

*Chapter 9***The Consciousness Quotient: Introducing the Conscious Experience as a Research Variable in Psychological Assessment**

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**I. CONSCIOUS EXPERIENCE AS A RESEARCH VARIABLE**

The scientific evaluation of consciousness has been a topic of debate over the last century in different scientific communities in different academic fields: for example, psychology and cognitive science, philosophy, neuroscience, psychiatry and, lately, quantum physics. As consciousness is a subjective experience, the first- and second-person approaches seem to provide valuable information but, unfortunately, the first-person methods offer no scientific results, unless statistical analyses are provided (Varela & Shear, 1999; Dennett, 2001).

The research problems come from the methodological inability to isolate consciousness as an individual phenomenon. Consciousness seems to be different from all other scientific concepts and it has been extraordinarily difficult to treat it as a variable (Baars, 1997). In psychology, measuring the conscious experience with assessment instruments and statistical methods has only rarely been a topic of research, perhaps because psychologists find it difficult to create a method that would reach a satisfactory level of significance as to its results (Natsoulas, 1990).

In order to use the data from self-reports in the psychological assessment of consciousness, the terminology must be explored. We need an operational definition of the conscious experience. However, first of all a distinction between awareness and consciousness is necessary. According to Brown and Ryan (2003), consciousness encompasses both awareness and attention: “Awareness is the background radar of consciousness, continually monitoring the inner and outer environment. One may be aware of stimuli without them being at the centre of attention. Attention is a process of focusing conscious awareness, providing heightened sensitivity to a limited range of experience. In actuality, awareness and attention are intertwined, such that attention continually pulls figures out of the ground of awareness, holding them focally for varying lengths of time” (Brown & Ryan, 2003, p. 822).

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Other important terminological issues come from the distinction between matched conscious and unconscious phenomena. Some of the widely studied conscious vs. unconscious polarities include: explicit vs. implicit cognition; immediate vs. long-term memory; attended vs. unattended information; focal vs. fringe contents; declarative memory (facts) vs. procedural memory (skills); effortful vs. automatic tasks; remembering (recall) vs. knowing (recognition); strategic vs. automatic control; wakefulness and dreams (cortical arousal) vs. deep sleep, coma, sedation (cortical slow waves); episodic memory (autobiographical) vs. semantic memory (conceptual knowledge), available vs. unavailable memories (Baars, 1997), rational vs. irrational (Vasile, 2012).

There is an increased tendency to use philosophy and neuroscience to explain consciousness and leave deep psychology aside. In *The view from within. The first person approaches to the study of consciousness* (Varela and Shear, 1999), Bernard Baars felt the need to emphasize this point, writing a chapter called “There is already a field of systematic phenomenology, and it’s called “Psychology.”” He writes: “the things we humans can report accurately are the same things we experience as conscious! Reportability is the generally accepted index of consciousness. In point of fact, therefore, psychologists are always asking people about their conscious experiences” (Baars, 1999). In recent years, first- and second-person procedures are becoming more accepted as valid research methodology for exploring the conscious experience (Petitmengin, 2009).

## II. THE CONSCIOUSNESS QUOTIENT (CQ)

The ‘Consciousness Quotient’ construct was developed through 15 successive studies between 2003 and 2014. The CQ-i beta version was first released in 2008 and since then, a series of studies refined the concept and the measurement procedures.

**The Consciousness Quotient (CQ)** is a composite psychological construct based on a list of traits, skills and abilities that describe conscious experience. The CQ Inventory (CQ-i) evaluates the frequency of various behaviours and the usage of specific skills and abilities, providing a detailed description of conscious awareness experiences.

**In our perspective, to be conscious means to have a degree of witnessing awareness and a degree of freedom of choice when thinking, feeling, sensing and interacting with people and the environment.**

An important element of conscious experience is intentionality, being the mind-set that allows a person to deliberately choose what behaviour to enact and what attitude to select. ‘More conscious’ (a higher CQ) means a higher degree of witnessing awareness and being less automatic in thinking-feeling-sensing, together with a higher

degree of choice when initiating a behaviour.

The witnessing perspective, which leads to the ability to observe the inside and outside worlds without engaging with them, is one of the key factors of the CQ construct.

The everyday CQ is “the level of consciousness (or the level of being conscious) that is experienced in the morning, one hour after waking up and after having had a refreshing sleep, without being exposed to any significant stimulus (coffee, TV, radio, music, talking, psychological stress). In other words, the consciousness quotient is the general level of being conscious/aware throughout a day, in regular life conditions”. This level of being conscious can change during life through the process of personal development.

### **III. THE CONSCIOUSNESS QUOTIENT INVENTORY (CQ-I)**

The CQ-i is composed of seven dimensions, which comprise the Consciousness Quotient: physical, emotional, cognitive, social-relational, self, inner growth and spiritual. These seven dimensions are the main seven factors of the Consciousness Quotient Inventory. CQ-i explores these dimensions, using questions scored with a Likert scale with six degrees.

CQ-i can be used for evaluating personal development or in psychotherapy when evaluating the progress of a client. Other areas include leadership, employee satisfaction, digital interactions, the arts, medicine, military applications and the efficacy of self-development or religious techniques. CQ-i is free to use by researchers in educational fields and for individual online testing on the CQ Institute website.

