

Environmental Impact Assessment Review 23 (2003) 3-15

Environmental Impact Assessment Review

www.elsevier.com/locate/eiar

Spirituality and health: an initial proposal to incorporate spiritual health in health impact assessment

Komatra Chuengsatiansup

Health Systems Research Institute, Nonthaburi 11000, Thailand Received 1 June 2002; received in revised form 1 July 2002; accepted 1 July 2002

Abstract

This paper explores current understanding on spiritual dimensions of health via Thomas Kuhn's notion of scientific paradigm. It suggests that the difficulties to include spirituality as a component in health impact assessment scheme are due to the conflicts between two underlying paradigms. Mainstream scientific thought, which has been dominated by Newtonian and Cartesian paradigm, is characterized by its reductionistic and materialistic worldview. In this paradigm, a complex whole (be it an ecological system or a living organism) is viewed as reducible and can be explicable only by objectively examining and measuring its components. In other words, the whole is understood in this paradigm by the properties of its parts. Spirituality as an aspect of life belongs to a differing paradigm of thought with entirely different ontological and epistemological assumptions. Spirituality is an emergent property of a complex living system and exists only when such a system is examined in a holistic manner. This paper offers an initial understanding towards a cross-paradigm dialogue in the attempt to incorporate spiritual dimensions of life into the process of health impact assessment. It proposes that an approach starting with an attempt to clarify once and for all the definition of spirituality may be too restrictive since defining is essentially an objectification of knowledge which presupposes a separation between the knower and the known. Contrary to the maxim "I think, therefore I am," understanding spiritual life is achievable not by thinking or cognitive contemplation on the definition. Instead, it is "realized" through practices and its embodied form of knowledge often resists objectification and verbalization. Rather than emphasizing on definition, this paper suggests a practical conceptual framework for

E-mail address: komatra@health.moph.go.th (K. Chuengsatiansup).

0195-9255/02/\$ – see front matter © 2002 Elsevier Science Inc. All rights reserved.

PII: S0195-9255(02)00037-9

appraising spiritual aspects of life through assessing supportive infrastructure of spiritual life (i.e. knowledge source, institutional components, socio-spatial organization of life) and the conducive environment.

© 2002 Elsevier Science Inc. All rights reserved.

Keywords: Spirituality; Health; Health impact assessment

1. Introduction

In current health reform movement in Thailand, attempts to conceive a more dynamic operational definition of health have been seriously undertaken. Similar to most countries, Thailand's health systems have been dictated by the biomedical model of health. In this dominant mode of understanding, health is conceived in terms of the normality of biological functions and processes. The biomedical definition of health precludes the involvement of stakeholders from a broader social and economic development in health policy processes. Not only psychosocial aspects of health have to be reemphasized, spiritual dimensions of health have also to be taken more seriously into account. Illness experiences of cancer survivors, people living with AIDS, as well as religious experiences and spiritual healing in Thai medical pluralism suggest that even the broader definition of health proposed by the World Health Organization (WHO) may need to be reinvented. In Thailand's health reform movement, the conventional definition of health as "a complete state of physical, mental, and social well being" has been reconceived and expanded to include spiritual dimension of life as an essential component of a healthy state of being. Health is thus defined as a "dynamic state of physical, mental, social and spiritual well-being."

Redefining the definition of health brings about new challenges. Attempts to incorporate spiritual dimension of health in to the framework for health impact assessment have encountered various obstacles and difficulties. In conceptualizing and operationalizing the idea, it seems that health professionals and policy makers not only have little understanding on spiritual life but they are not familiar with the language of spirituality at all. Existing traditional languages and cultural idioms on spirituality seem to lack the technical clarity one needs to discuss this elusive issue in a more rational and scientific way. To incorporate spiritual dimension into policy process, an objective and transparent definition of the idea is required. To give a definition to an entity means that it needs to be conceptualized in a definite and categorical specificity. Spiritual experiences, as evident in religious teachings all over the world, seem to resist any definitive meaning and categorization. Not only health and policy expert lack common language in addressing spirituality, language itself seems to be inadequate and rather a restrictive media for the expression of inner spiritual life. Spiritual experiences are better to be conceived metaphorically and communicated through ill-defined mythical languages and perplexing ritual expressions.

