

Is Spiritual Intelligence (SQ) or Spiritual Quotient an Intelligence? Howard Gardner's Theory of Multiple Intelligences analyzed.

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Abstract

The concept of spiritual intelligence is currently at the focus of scientific debate. One of the most important problems is if it is a valid intelligence that meets the criteria developed by scholars. In this paper, I look at this idea in the context of Howard Gardner's theory of multiple intelligences and show some evidences from biology, neurology and other scientific disciplines.

Keywords: spiritual intelligence, biology of knowledge, developmental psychology, logical analysis, neurology, neuroscience, transpersonal psychology, Howard Gardner, theory of multiple intelligences, cognitive sciences.

A. Introduction

What does it mean to have spiritual intelligence? I described spiritual intelligence in a recent paper (Moleka, 2021). Spiritual intelligence, according to Griffiths (2020), is a higher dimension of intelligence that activates capacities such as a new level of understanding, empathy, and innovation, and stems from a deep understanding of its goals and reasons for existence, resulting in an improvement of talents and work. It's also a "transpersonal intellect that extends beyond human boundaries, a non-rational dimension that connects man to nature and to God." (Moleka, 2021).

Scholars like Maslow, Jung, and Fowler have demonstrated the importance of spirituality in the formation of human personality traits and motivations (Drigas and Mitsea, 2020). Spiritual intelligence, according to Zohar and Marshall (2000), is the pinnacle of intellect, the ultimate intelligence, and helps us to make acceptable judgments on events and act accordingly. It allows people to analyze conditions in order to figure out how to change them, rather than reacting to them. This allows people to become masters of situations rather than just enduring them. This intelligence also aids in answering questions about the profound meaning of things and their value, allowing one to act holistically. Spiritual intelligence is also a multidimensional transformational spirituality. Internal and external transformations are taking place (a new relationship with God, a new relationship in searching harmony with oneself and well-being for the community, and

harmony with the environment in being preoccupied not only by the present but also by the resources for the future generations). Values and rationality are included, but it goes beyond them. It also serves as the foundation and basis for all transformational activities.

B. Gardner's theory of multiple intelligences

Howard Gardner changed the world's perception of intelligence, which was previously defined in terms of IQ (intelligence quotient). Professor of psychology at Harvard University's Graduate School of Education, he wrote "Frames of Mind: The Theory of Several Intelligences," in which he demonstrates the presence of multiple intelligences rather than a single mind that can be measured and quantified. Gardner isn't the first to advocate for multiple intelligences. At the polar opposite of Spearman (1904), who maintained a one-dimensional approach to intelligence, the proponents of the factorial current promoted the notion that intelligence is made up of many components. For their ratings, Cattell and Vernon (1971) argued a hierarchy of intelligence, with *g* as the general component and several secondary variables such as the verbal and visuospatial factors. Cattell discussed the *gf-gc* theory, which combines fluid and crystallized intellect. Fluid intelligence is a capability to solve issues that is innate and declines with age, whereas crystallized intelligence is a product of learning and consists of knowledge of facts and procedures. It is contingent on the use of fluid intelligence in novel contexts (Horn and Cattell, 1966; André, Loye and Laurencelle, 2015).

Philip Kent (2017), on the other hand, believes that the earliest research on intelligence comes from the 19th century, when Francis Galton (1883) conducted quantitative research on human talents in his Anthropometric Laboratory in London city. Spearman began working on general mental or general intelligence in late 1904. The effects of heredity on (*g*) were considerable, and he discovered no racial disparities. Beardsley (2004) divides intelligence theories into four categories: Assimilation and accommodation, as described by Jean Piaget, is a developmental process. The psychometric models based on measurement concepts with Raymond Cattell and his theory of fluid and crystallized abilities, the information processing models with Robert Sternberg and Howard Gardner, and the contextual model with products with J. P. Guilford result in a Rubik's Cube of 120 discrete aspects of intelligence.

Intelligence is not regarded in the same manner by all civilizations; hence being intelligent has varied meanings in different cultures and periods of history, according to him. (Beardsley, 2004). Gardner (2003) lists the many types of intelligence as follows:

-Linguistic: skills related to the delivery of speeches, language proficiency, and effective communication. The ability to think, communicate, and appreciate complicated meanings using words. Poems, wordplay, essays, and written expressions of thoughts...

- Musical: ability to do musical tasks such as song development, melodies, and their execution, a keen ear for listening to audio, and playing musical instruments...

-Logical-mathematical ability: the ability to reason logically and test scientific theories. and solutions systematically, to calculate and solve complex mathematical operations, to know, classify, use mathematical operations, to identify patterns, to experiment and develop arguments in a logical manner. -

Space: ability to sense the exactness of shapes, as well as the ability to recreate and modify them without assistance. Producing artwork, technical drawing, visual puzzle solving, navigating, piloting, drafting plans or other graphic representations, designing...