#### **Main factor structure of the Consciousness Quotient:**

**1. The Physical CQ** refers to the capacity for awareness of one’s body and of the actual elements of the environment (environmental awareness). This factor includes various traits, skills and abilities, such as interoceptive awareness, body posture, tone of voice, awareness of senses (e.g., smell, taste, touch), psychosomatic connections (how the body is influenced by emotions and thinking patterns), detecting automatic movements of the body (e.g., automatic eating behaviours), awareness of the bio-energy of the body, and a connection with one’s physical surroundings.

*Focusing attention on the body will result in a better connection with both your inner reality and outer reality. You will thus be able to identify the problems of your body in relation to the outer world. Breathing, conscious cooking and observing body movements comprise a few exercises that would help you to increase your Physical CQ. Another*

*important technique is to observe what changes occur in your body when you have emotions or when you think of specific topics.*

**2. The Emotional CQ** refers to the capacity for awareness of one's emotions and feelings, and their development and interactions. The Emotional CQ include traits, skills and abilities related to the emotional world, such as empathy, emotional validation, openness, vulnerability, recognition of people's emotions, detecting the automatic patterns in emotional life, mirroring others, emotional acceptance, emotional intelligence, the ability to select among emotions and to sustain positive emotions, adapting emotional responses to various social contexts, and acceptance of any emotions that appear in you.

*By raising the level of Emotional CQ through various personal growth techniques, you will be able to improve your personal and social life. You may find it useful to develop your emotional intelligence (e.g., [eqi.org](http://eqi.org)) and the capacity to welcome and accept all your emotions as they come.*

**3. The Cognitive CQ** refers to the capacity for awareness of one's own ideas and thoughts, of the cognitive flow in general. The Cognitive CQ is related to thinking, reflection, judgment, patterns of understanding, ways of meaning-making. It includes specific traits, skills and abilities, such as systems-thinking, intuition, awareness of cognitive filters, metacognition, self-reflection, detection of cognitive biases (e.g., jumping to conclusions, labeling, projection), accepting indecision, flexibility in thinking, critical thinking, present moment awareness, awareness of the limits of words (construct awareness), attention regulation, an ability to act with intention (choice), decision-making, mindfulness, acceptance of multiple perspectives, cognitive openness, creativity, the ability to have a panoramic view (overview) of a specific topic or situation, and the ability to manage the flow of thoughts.

*Improving the Cognitive CQ could have positive effects for the management of your thoughts. Training your attention (e.g., through mindfulness) would help you to identify less with your stream of thinking and provide you with the abilities necessary to better organize your thoughts. Sustained self-reflection (metacognition – thinking about thinking) is another useful practice to increase the Cognitive CQ (some useful techniques are available on [wisebrain.org](http://wisebrain.org)).*

**4. The Social-Relational CQ** refers to the capacity for awareness of the relations and connections with the people around us and the communities we are a part of. The Social-Relational CQ includes traits,

skills and abilities related to parental relationships, close relationships, social interactions, perception of others' communications styles, detecting social deception, cognitive empathy, social intuition, flexibility in social behaviours, outrospection (a means of getting to know oneself by developing relationships and empathetic thinking with others), awareness of in-out groups stereotypes, cognitive openness when discussing matters with others, detecting the hidden agendas of the people we listen to or talk to, and conversational skills.

*An exercise that could increase the Social-Relational CQ is to divide your attention when speaking with people: keeping your attention focused both on the person you are talking to (and their message) and on yourself, on your own body posture, thinking and emotions.*

**5. The Self CQ** refers to the capacity for awareness of one's self and one's own ego (identity). The Self CQ includes traits, skills and abilities related to identity, the self-system, one's image of life, self-awareness, connections between emotions and thinking, an ability to see one's self as objectively as possible, flexibility in ego-related thinking (e.g., the ability to make and appreciate jokes about the way we are), self-compassion, self-kindness, post-autonomous ego-development traits (goal in life, ego awareness), awareness of sub-personalities, multicultural self-awareness (e.g., recognizing how cultures you interact with influence your worldview), and autonomy.

*You can increase your Self CQ by observing your sub-personalities – the various facets of your personalities (e.g., you as a child, you as a parent, you as a friend, you as a worker, etc.), how they act and interact with each other and with the environment, and what their specific emotions, patterns of thinking, fears and behaviour are.*

**6. The Inner Growth CQ** refers to the capacity for awareness of the process of personal development, transformation and growth. The Inner Growth CQ includes traits, skills and abilities related to the evolution of personality, paradigm shifts, unlearning and learning (through pain or by open learning), openness, the language updating process, accepting criticism, abandoning old perspectives and embracing new ones, noticing resistance to change, learning after peak experiences, detecting the cognitive biases related to learning (e.g., confirmation bias), resilience, awareness of one's level of development (e.g., using spiral dynamics theory), and an ability to sustain new patterns of thinking/feeling while old patterns slowly lose their grip (awareness of the process of neuroplasticity).