In the following discussion, however, I will not argue that language is the root cause of the difficulties encountered during the attempt to incorporate spiritual health into policy processes and action. Rather my argument is that the difficulties in singling out workable operational models of spiritual health within the dominant scientific culture are due to ontological and epistemological differences, or, in other words, spirituality and biomedicine belong to different and incommensurable scientific paradigms. The following discussion will be divided into three main parts. In the first part, I will briefly clarify the notion of "paradigm" as employed in philosophy of science literature. The second part will discuss the nature of spiritual dimensions of life in various religions and knowledge traditions. The last part will provide a few suggestions to reconcile the "incommensurability" of the two paradigms. I propose that to "translation" between two different modes of thought, the process of continuing dialogue is more important than seeking the definite unified conclusion that would end all other debates.

2. Part one: On the notion of paradigm

The term paradigm seems to be over-employed in writings ranging from business management texts to marketing handbook to alternative health guideline. The notion of paradigm used in this discussion follows Thomas Kuhn's historicist rendition of science philosophy (Kuhn, 1970). The following are some aspects of Kuhn's employment of the idea.

- The term is originally a Greek term meaning archetypal or ideal form of things, which would derive into various manifestations and derivatives.
- Thomas Kuhn employed the term as a central concept in his formulation of a philosophy of science in his famous "Structure of Scientific Revolutions."
- In Kuhn's historicist theory of scientific rationality, he rejected the two dominating theories of scientific progress namely "confirmationism" and "falsificationism." He argued that scientific progress was not achieved through accumulative process by which various theories of scientific knowledge are either verified or falsified. Rather, real scientific progress was achieved with a radical shift of the basic assumption on reality and the way we acquire knowledge, of which Kuhn called "paradigm shift."
- Kuhn's definition of paradigm: "a constellation of achievements—concepts, values, techniques, etc.—shared by a scientific community and used by that community to define legitimate problems and solutions."
- Kuhn also defines paradigm as "great work" such as major scientific discovery that has set an example of how to go about doing scientific work. Kuhn later on used the term "exemplar" to mean this narrower definition of paradigm as great work.
- When a paradigm has successfully attracted a fair number of adherents and has been adopted by the scientific community, it becomes a dominant paradigm.

Once a dominant paradigm is in place, it will be adopted and "exemplar" will be employed as standard model to solve scientific questions. Kuhn called this phase of scientific activities "normal science" which do not aim at "novelty" and do not critically question its paradigmatic foundation.

- According to Kuhn, normal science will go on until such practices encounter "crisis" where normal scientific explanation fails to be adequate in addressing the new scientific phenomena. At this juncture, competing paradigm(s) will emerge. If any new paradigm successfully provide a satisfactory explanation and attract adequate attention of scientific community, it will become "the" new paradigm.
- Kuhn termed the phase of critical change in scientific thinking "revolutionary science." It is revolutionary because the new science and its paradigm will base on a totally different ontological and epistemological assumption.

Thirty years after Kuhn's formulation of the concept, Fritjof Capra expands Kuhn's notion of scientific paradigm into social paradigm that determines not only the way scientific community works but also society at large (Capra, 1982). According to Capra, social paradigm is a constellation of concepts, values, perceptions, and practices shared by a community, which forms a particular vision of reality that is the basis of the way the community organizes itself. In Capra's definition, a paradigm governs not only scientific activities but also the way people in society think and act. Capra points out that modern science and modern life have been dominated by "Newtonian—Cartesian" scientific paradigm since the 18th century. In this paradigm, natural world was conceived in a dualistic, reductionistic, and mechanistic way.