-Kinesthetic: control and harmony of bodily motions; body skills or manual. Use all of their body parts to solve problems or create. Execute movement sequences; use the body to communicate thoughts and feelings. Everything from gymnastics to ballet to mime to the capacity to create and repair things like masons and mechanics...- Interpersonal: skills in interpersonal

relationships: sensitivity to moods, temperaments, motivations, to have empathy. Being able to cooperate and interact socially, to maintain long term relationships, ability to organize and manage people. Know how to negotiate, reconcile, and lead a group.

- Intrapersonal: ability to introspection, self-analysis, and the representation and successful use of a truthful and accurate image of oneself. Metacognition (understanding one's learning process), appraisal of one's strengths, limitations, actions, and anxieties, as well as a rudimentary understanding of emotions

-Naturalist: capacity to recognize and classify various flora and fauna species. Understanding, reasoning, and solving problems in the natural environment, as well as studying and safeguarding various ecosystems. -

Existential: the ability to ponder deeply about the meaning, scope, and purpose of human existence (why am I on earth, what is my mission)

Other authors have introduced the concept of emotional intelligence, which combines aspects of intrapersonal and interpersonal intelligence. Since Wayne Payne's dissertation on the subject in 1985, emotional intelligence has sparked a lot of curiosity. Mayer, Salovey and Mayer, and Geher all contributed significantly to our understanding of emotional intelligence. others' emotions, to discriminate among various emotions, and to use the information to guide thought and action. Daniel Goleman popularized the concepts and applied them to business success with his

1995 book *Emotional Intelligence* (Beardsley, 2004). By emotional intelligence (EQ) you can understand and feel for other people; an ability to read other people's emotions or read the social situations that we are in, and to behave or respond appropriately, an intelligence to feel, helping leaders to identify the right people for the right job. Tony Buzan (2003) added sexual intelligence in this list as an understanding of the strength of everybody (male or female) and the ability to communicate appropriately with the opposite sex.

Marco Tavanti (2006) inspired by the works of David C Thomas, Kerr Inkson and Daniel Goldman speaks about cultural intelligence or cultural quotient (CQ) as the skills for leaders and managers to recognize the cross-cultural difference and consequently to choose appropriate behaviors according to each cross-cultural context. It is related to social intelligence.

From these different bits of intelligence developed by Gardner, careers can emerge: for linguistic intelligence, for example, someone can become a great actor, a renowned lawyer, a talented journalist, a famous writer, an outstanding communicator. For musical intelligence: conductor, performer, sound engineer... For logical-mathematical intelligence one can be an engineer, accountant, economist, statistician, computer scientist ... For spatial intelligence: graphic designer, architect, town planner ... For kinesthetic intelligence: actor, dancer, mechanic, firefighter, surgeon ... For naturalistic intelligence, one can become an anthropologist, zoologist, curator, forest ranger, landscape designer... For interpersonal intelligence, someone can excel as a manager, human resources manager, negotiator, psychologist, nurse, political or religious leader. Gardner is at odds with a one-dimensional view of intelligence, also criticizing the Western model of education which sees logical intelligence as the pinnacle. His discovery upsets the very definition of intelligence and brings down from its pedestal the all-powerful logical-mathematical intelligence that Piaget had placed as an essential and supreme foundation for school learning, a necessary and indispensable criterion for success and performance. In addition to education, many sectors have used Gardner's data to reform or advance their practices such as counseling (Pearson, 2011).

C. Weakness of this theory

Among the weaknesses of Gardner's conception of multiple intelligences, there is a little tautological thinking in his way of defining things for example for him, kinesthetic intelligence lies in the ability to use his body, and a person can fully make use of his body because that he has good kinesthetic intelligence. The second weakness is the confusion between the notion of intelligence with the notion of talent or gift.

For Klein this conception “is too broad to be useful for planning curriculum, and as a theory of ability, it presents a static view of student competence” (1997). For Gardner the intelligence works via intellect so instead of talking about the theory of intelligence it will be normal to talk about the theory of intellect and his conception is very restrictive (Messick, 1992). Robert and Michele Root-Bernstein take the theory of multiple intelligences a step further. They argue that “multiple intelligences” is not intelligence per se. Rather, they are the media through which intelligence is expressed. The artifacts created through these media are symptoms of intelligence. According to them, thinking and creativity precede logical and verbal expression, and are experienced by the individual in pre-verbal ways. Thus, to know a thing is first experienced through emotions, intuitions, visual images, and bodily feelings. For example, one may hunt for just the right word by checking a thesaurus or dictionary. The right word, though, maybe elusive and the individual proceeds with the best approximation that comes to mind (Beardsley, 2004). Root-Bernstein (2009) provides illustrations of those with multiple gifts from the historian of science Paul Cranefield who was among the founders of biophysics in the mid-19th century and finds a direct correlation between the number and range of avocations everyone pursued and the number of major discoveries he can make. Cranefield and Meyers integrate ideas from diverse fields as the basis of creative giftedness and ask not “who is creative?” but “what is the basis of creative thinking?” Polymath is therefore the main source of any individual’s creative potential. The question of “who is creative” must then be re-examined in light of what necessary for creative is thinking (Beardsley, 2004).