*You can increase your Inner Growth CQ by learning to be more open and to accept life as it comes. Learning from criticism and embracing various perspectives for the same situation are key skills that would support your personal development.*

**7. The Spiritual CQ** includes specific traits, skills and abilities related to human connectedness, meta-awareness, witnessing awareness (non-attachment) and acceptance of experience, present moment awareness, the connection with humans and nature (environment), mindfulness, and non-reactivity to inner experiences. Witnessing experience is a key factor to the Spiritual CQ: the ability to look at your own body, thoughts and feelings, and your own awareness as a neutral witness, from the outside. This is the experience of an ‘I’, of an observer, of watching one’s self doing things.

An important part of the Spiritual CQ explores post-autonomous ego development features, including serving others, compassion for the self, transpersonal experiences, Ego as object/construct, detecting the limits of words (language as object).

The spiritual factor was developed by including the participatory understanding of spirituality: *“the spirituality of persons is developed and revealed primarily in the spirituality of their relations with other persons. If you regard spirituality primarily as the fruit of individual meditative attainment, then you can have the gross anomaly of a “spiritual” person who is an interpersonal oppressor, and the possibility of “spiritual” traditions that are oppression-prone”* (Heron, 2006, p. 6).

*Improving the Spiritual CQ could lead to an increased ability to connect with the collectivities that you live in and to experience your life as a part of a larger life that includes all of us. There are many available methods that develop the Spiritual CQ. Some of the effective ways include mindfulness-related techniques and the practices promoted by non-dual communities (e.g., conscious.tv, batgap.com) and Eastern and traditional spiritual philosophies (e.g., Ubuntu, Native American), which develop the ability to non-identify with the self-centred ego and embrace a larger perspective.*

#### **IV. CQ-I DEVELOPMENT**

The CQ-i beta version was first released in 2008, and presented the following year at the ‘Toward a Science of Consciousness’ conference. Since then, it has been updated many times in order to become a very reliable and valid assessment instrument that measures consciousness as a psychological variable.

CQ-i Beta v.2013, released in January 2013, was composed of six

dimensions which together constituted the CQ factor model: physical, emotional, cognitive, spiritual, social-relational and self-consciousness. The 51 items of CQ-i Beta v.2013 explored these dimensions using a Likert scale with six levels.

During the development process of the CQ-i, some other psychological instruments were analysed: Self-Consciousness Scale – SCS (Fenigstein, 1975), Mindfulness Attention and Awareness Scale-MAAS (Brown & Ryan, 2003), Freiburg Mindfulness Inventory (Buchheld et al., 2001), Psychological Well-Being Scales (Ryff & Keyes, 1995). Some scales from transpersonal psychology were analysed (Macdonald & Friedman, 2003) as well as some recent developments such as the “Descriptive Experience Sampling” (DES) method by Russ Hurlburt and colleagues, and the “Explication Interview” (EI) by Pierre Vermersch and colleagues (Froese et al., 2011).

Although the first version of CQ-i (2008) had a five-level Likert scale using agreement-disagreement. After consultations with various experts and several studies on a large population (studies #3, #4, #5) we decided to change the Likert scale from 5 levels to 6 levels. After this modification, reliability of the CQ-i improved significantly.

In 2012 we further explored the CQ factor model. We eliminated some items (which showed low reliability after we changed the Likert scale), and we introduced new items. After an extensive library research, we created a list of 24 criteria for designing the items. As a result, all the items were checked for their compliance with these criteria. In study #10 we used the Willis’ Cognitive Interviewing to improve the items. We re-checked and changed all the items, so that the traits we explore in each item would refer to behaviours instead of attitudes. Another important decision that improved the validity was to change the Likert scale type from agreement-disagreement to a six-level frequencies scale.

### CQ-i Beta Version. Pre-testing (2003-2010)

Study No.	When	Population, Scientific Activities	Results, Decisions
# 0	2003-2007	Literature research, Item pool, Evaluating other scales	Selecting 64 items
# 1	2007	N=150, paper-pencil	2 Items eliminated; 15 Items reformulated CQ-i beta version 62 items
# 2	2008	N=2474 50% paper-pencil, 50% online	Publication of Ovidiu Brazdau’s Ph.D. thesis, socio-demographics correlations, Body Types correlations; Online CQ-i Beta available (until 2012)
# 3	2009-2010	Consultation with experts Feedback from peer reviewers of scientific journals	Feedback from experts: Harris Friedman, Bernard Baars, Jonathan Shear, John Rowan. Feedback from scientific journals: Consciousness and Cognition, Nature. IJTS. TSC 2009 Presentation, Hong Kong. Discussions.



### Exploratory Studies. Likert Scale Revision (2009-2011)

# 4	2009-2011	Online, N= 5464, Likert 5 Online, N=112, Likert 6	(Romanian 5.012, English 1.168)
# 5		N=65, paper-pencil Likert 5 vs. Likert 6	Changed Likert Scale from 5 to 6 (kept agree-disagree types)
# 6	2011, May	N=70, paper-pencil; Military population	
# 7	2011	N=30, paper-pencil; Participants to personal development workshops	
# 8	2011	N=120, GAMA	Published article: Brazdau, O. & Mihai, C. (2011). The Consciousness Quotient: a new predictor of student's academic performance. Elsevier Procedia Social and Behavioral Sciences, 11, 245-250.
# 9	2011	N=145, paper-pencil MSCEIT, EQ-i, CPI, NEO PI-R	Presentation TSC 2011, Stockholm, Discussions.