Modern medicine and health science are "sister science" adopting and adapting "exemplar" from the science of physics to solve the puzzle in the science of life. Dominant medical worldview therefore suffers from the same reductionistic, atomistic, and mechanical approach to natural phenomenon. Modern medicine is reductionistic because it reduces the complexity of life into a mere materialistic or biological phenomenon. Illness and health are conceived and explained in the mainstream medical establishment solely by biological processes without necessarily referring to any "social", "cultural", "political" or "spiritual" dimensions. This is not because medical scientists are totally ignorant. Rather, as suggested by Kuhn, the ways scientific activities are conducted are dictated by the paradigm within which such scientific inquiries and explications are conceived.

Each particular paradigm has its own ontological, cosmological, and epistemological assumptions. These assumptions, in turn, respectively define what considers as reality, what are the rules that govern the relationship of things, and what are the means by which knowledge is created. In science of physics under the Newtonian and Cartesian paradigm, objectively measurable reality exists out there independent of human perception. In quantum physics, however, just as particles and waves have ceased to be mutually exclusive entity, the observed reality has ceased to be independent of the observer. One can thus say that scientists in different paradigm who construct their different theories through

their own different methodologies are actually living in different world of reality.

3. Part two: Spiritual dimension of health

Health as perceived by the mainstream health and medical establishment has been defined in accordance with the biomedical model of health, which is philosophically rooted in reductionistic and materialistic paradigm. The basic assumption of this worldview rejects any mode of existence other than those objectively measurable entities. In other words, the world of scientific materialism contains such things as the elusive, non-quantifiable social and spiritual dimensions of health. Ontological and epistemological assumptions of modern science have precluded inquiry into the realm of existential experiences for they cannot be objectively examined. Once qualitative dimensions have been excluded as irrelevant, science has confined itself to the realm of materialistic reality. Little wonder there is a lack of common language among scientists in addressing spiritual life.

From the Kuhnian vantage point of scientific paradigm, one is reminded that scientific rationality is relative to its underpinning paradigm. Health, as well as any other aspects of natural phenomenon, could be defined differently in different paradigm of thought. One is, therefore, has to bear in mind that reality in one's worldview can be just as real as other reality in alternate worldview. Imposing a worldview as one and the only legitimate view is a risky business for, as Rescher suggested, future science might change what is accepted as true in present science.

Not only can we never claim with confidence that the science of tomorrow will not resolve the issues that the science of today sees as intractable, but one can never be sure that the science of tomorrow will not endorse what the science of today rejects. This is why it is indefinitely risky to speak of [something] as inherently unscientific. Even if X lies outside the range of science as we nowadays construe it, it by no means follows that X lies outside science as such (Rescher, 1983: 169).

In the dominant paradigm of biomedicine, health is defined and conceived of as a state of normal bodily functions and biological processes. Mind and body are separate entities. In the world of medical reality, therefore, the multiple dimensional characteristics of life are reduced into its mere materialistic (biological) dimension. To account for a multidimensionality of life and health, we require a more holistic view of nature and may need to seek help from other knowledge tradition to understand life more fully.

Studies in new scientific paradigm seem to offer a new path of inquiry for our purpose. Holistic paradigm and the science of complexity argue that in a complex system, be it a living organism, a social system, or an ecological system, the whole is more than the sum of its parts (Capra, 1997). When elements come together and

form into a complex system, there are new properties emerging, which are not the properties of its constitutive components. This emergent property has to be studied in a holistic way since when the constitutive components are taken apart, as it is done in an atomistic scientific approach, the emergent property ceases to exist. When biological components constitute life, there are emergent properties, which are not reducible to its parts. Spirituality and humanity are a few of the emergent properties and thus defy reductionistic methodology commonly employed in scientific investigation.

Theoretical postulation aside, working experiences in medical practices and health programs also indicate that life is more than just biological processes. Lived experiences of people living with AIDS (or PWAs) or cancer survivors, for instance, seem to indicate that spiritual health is a salient dimension of a healthy life. Examples from various biographical accounts suggest that PWAs were able to come to term with life when they could find a new meaning of life. With this spiritual transformation, they would live an active and determined life full of purposes. In a sense, they were transformed from object being acted upon into a subject acting on the world. Such an achievement of being able to live a purposeful and meaningful life, in certain extent, has made misery in other existential realms of life, be it physical, mental, or social suffering rather trivial. One lesson can be drawn from such examples that "If you know the why of your life, you can live with any what and how." The why of our life is part of the existential purpose one gives to one's own life, and this constitutes the spiritual dimension of life.

