living standards, and respectful connection with the natural world.

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