### CQ-i Revisions – Conscious Behaviours & Conscious Life Situations (2012). Updating items.

# 10	2012, Jan.-Aug.	Extensive library research; five researchers in the research team: Petru Constantinescu, Ramona Sbircea, Iuliana Constantinescu, Andreea Butucescu and Sofia Dumitriu.	Re-checked all the items using 24 criteria. Each conscious behaviour searched for in the scientific literature. Compliance with APA, ITS and ETS Standards. Evaluation for introducing validity scales: Lie Scale, Acquiescence Scale, Extremity Response
# 11	2012, Sept.	N=12, Willis' Cognitive interviewing Likert scale evaluation: from agreement to frequencies	Article in Elsevier Procedia Social and Behavioral Sciences (2012): Consciousness Quotient Inventory Improvement: Qualitative Study Using Cognitive Interviewing Approach. Changed Likert scale to frequencies; Changed all items to be behavioural
# 12	2012, Oct.	N=120, paper-pencil	Updated 8 items and life situations/conscious behaviours
# 13	2012, Dec.	N=102, paper-pencil	All the reversed items removed Other 12 items removed Item 24 moved from spiritual to cognitive scale Statistical analysis; New items for the Lie Scale

The distribution analysis (Study # 13, Dec. 2012) indicates normal distributions along all dimensions (Table 5). The distribution of the total score is symmetrical (Skewness =  $-.396$ ; Skewness SE =  $.244$ ) but peaked, so we could consider it to be leptokurtic (Kurtosis =  $1.795$ ; Kurtosis SE =  $.483$ ). In relation to the Kolmogorov-Smirnov test for normality ( $K-S(98) = .761$ ;  $p = 609$ ), we could consider this distribution to be normal



**Distribution of Scores Along Factors (Study #13, 2012), N=102**

Factor	Mean	SD	Skewness	Kurtosis	Kolmogorov-Smirnov
Physical CQ	24.28	3.16	.016 (.241)	-.148 (.478)	.87 (p=.435)
Emotional CQ	26.93	3.19	-.025 (.239)	.825 (.474)	1.12 (p=.163)
Cognitive CQ	25.13	4.01	-.126 (.239)	.594 (.474)	1.06 (p=.206)
Spiritual CQ	38.8	6.82	-.239 (.241)	.875 (.478)	.895 (p=.399)
Social CQ	29.02	5.10	.139 (.239)	.72 (.474)	1.09 (p=.181)
Self CQ	36.46	6.41	-.08 (.239)	.565 (.474)	.626 (p=.828)
<b>Total CQ</b>	<b>159.02</b>	<b>26.44</b>	<b>-.39 (.244)</b>	<b>1.79 (.483)</b>	<b>.761 (.609)</b>

The reliability analysis (Cronbach's alpha) that was realized during study #13 concluded that the CQ-i has good internal consistency for the total score (.927). The split-half analysis (part1–32 items, part 2-32 items) also showed a good reliability: Alpha(1)=0.830; Alpha(2)=0.864; Spearman-Brown=0.879. Guttman split-half coefficient had the same value as Spearman-Brown.

**CQ-i Pre-release – Validation Studies & Explorations (2013-2015)**

# 14	2013, Jan.- Feb.	Same population profile as in study #9 Exploratory concurrent validity CPI (N=39), EQ-i (N=45), NEO PI-R (N=47), MSCEIT (N=45), GAMA (39)	Concurrent validity Statistical analysis CQ-i v.2013 released CQ-i v.2013 available online starting March, 2013
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The preliminary validation studies realized during study #14 included explorations of its concurrent and incremental validity using inventories such as CPI, EQ-i, NEO PI-R, GAMA and MSCEIT. CQ was analysed in relation to other variables, such as emotional intelligence, IQ and personality traits. The results showed that the CQ, as measured with CQ-i beta v.2013, does not correlate with Emotional Quotient (EQ) – either as a trait or skill measured with EQ-i and MSCEIT.

Only a few significant correlations of the CQ and some dimensions of EQ-i and MSCEIT have been observed: the CQ was found to be significantly positively correlated with the Intrapersonal Scale (RA) ( $r = .311$ ,  $p < .01$ ) and the General Mood Scale (GM) ( $r = .326$ ,  $p < .05$ ) from EQ-I. CQ [Physical] was found to be significantly positively correlated with Perceiving Emotion ( $r = .390$ ,  $p < .05$ ) from MSCEIT. The exploration of the CQ and personality traits using CPI and NEO PI-R revealed a few significant correlations. CQ was found to be significantly positively correlated with Law Enforcement Orientation (Leo) ( $r = .451$ ,  $p < .01$ ), Openness (O) ( $r = .469$ ,  $p < .01$ ), Conscientiousness (C) ( $r = .407$ ,  $p <$

.01), Warmth (E1) ( $r = .406, p < .01$ ) and Achievement Striving (C4) ( $r = .367, p < .05$ ), and negatively correlated with Activity (E4) ( $r = -.359, p < .05$ ) and Self-Discipline (C5) ( $r = .394, p < .01$ ).