Problems emerge when one attempts to incorporate spiritual dimension of health into policy processes and actions. Health impact assessment is a good example of such problems. In Thailand, local communities are exerting that impact on their health should not be considered only in physiological terms. They define health not in accordance with the biomedical model but in ways that defy the demarcation between mind and body, between this worldly and otherworldly existence, and between natural and supernatural worlds. If healthy life is defined as good life then how good is a life without purpose and without aesthetic dimension. To take local perspective into account in health impact assessment, or for that matter in any health policy processes and actions, one has to come to term with non-quantitative dimension of assessment. For that, one has to start with asking the question what are the criteria as to value or justify the existence of dimensions of health that are not well understood by the science of today. William James, in his prestigious lectures on *The Variety of Religious Experience* (1961), posits that the existence and value of religious experiences

can only be ascertained by spiritual judgment...based on our own immediate feeling primarily; and secondarily on what we can ascertain of their experiential relations to our moral needs and to the rest of what we hold as true (James, 1961: 33).

James suggested three criteria in valuing religious experiences: immediate luminousness, philosophical reasonableness, and moral helpfulness. Neither can

religious experience be judged by their peculiar origin nor by blind faith; its significance must be tested by the value of their fruit. Williams James concluded his inquiry into the variety of religious experience by pointing out the characteristics of religious beliefs that are critical for us here to consider the spiritual dimension of life:

- 1. that the visible world is part of a more spiritual universe from which it draws its chief significance;
- 2. that union or harmonious relation with that higher universe is our true end;
- that prayers or inner communion with the spirit thereof—be that spirit "God" or "Law"—is a process wherein work is really done, and spiritual energy flows in and produces effects, psychological or material, within the phenomenon world;
- 4. a new zest which adds itself like a gift to life, and takes the form either of lyrical enchantment or of appeal to earnestness and heroism;
- 5. an assurance of safety and a temper of peace, and, in relation to others, a preponderance of loving affections (James, 1961: 377).

One can see that these characteristics presuppose a totally different ontological assumption from that of prevailing scientific thought. What are real and existing are not only the disenchanted material world but also an invisible spiritual world knowable only through personal inner experience. Furthermore, there is good life and bad life. Good life is constituted by spiritual fulfillment, an actualization of the self, or the union of the self with higher teleological purpose of life. In knowledge traditions other than biomedicine, it is therefore possible to conceive of serious illness as involving a quest for ultimate meaning. This is particularly true for many cancer survivors to whom the appearance of malignancy itself is nothing more than a warning that life is indeed definite, that there is no time to wander around but it is now time to be serious on spiritual fulfillment.

However, spirituality is not necessarily religious or otherworldly. Spiritual fulfillment can also be rooted in a secular world and non-religious ideology. Feminist activists and people working in ecological conservation groups, antinuclear movements, charitable organizations, development agencies, for instance, in seeking to fulfill their vision of a good life, can also be considered as spiritual quests. While traditional ideas on spirituality stress being one with the god or the law of truth, modern spiritual life is defined in a more humanistic way as the realization of a purposeful and meaningful life, as self-fulfillment, or as self-actualization. It is rather difficult, then, to come up with a definition of spiritual health because spirituality cannot be restricted or made to stand for any single principle or essence. Rather than define spirituality in terms of religion, religion should be considered as one among many other possible gateways to spiritual life. Once we attempt to single out a definition with definite clarity and specificity, we run the risk of oversimplifying the idea. The question then needs

to be asked: What are we aimed at when we define an idea? Again, Williams James gave us some suggestions:

And, if we should inquire for the essence of "government"...the man who knows government most completely is he who troubles himself least about a definition which shall give their essence. Enjoying an intimate acquaintance with all their particularities in turn, he would naturally regard an abstract conception in which these were unified as a thing more misleading than enlightening (James, 1961: 39).