D. Scientific criteria of spiritual intelligence (some evidences).

From the work of Howard Gardner (1983), criteria have been established to qualify particular skills as intelligence. These criteria are derived from the biology of knowledge, developmental psychology, and logical analysis.

- First, this intelligence must have moral capacities attached to it.
- Secondly the ability to adapt, solve problems in specific contexts, and living with an ethos.
- Third, the development with advancing age of these faculties.

He also recommends neurological, biological, and experimental psychology evidence. Gardner (2009) thinks that the statute of intelligence concerning spirituality depends upon criteria and the definition of what we call intelligence. For Emmons (2009), spirituality is a form of intelligence and gives evidence of it because all intelligence is a set of skills and abilities that enable people to solve problems and also achieve goals in their daily life. He talks about spiritual intelligence, the capacity for transcendence; the ability to enter into high spiritual states of consciousness; the

ability to engage in daily activities, events, and relationships with a sense of the sacred; the ability to use spiritual resources to solve life's problems; and the ability to adopt virtuous behavior such as forgiving, showing compassion. To these criteria, Noble (2000) added the recognition capacity that the physical reality is embedded in a larger multidimensional reality and Vaughan (2002) added the capacity for thought and existential questioning. According to Zohar and Marshall (2001), spiritual intelligence represents the process by which the human brain reconceptualizes experiences with signifiers and signified to borrow the expression of Swiss linguist Ferdinand de Saussure (1959). We should add holism which consists in mobilizing and motivating the people to work from a perspective that encompasses the whole organization and not being satisfied with the micro perception of their work only, anticipating the long-term consequences of the actions of today (Alosaimi, 2016). For Zohar and Marshall (2001), there are three thought spells, three kinds of intelligence, and neural organization in the brain. The brain contains 10 to 100,000,000,000 neurons; there are about 100 different kinds. Each cell has roots, a cell body, a trunk, and branches. Intellectual quotient (IQ) runs along neural pathways and helps us form associations between things like hunger and food, mother and love. It underpins equalization. Neural networks can reconnect with experience. Associative intelligence, including emotions, is not immediately verbal. We have two memory systems, one based on precise neural wiring in the hippocampus, the other based on associative neural networks located throughout the brain. The first is subject to degradation with age; the second is not. Recent memory is in the first; long-term memory, including emotions, is based on the second. Emotional reactions have an associative basis. Associative thinking learns as you go, but it tends to be linked with habits. We have a third type of thinking, which is creative, insightful, and intuitive. We learn and understand with IQ and emotional quotient (EQ), but we invent and create with spiritual quotient (SQ). ECGs of people meditating show coherent brain waves across large areas of the brain. Magnetoencephalography is a new technology that has made it possible to detect oscillations at 40 Hz throughout the brain. These are postulated to enable information processing between serial and parallel neural systems in the brain; provide a neural basis for consciousness itself, and are the neural basis. Discoveries in neurology have shown that in the human brain there is in the temporal lobe a field, a space for spiritual experiences. And it takes more and more space with spiritual exercises like prayer (Zohar and Marshall, 2001).

For Griffiths (2020), the studies in the field of neurology have established that the human brain has three distinct processing modes, called serial, parallel, and synchronous. Serial processing is in connection with IQ functions in the left brain but parallel processing is connection with EQ

functions in the right brain. And synchronous processing is associated with SQ functions in the whole brain. King and DeCicco (2009) proposed a scale of spiritual intelligence self-report inventory (SISRI 24) “designed to measure a person's level of spiritual intelligence” (Bt Wan Zulkifli , Bt Ishak , Bt Mat Saad, 2017) and summarized in four components: the critical existential thinking (CET), the personal meaning production (PMP), the transcendental awareness (T.A) and the conscious state expansion (CSE). CET is the ability to criticize the meaning of one's existence, the reasons, and the goals of life. CET includes certain components such as critical thinking (CT) and consists in analyzing, conceptualizing, applying, and evaluating data or information coming from experience, reflection, or observations. Personal meaning production (PMP) is the ability to build meaning, starting from experiences of all kinds, a kind of personal philosophy of life.