### **CQ-i Pre-release – Validation Studies & Explorations (2013-2015)**

# 15	2013, Feb. – 2014, Aug.	In-Depth Construct Development and Content Validity Research	<p>After developing the construct, the content validity was evaluated by a panel of 25 experts. As a result, 40 items were excluded and 27 items were re-worded.</p> <p>New terminological clarifications were developed in order to better operationalize the CQ construct. CQ-i (v. 2014, beta version) released.</p> <p>“The Consciousness Quotient: Construct Development and Content Validity Research” – Paper presented at PsiWorld 2014 Conference.</p> <p>CQ-i Administration on Adolescents: Difficulty Level Assessment – Paper published in Elsevier Procedia – Social and Behavioral Sciences, Vol. 128</p>
#16	2014, Oct.-	CQ-i final version (v. 2015) released. Extended Validity and Reliability Researches	<i>On-going research</i>

In 2014, a study of the difficulty of the items for adolescents revealed that the structure of the items was easy to understand by adolescents (Brazdau, Sharma, & Ahuja, 2014).

The purpose of this study was to examine the difficulty level of the Consciousness Quotient Inventory (CQ-i) for adolescents. The previous validation of the CQ-i includes its administration in adults only; thus, in order to determine whether CQ-i can be administered in adolescents as well, the difficulty levels of the items were analysed using a scale from very easy to very difficult. The study was based on 100 participants (aged 13 to 17), from different schools in Agra, India.

The difficulty level for each item of CQ-i was evaluated using a five-level Likert scale, from “Very Easy” to “Very Difficult”, scored 1 to 5. Before administration, the students were introduced to CQ-i, and the purpose of administration was explained to them.

In the first phase, data were collected from the students of two sections (having 45 students each) from the 10<sup>th</sup> grade of St. Conrad’s Inter College, Agra. Students from one section were strongly influenced, overestimated and were pressurized to finish the inventory quickly by their class teacher, who was present while the test was being administered. As a result, the responses of these students were discarded, sensing fake responses. All the responses of the students from the second section were genuine and true, except for three. Thus, overall,

data were collected from 90 participants, of whom 42 were selected for the analysis.

In the second phase, data were collected from St. Francis School, where the tool was administered to 35 students from the 9<sup>th</sup> and 10<sup>th</sup> grades, out of which the number of genuine responses was just 20. In the third phase, Hillman Public School was selected for data collection. The inventory was administered to 55 students from the 8<sup>th</sup> and 9<sup>th</sup> grades, out of which 38 genuine responses were included in the study. Finally, the responses of 100 participants were considered and the rest were discarded on the basis of the analysis mentioned above.

The results indicate that the overall difficulty level of CQ-i was easy to moderate. An age-wise analysis indicates that the difficulty level is relatively higher for younger adolescents (aged 13-14) as compared with older ones (aged 15-17). It was observed that the overall average difficulty level of all dimensions was similar. Physical CQ was rated as having the highest difficulty level followed by spiritual CQ, self-consciousness and emotional CQ, respectively, while cognitive and social-relational CQ were rated lowest in the difficulty levels. Further analysis showed that adolescents in age group 13-14 experienced greater difficulty across all dimensions except for physical CQ than did age group 15-16. The exploration of the gender variable showed that boys rated nine items as difficult, whereas girls rated only five items as difficult.

In order to obtain more qualitative data, the researchers interviewed 30 students (20 from age group 15-16 and 10 from age group 13-14) to understand their views regarding CQ-i. On asking whether they found certain constructs or situations unfamiliar, they answered that they marked such items as difficult which mentioned unfamiliar situations. Students from age group 15-16 said that they were able to comprehend almost every item but that they never experienced certain situations.

The study concluded that, by making a few changes in the difficult rated items, CQ-i can be made suitable for adolescents.

## **V. CONSCIOUSNESS QUOTIENT INVENTORY V. 2015: THE CONTENT VALIDITY RESEARCH<sup>1</sup>**

After releasing the CQ-i beta v.2013 and using the framework developed during 2003-2013, the operationalization of the CQ was extended in order to find all the relevant descriptors of conscious experience.

During this study, a variety of sources were analysed in order to generate the test content: literature research (consciousness studies, articles, books); mindfulness research; psychometrics research; spiritual wisdom; personal experience of non-dual people, inter-

<sup>1</sup> Paper published in *Elsevier "Procedia – Social and Behavioral Sciences"*, vol. 187, pages 244-249.

views on Conscious TV, and the “Buddha at the gas pump” website; personal experience of witnessing awareness; our team of researchers; experts, friends, psychologists, research partners, discussions on the “consciousness science” Google group discussions (a group composed on more than 60 consciousness experts, mostly speakers at the Towards a Science of Consciousness conferences), feedback from people responding to the test, Google suggestions (e.g., we analysed the first 100 websites that referred to “I am aware of” and see the recommended links as a source of collective knowledge, especially first-person data).

Some concepts as used in consciousness studies were explored and included as descriptors/traits of conscious experience: mindfulness (Baer et al., 2006), post-autonomous ego development (Cook-Greuter, 2000), witnessing awareness (Brazdau, 2014), meta-awareness/awareness of awareness itself (Monsanto, 2013), emotional intelligence (Heim, 2003).