Defining spirituality is a complex undertaking because there seems to be neither one specific spiritual experience nor single spiritual quality. Also, spiritual health seems to resist defining because it is not only subjective but relational state of inner experience. Spiritual growth is also non-linear. All these qualities of spiritual life make it a dogmatically impossible task to come up with all encompassing definition of spiritual health. Perhaps, to define it is to rob it of the mystical quality essential for being what it has been.

4. Part three: Incorporating spirituality in health impact assessment

It is clear that a cross-paradigm dialogue is needed in the attempt to incorporate spiritual dimensions of life into the process of health impact assessment. Due to the fact that spirituality belong to a paradigmatic thought radically different from mainstream scientific paradigm, an approach starting with an attempt to come up with indicators and measurement may be too restrictive and mechanical. Spiritual health and its embodied form of knowledge often resist objectification and verbalization. Rather than emphasizing on definition and indicators, it is more practical to appraise spiritual aspects of life through assessing circumstantial factors and evidences. The following conceptual framework proposes two clusters of factors contributing to spiritual health. They are:

- (1) Factors enhancing spiritual life
 - supportive infrastructure of spiritual life
 - · conducive environment for spiritual health, and
- (2) Paradigmatic changes detrimental to spiritual health.
- 4.1. Factors enhancing spiritual health

4.1.1. Supportive infrastructure for spiritual life

Supportive infrastructure for spiritual life

- A. Knowledge sources: common storehouse of spiritual knowledge
- Textual sources
- Myths and folklore
- Rituals and rites

- Metaphors and symbols
- Practice and embodied knowledge

B. Institutional foundation: structural support of spiritual life

- Temples/mosque/church
- Spiritual leaders/ritual functionaries
- · Structures of associational life
- Networks of communication
- Community of practice

C. Spatio-temporal organization of spiritual life

Temporal organization

- · Calendrical rites
- Customary ceremonies
- · Life-Cycle rituals
- Vocational calendar

Spatial organization

- Sacred place
- Spiritual sanctuary
- · Gathering sites
- · Architecture and city planning

Factors enhancing spiritual health can be divided into two groups: spiritual infrastructures and conducive environment for spiritual health. Spiritual infrastructures refer to basic cultural elements that support spiritual practices. Within environment conducive to spiritual growth, these basic infrastructures become the framework by which individuals and communities engage with their spiritual practice.

Spiritual infrastructures can be further classified into three categories: knowledge sources, institutional foundation, and spatio-temporal organization of spiritual life.

- Knowledge sources: Each spiritual tradition has its own way of conserving its wisdom. Knowledge sources, which are common storehouses of spiritual knowledge, could be textual sources such as written texts or religious manuscripts. In oral tradition society, knowledge could be kept and memorized in the forms of myths and folklore. As Connerton (1989) suggests in his book, How Society Remember, rites and ritual ceremonies are also sites where collective memory and knowledge are kept. Metaphors and symbols also play important roles in ancient mysticism. In addition, since spiritual knowledge is realized and embodied rather than memorized and cognate, the state of knowing and what being known are quite inseparable. Knowledge is therefore in the practices and is in the life of persons. Praxis and the embodied form of knowledge must be considered as sources of spiritual wisdom.
- Institutional foundation: Religious or spiritual institutions are the skeleton of spiritual life. Temples, mosques, and churches are, for instance, structures of collective spiritual life. Spiritual leaders and ritual functionaries are also important parts of religious institutions. These collective realms of spiritual life serve as the

community of practice where new generations socialize and learn about their indigenous knowledge system.