Transcendental consciousness (TA) is the ability to identify transcendent dimensions or patterns of self, others, and the physical world during states of consciousness normal, accompanied by the ability to identify one's relationship to oneself and the physical. Conscious state expansion (CSE) is the ability to enter and exit higher states of consciousness (e.g. pure consciousness, cosmic consciousness, and oneness) and other trance states for example during deep contemplation, prayer ...).

Zohar and Marshall's (2000) have some questions to evaluate someone's spiritual intelligence:

1. Do you follow your convictions or inner voice even if it is at your own risk?
2. Are you motivated by ideals like helping others and serving worthy causes?
3. Do you have a broader contextual view of issues and events?
4. Can you perceive the unsaid speech of others, feel their unexpressed feelings?
5. Do you believe in the multiplicity of possibilities to solve a problem or achieve a goal?
6. Do you see a problem from different angles or perspectives?
7. Do you seek to understand the true causes behind appearances? A tendency to understand the why behind each phenomenon or event.
Are you dissatisfied with current and popular explanations of people's problems?
8. Do you believe that your performance, talents, and success come from God or from you?

For Arnout and Alkhatib (2019), since 1999, the two components of spiritual intelligence namely: the perception of the global image and intuition is associated with the right hemisphere. The

findings of studies in biology and neurology attest to the existence of a link between the skills of spiritual intelligence, such as intuition, holistic vision, empathy, honesty, and a biological basis associated with the appearance of special processes in specific regions of the brain, as well as the possibility of genetic factors. Davison and his team's research demonstrated that those who did relaxation exercises to increase alertness and meditation ability showed high involvement activity in the front of the cortex during this exercise time compared to others times when they didn't. The development of spiritual intelligence skills is associated with long and short term changes in specific areas of the brain (Arnout and Alkhatib, 2019; Basso and Suzuki, 2017). The biopsychosocial-spiritual model of care shows that everyone has a spiritual history that could help to some extent to shape the understanding of caregivers that each patient is a whole person, and in the case of illness, it is man as a whole who is affected not only biologically, psychologically, and socially but also spiritually (Saad, de Medeiros and Mosini, 2017). Even if Western health systems neglect the existential and spiritual needs of patients, because of their biomedical vision of man which recognizes only physical needs thus excluding the holistic dimension of care, current research shows that clinical intervention that strengthens a patient's spiritual awareness helps decrease the patient's level of psychosocial distress. Spirituality improves physical and mental health and can be especially important for terminally ill patients (Arnout and Alkhatib, 2019).

Problem-solving is aided by spiritual intelligence. Spiritual intelligence does, in fact, provide a feasible third brain process for synchronous neural oscillations that unify data throughout the brain, which then unifies, integrates, and has the capacity to alter material arising from the other two processes: reason and emotion. It promotes communication between the mind and the body, reason and emotion, and the known and unknown. The information frontier also self-organizes. Some aspects of this intelligence, like as creative reasoning, self-control, integrity, and asking "why" inquiries, can be used to a much broader range of situations than existential problems. These values can be used to think about and solve relationship issues. They can also be used to develop and formulate complex statements and resolution policies. Spiritual resources and expert systems are intertwined, and both can help you choose an effective path from a plethora of options. A holistic approach to overcoming such problems must include spiritual wisdom. The capacity to employ a multimodal approach to problem-solving while learning to listen to your inner voice is known as Inner Voice Strategy. We have problem definition, problem analysis, and problem solution in the problem-solving process, generation of possible solutions, solution analysis, selection of the best solutions, and planning of the next course of action. Without

spiritual intelligence, it is difficult to explain the comprehensive planning of human intelligence and to arrive at lasting and holistic solutions (Kadkhodaa and Jahanic, 2012).

Conclusion

Even if Tirri and Nokelainen (2011) prefer the term sensitivity, I believe that spiritual intelligence is a valid intelligence such as demonstrated above. As noted by Zappalà (2021), spiritual intelligence is “the cognitive ability to find higher meaning, value, and purpose in life through transcending rational intelligence” but we need more empirical and theoretic works (Atroszko, Skrzypińska and Balcerowska, 2021) to sustain this emerging paradigm and build a solid instrument of its measure (Ahmad Peerzadah, Mufti and Ahmed Nazir, 2018) such as SISRI 24 in the Polish context (Skrzypińska and Atroszko, 2016). Momenia and Vatankhah (2013) did similar experience among some students without a conclusive result. As noted by Arnout and Alkhatib (2019): “spiritual intelligence makes us rational, emotional and spiritual beings integrated” and could become “the hope of all humanity” (Arnout and Alkhatib, 2019).

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