Related concepts and studies were analysed and taken into consideration in order to find adequate descriptors of conscious experience, including: attention regulation (Asada, 2014; Monsanto, 2013), the triune brain (MacLean, 1990), neuroplasticity (Hanson, 2011), metacognition (Darling-Hammond, 2014), rational/irrational belief-dynamics (Vasile, 2012), spiritual intelligence (King, 2008), conceptual systems and personality organization (Harvey et al., 1961), affective neurosciences (Davidson, 2012), ‘enlightenment’ and ‘awakening’ experiences (Costeines, 2009), persistent non-symbolic experiences (Martin, 2010), neurotheology (Murphy, 2002), levels of human development (Grawes, 1970), outrospection (Krznaric, 2014), human connectedness (Andrews, 1996), *Ubuntu* philosophy (Gianan, 2010), non-dual awareness (Josipovic & Malach, 2006), pure awareness (Forman, 1990; Genarro, 2008), psychedelics research (Kent, 2010), spiritual crises (Grof, 2009), Orch-OR theory (Hameroff, 2010), spiritual intelligence (King, 2008), critical reviews of consciousness studies (Blackmore, 2010), and *advaita* and *neo-advaita* philosophy (Conway, 2008).

Other psychological scales were analysed in order to explore some of the measurable factors of conscious experience: the Self-Compassion Scale (Neff, 2003), the Multidimensional Assessment of Interoceptive Awareness (Mehling et al., 2012), the Mystical Experience Questionnaire (MacLean et al., 2012), the Leadership Maturity Assessment Instrument and Loevinger’s Washington University Sentence Completion Test (Cook-Greuter, 2000).

After extensive analyses, a new section with yes/no answers was added (acknowledgements to Sperry Andrews and Carlo Monsanto for suggesting this new section and for providing the initial items). The factor structure that resulted is presented below. As a result of this in-depth operationalization, the CQ construct was operationalized using

a sample of more than 300 traits, skills and abilities, which were later translated into items.

### Main Factor Structure of the Consciousness Quotient

Factor	Content
Physical CQ	Body and basic physical perceptions and sensations, environmental awareness
Emotional CQ	Emotions, feelings, emotional intelligence
Cognitive CQ	Related to thinking, reflection, judgment, patterns of understanding, ways of meaning-making
Social-Relational CQ	Parental relationships, close relationships, any conscious interactions with others
Self CQ	Identity, self-system, image of life, self-awareness, post-autonomous ego-development traits
Inner Growth CQ	Related to self-development, evolution of personality
Spiritual CQ	Connecting with humans and nature, meta-awareness, witnessing awareness, acceptance of experience

In order to establish the content validity of the CQ, the list of traits, skills and abilities that describe conscious experience were analysed by a panel of experts. The goal was to evaluate the comprehensiveness and representativeness of the content - whether the lists of traits that compose CQ adequately cover conscious experience, with no irrelevant content included (Newton, 2003).

A secondary objective of the content validity study was the evaluation of the pattern-matching (Trochim, 2000): to explore whether our observed patterns of conscious experience (how things operate in reality) correspond with our theoretical patterns (how we think the world works).

The expert panel comprised consciousness researchers, experienced practitioners of inner development techniques (religious or spiritual), and representatives of the non-dual community. Participants were emailed copies of the CQ-i traits and items table, in the format presented in Table 3. They were asked to comment on the overall appropriateness for inclusion of each descriptor. In addition, the experts were asked to comment if they believed anything should be added or deleted, and to evaluate the wording of the items.

For several items, supplemental descriptions and references were available. The participants entered their responses onto the form and emailed it back to the researchers, who then reviewed and collated the replies. Changes were made to the items according to suggestions where appropriate. The consultation took place between March 2013 and July 2014.

## CQ content validity research - feedback form used by the experts

Factor	Sub-factor	Trait, Ability, Skill	Item	Supplemental Description	Example of comment
Self CQ	Mindful living	Acceptance	I am ok when experiencing physical or psychological discomfort		Might be better worded as: I can tolerate a certain amount of physical and psychological discomfort without needing to change what I am involved in, in order to comfort myself.

Out of 108 people invited, the final panel comprised 25 members. Fourteen experts analysed each item: Zoran Josipovic, Susanne Cook-Greuter, Carlo Monsanto, Richard Joannides, Vlad Dogarescu, Kruti Sharma, Altina Hripacov, Sadhna Sharma, Monica Burcea, Ioana Pielescu, Catalin Chites, Felicia Epuran, Sona Ahuja and John Renesch. Eleven experts replied by commenting on the general appropriateness of the items' format, the CQ structure and the items' wording: Sperry Andrews, Jan Essman, Rebecca Hardcastle Wright, Michael James, Ionela Andrei, John Cook, Cristiana Levitchi, Chobo Ji, Sam Gentoku McCree, ShantiMayi and Valita Jones.

The responses confirmed that the CQ-i has an appropriate content that adequately cover the conscious experience. A total of 40 items were excluded from the CQ-i, and 27 items were re-worded to better suit the traits they measured. Some of the panellists raised concerns about its length and ease of use. This will be monitored over time.

As a result, new terminological clarifications were developed in order to better describe the consciousness quotient construct:

- To be conscious is to have a degree of witnessing awareness and a degree of freedom of choice when thinking, feeling, sensing and interacting with people and the environment.