• Spatio-temporal organization of spiritual life: Impact on spiritual health can also be the consequences of changes in spatial and temporal organization of life. Religious practices often relate to rituals and ceremonies such as fasting or lent seasons, ordination, or Sabbath. Other temporal organizations include customary ceremonies, initiation rites, vision quest, and other rites of passage. Perturbation in these temporalities can disturb communal religious practices and draw strong resistance from Church or faith community. Spatial arrangement is also important aspect of spiritual life. Most religious traditions maintain special places or memorial sites endowed with symbolic meaning. Sacred places, spiritual sanctuary and site of pilgrimage for spiritual retreat or meditative practices are conspicuous places where spiritual pursuit is concentrated. Other awe-inspiring or majestic places could also play important roles in community's religious life. Policies or projects that would change time (i.e. work schedule) or involve alteration of place must consider their impact on the spatio-temporal organization of spiritual life in the communities.

4.1.2. Conducive environment for spiritual health

Conducive environment for spiritual health

- · Adequate basic physiological needs
- Balanced gender roles
- Multigenerational society
- Community cohesiveness
- Optimal life tempo
- Shared cultural heritage

Healthy spiritual life not only relies on symbolic form and cultural meanings, it also depends greatly on contextual circumstances. The following are conditions that enhance spiritual development.

- Adequate procurement of basic physiological needs: The relationship between spiritual and physiological condition is multifold and dynamic. In religions all over the world, suffering, be it physiological or mental, has lead spiritual seekers to a moment of truth. At the same time, most of us would agree with the dictum a sound mind is in a sound body. Yet various accounts of illness experience reveals that spiritual strength could also lead one through physiological crisis. The baseline, however, is spiritual health is impossible to achieve with an empty stomach.
- Multigenerational society: Although the meaning and significance of spiritual fulfillment varies and has to be realized and reinvented in each generation, the co-existence of multiple generations is important factors in passing on spiritual know-how. This is particularly salient considering the fact that many aspects of religiosity are in oral tradition. Migration of labors and

youngsters into the cities, leaving the elderly home alone, not only effects social well being of the elderly, but also makes it more difficult for participation and learning of indigenous system of knowledge among the young.

- Balanced gender roles: Current scientific paradigm has been criticized as androcentric and thus supported the existing male-dominated power structure. In spiritual healing traditions and indigenous system of knowledge, the roles of women are more prominent than it is in modern scientific community. The introduction of cash crop in many traditional matriarchal societies has altered gender roles resulting in women being marginalized. It may not be a coincident that, in such societies, social well being and spiritual fulfillment are in the decline.
- Community cohesiveness: Most religious traditions have their roots in community life. Christian church, Buddhist monastery, or Islamic mosque is community of faith. It is in the communities that virtues and precepts are realized. As Durkheim (1976) suggested, the worshipping of god or supernatural power is actually worshipping the collectivity of community itself.
- Optimal life tempo: Fast pacing city life and tedious repetitiveness of industrial work are unhealthy for spiritual life. Spare time of calmness and serenity allows deep reflection and self-examination. Rush hours and traffic congestion, for instances, can be relatively disturbing to spiritual health compare to life tempo in countryside.
- Shared cultural heritage: Common languages and shared symbolic meanings can facilitate spiritual education within group. Mutually understandable language, cultural idiom, and symbolic form not only help in communication and education, the pride of local wisdom and cultural heritage also contribute to collective support of local spiritual traditions.

4.2. Paradigmatic changes detrimental to spiritual health

Changes in certain aspects of the community can undermine spiritual health. In addition to the weakening of spiritual infrastructure and conducive environment mentioned above, changes in mode of thought can be most detrimental to spiritual health. The following are paradigmatic changes that could render spirituality irrelevant.

- Disenchantment of life and nature: As mentioned earlier, spirituality is rooted in paradigm of thought that conceived the visible world as part of a more spiritual universe from which life draws its chief significance. The true end of being is the union or harmonious relation with that higher universe. The conflicting materialistic worldview pays little notice on this mystified universe. In fact, mechanical worldview of Newtonian and Cartesian paradigm begins with the disenchantment of the universe by turning it into clockwork (see Griffin, 1996).
- *Masculinization of thought*: Another sign of the domination of mechanical worldview is the musculinization of thought. Androcentric worldview of modern science emphasizes on objectivity and the separation of the knower and the known. A more feminine way of knowing is through relatedness and sympathy (see Bordo,

1987). While physical sciences aim at disclosing the law of nature in order to control and exploit natural resources, mysticism and revelation aim at becoming one with the enchanted nature. To know is to feel and to be part of the unfathomable greatness of being.