- An important element of conscious experience is intentionality, as the mind-set that allows a person to deliberately choose what behaviour to enact and what attitude to select.

- 'More conscious' (a higher CQ) means a higher degree of witnessing awareness and being less automatic in thinking-feeling-sensing, together with a higher degree of choice when initiating a behaviour.

'Witnessing awareness' is usually described as the "I am experience", "the observer experience", "just being" (as opposed to "doing"), "aware of awareness itself", "no-mind". 'Mindfulness' is a related construct (right mindfulness - *samma sati* in Buddhism – is the same as witnessing awareness), but in modern mindfulness, as it is promoted in the West,

being mindful does not go beyond being a cognitive observer.

In order to clarify this distinction, the term 'non-conceptual self' was proposed (Brazdau, 2014), as that part of personal identity which has witnessing awareness as its main function, complementary to the 'conceptual self', which has cognition as its main function. The witnessing perspective, which leads to the ability to observe the inside and outside worlds without engaging with them, is one of the key factors of the CQ construct.

## **VI. CQ-I CRITERION-BASED VALIDITY AND EXPLORATORY RESEARCHES**

Between 2009 and 2013, a series of criterion-related researches were undertaken. The main conclusion of these exploratory studies was that conscious experience can be scientifically treated like any other psychological variable, and that it is possible to introduce conscious experience as a variable in psychological assessment (Brazdau & Opariuc, 2014). The psychological assessment framework developed during the exploratory researches was the foundation for the in-depth construct's operationalization and the items' development.

### **STUDY 1**

#### **Effect of Yoga and Meditation on Consciousness Quotient and Mindfulness**

By Sona Ahuja, Dayalbagh Educational Institute, Agra, India.

Study published in Journal of Consciousness Exploration & Research June 2014, Vol. 5, Issue 5.

The effect of yoga and meditation on conscious experience and mindfulness were examined comparing beginners, intermediate, advanced meditators and a group of non-meditators. The participants were applicants of yoga and meditation program offered for twenty weeks. Four groups of 20 each were formed including, 3 experimental groups and one control. The groups did not differ with respect to gender (11males and 9 females in each group). Experimental group had three set of subjects as stratified samples viz., pre-initiates(beginners) - those who were not trained for any meditational practices prior to experiment, first initiates (intermediate meditators) - those who were trained for contemplation of divine form at the seat of spirit(between two eyes), second initiates (advanced meditators) - those who were trained for sound practice which consists in concentrating attention at the seat of the spirit and establishing contact with the current of Sabda or mystic word.

The experiment was in the form of practice of yoga and meditation for 20 weeks. The practice sessions (one hour) were held on weekdays



in the evening for three days a week under the guidance of experienced practitioner. Each day, the programme commenced with a brief 15 minutes lecture covering different topics to reinforce the subjects for meditation. The topics included body, mind, spirit and consciousness; cosmology; spiritual awakening; nerve centres, chakras, kamals and padmas; attunement with spiritual sounds; main object of meditation and ways to establish contact with the source of spirituality. This was followed by yoga. Seven yogasanas were included in the intervention programme for relaxation Siddhasan, Sarvangasan, Bhujangasan, Paschimottanasan, Padahastasan, Ardhamatsyendrasan and Shavasana. These asanas were selected for relaxation and preparation of body for meditation. After yogasana, the practice of meditation was modeled on practices of oriental philosophy of Saints (Radhasoami Faith). These meditational practices are based on Hierarchical Order Theory of Consciousness (Satsangi, 2013).

The results showed a significant increase in the CQ scores, after the intervention. The practice had considerable effect on all dimensions of consciousness quotient over time. The impact was more and relatively immediate on social and self-consciousness quotient. Initially after ten weeks of practice, the practitioners did not show significant change in physical and emotional consciousness quotient scores but there was significant increase in scores after 20 weeks of practice of yoga and meditation. Though the difference in mental and spiritual consciousness quotient scores was not significant even after 20 weeks, but there was increase in these scores also.

Further, the naïve practitioners showed significant gain in consciousness scores after practice of 20 weeks in comparison to those who had exposure to the practice of yoga and meditation

## **STUDY 2**

### **Consciousness Quotient as a Predictor of Executive Functioning**

By Sona Ahuja, Sadhna Sharma (Pedagogical Sciences, Dayalbagh Educational Institute, Agra, India)

Paper published in MIER Journal of Educational Studies, Trends & Practices

November 2015, Vol. 5, No. 2.

Presently, it is a debatable issue whether to include consciousness, which has been declared as loudest mental phenomenon in the domain of executive functioning or not. Executive functioning is associated with higher order mental abilities which are required to connect past experiences with the present ones and which are required to strategically manage oneself and one's resources.

Executive functions including mental abilities such as, working memory, reasoning ability, problem solving, inhibitory control, task flexibility and cognitive flexibility are significant factors for students' learning and academic achievement.