- Decrease of cultural diversity: Spiritual experiences are culturally specific as each culture has its own ontological and epistemological assumption. Just as biodiversity provides us with natural resources, cultural diversity provides humanity with varieties of spiritual resources.
- *Materialism and consumerism*: Materialism and consumerism reduce the multidimensional of life into one that define good life as being merely able to possess and consume (see Featherstone, 1991).

Paradigmatic changes detrimental to spiritual health

- Disenchantment of life and nature
- · Masculinization of thought
- · Decrease of cultural diversity
- · Materialism and consumerism

5. Conclusion

In assessing the impact of policies or project on health and well being of the community, it is crucial first of all to examine how health is defined. It is clear from the discussion above that the definition of health depends on the underpinning paradigm of thought. In the dominant scientific paradigm, health is defined in terms of the normality of biological functions and processes. This biomechanical worldview rejects the existence of other realms of existential experience that are not objectively measurable. Social and spiritual health therefore received little attention in the official policy processes and actions. If health impact assessment has to take into account local worldview, it must first of all examine its own primes. The discussion above suggests that to incorporate spiritual dimensions of health into any policy processes and action, epistemological assumption of scientific inquiries needs to be examined. For in modern scientific paradigm, spirituality, mind, and soul are not considered legitimate fields of knowledge. As James put it

The Sciences of nature know nothing of spiritual presences...The scientist, so-called, is, during his scientific hours at least, so materialistic that one may well say that on the whole the influence of science goes against the notion that religion should be recognized at all (James, 1961: 380).

That modern sciences know nothing of spiritual presence is in fact due to its paradigmatic assumptions regarding ontological existence. This paper offers an initial understanding towards a cross-paradigm dialogue in the attempt to incorporate spiritual dimensions of life into the process of health impact assessment. It

proposes that an approach starting with an attempt to clarify once and for all the definition of spirituality may be too restrictive since defining is essentially an objectification of knowledge which presupposes a separation between the knower and the known. Defining spirituality is almost an impossible task because its subjective quality and its embodied form of knowledge often resist objectification and verbalization. Rather than emphasizing on definition, this paper suggests a practical conceptual framework for appraising spiritual aspects of community life through various circumstantial evidence and factors. Since modern sciences know so little about spiritual aspects of life, it is important to learn between different modes of thought in different paradigm. The process of continuing dialogue is therefore more important than seeking the definite unified conclusion that would end all other debates.

References

Bordo, S. The Cartesian Masculinization of Thought, Chapter 6 of *The Flight to Objectivity: Essays on Cartesianism and Culture*. Albany: State University of New York Press; 1987. p. 97–118. Reprinted in Cahoone L, editor. From modernism to postmodernism: an anthology. Cambridge, MA: Blackwell Publishers; 1996.

Capra F. The turning point. New York: Simon & Schuster; 1982.

Capra F. The web of life: a new understanding of living systems. New York: Anchor Book; 1997.

Connerton P. How societies remember. Cambridge, UK: Cambridge Univ. Press; 1989.

Durkheim E. The elementary forms of religious life. London: Allen and Unwin; 1976.

Featherstone M. Consumer culture and postmodernism. London: Sage Publications; 1991.

Griffin DR. The reenchantment of science. In: Cahoone L, editor. From modernism to postmodernism: an anthology. Cambridge, MA: Blackwell; 1996. p. 665–86.

James W. The varieties of religious experience. New York: Collier Books; 1961.

Kuhn T. The structure of scientific revolutions. 2nd ed. Chicago: University of Chicago Press; 1970.
Rescher N. The unpredictability of future science. In: Cohen RS, Lauden L, editors. Physics, philosophy, and psychoanalysis: essays in honor of Adolf Grunbaum. Dordrecht: D. Reidel; 1983. p. 153-68.