The current study aimed at studying the relation between conscious experience as measured by CQ-i and two executive functions i.e. cognitive flexibility and self-regulation. The sample consisted of 200 adolescents in the age group of 13 to 19 (Mean age: 16.05, S.D=1.62). 78 boys and 122 girls from eighth to twelfth grade participated in the study. The data was collected in five phases from the students of more than 10 different schools of Agra, India, selected randomly. Students completed the bilingual version (English and Hindi) and adapted Indian version of Consciousness Quotient Inventory (CQ-i v. 2013) by Brazdau, Sharma and Ahuja (2014), Adolescents Self Regulatory Inventory (ASRI) by Moilanen (2007) and Cognitive Flexibility Scale (CFS) by Martin and Rubin (1995).

A linear regression analysis was performed to check predictive ability of consciousness quotient. It was found that CQ accounts for 6.4% variation in cognitive flexibility [ $R^2 = 0.064$ ,  $F(1, 90) = 6.182$ ,  $p < 0.05$ ] and 16.6% variation in self-regulation [ $R^2 = 0.166$ ,  $F(1, 71, 14.096$ ,  $p < 0.01$ ]. These findings suggest that the extent of relationship of consciousness quotient with different executive functions varies. It was revealed that consciousness quotient accounts for greater variation in long term self-regulation [ $R^2 = 0.193$ ,  $F(1, 78) = 18.62$ ,  $p < 0.01$ ] than for short-term regulation [ $R^2 = 0.015$ ,  $F(1, 78) = 1.207$ ,  $p > 0.05$ ]. Interestingly, it was found that even two executive functions i.e. cognitive flexibility and self-regulation are positively and significantly correlated ( $r = 0.46$ ,  $p < 0.01$ ).

Findings based on self-reports reveal that executive functioning is moderately but significantly related to consciousness quotient, although the relationship may vary for different executive functions. The strength of functional relationship revealed the predictive ability of CQ for cognitive flexibility and self-regulation (through regression analysis). Consciousness quotient accounts for greater variation in self-regulation as compared to cognitive flexibility. It can be inferred that students with higher score on CQ-i will tend to have greater long term self-regulating abilities and cognitive flexibility than those with the lower score. The findings are found to be consistent with the propositions of Dehaene and Naccache, (2001) and Jack and Shallice, (2001) that cognitive control processes necessarily require awareness.

### **STUDY 3**

## **Contemplative exercises once a week for 8 weeks didn't increase the Consciousness Quotient**

By Jennifer Luna Tuazon

A Doctor of Philosophy in Education (Psychology and Guidance)  
Dissertation

West Visayas State University, La Paz, Iloilo City, Philippines

March, 2014.

This study specifically aimed to find out the consciousness quotient and intrapersonal and interpersonal relationship skills of participants prior to and after exposure to transformative consciousness exercises (for the experimental group) and the self-awareness sessions (for the comparison group).

This randomized pretest and posttest control group design utilized the Consciousness Quotient Inventory (CQ-i v.2013) and the validated researcher made Intrapersonal and Interpersonal Relationship Skills Scale (IIRSS). The intervention was designed using the Transformative Consciousness Modules, developed by Stephen Wolinsky. The Transformative Consciousness sessions were conducted for 4,5 hours, once a week, for 8 weeks. The participants were 23 students in the experimental group and 21 students in the comparison group, from West Visayas State University. The CQ-i and IIRSS were applied before and after the Transformative Consciousness sessions.

Main topics of the Transformative Program, based of Stephen Wolinsky's book (Quantum Consciousness. The Guide to Experiencing Quantum Psychology, 1993):

- You Are Not Your Mind (The Power of Now, Tolle, 2005)
- Ego: The Current State of Humanity (A New Earth, Tolle, 2005)
- Observing our Thoughts (Quantum Consciousness, Wolinsky)
- Moving Deeply in the Now (The Power of the Now)
- Space and Transmutation or Transformation of E-motions (Wolinsky)
- Consciousness: The Way out of Pain (The Power of the Now)
- The Core of Ego (A New Earth)
- Role-Playing: The Many Faces of the Ego (A New Earth)
- The Pain-Body: The Many Faces of the Ego (A New Earth)
- Concept of Time: You are the observer/creator of the time aspect of consciousness
- Moving Deeply Into the Now (The Power of the Now)
- The Mind Strategies for Avoiding the Now (The Power of the Now)
- The State of Presence (The Power of the Now)
- Breaking Free (A New Earth)
- The Inner Body (The Power of the Now)

- The Portals into the Unmanifested: The True Nature of Time and Space (The Power of the Now)
- You are beyond the aspects of energy, space, mass, and time. (Quantum Consciousness)
- Enlightened Relationships
- Going Beyond Ordinary Reality: The observer is the observed (Quantum Consciousness)
- Beyond Happiness (The Power of the Now)
- Finding Who You Truly Are (A New Earth)
- The Meaning of Surrender (The Power of the Now)
- Is Emptiness something to be Afraid of? Building block of the Universe. The nothing is alive! Nothing is in charge. (Quantum Consciousness)
- The Discovery of Inner Space (A New Earth)

Prior to and after the interventions, the intrapersonal and interpersonal relationship skills of the experimental group were high, while that of the comparison group were average. Results further revealed that there were no significant differences between the experimental and comparison groups' conscious quotient and intrapersonal and interpersonal skills prior to the intervention. Similarly, no significant difference was noted between the two group's consciousness quotients after the intervention, but a significant difference was found between their intrapersonal and interpersonal relationship skills.

On the other hand, significant differences were noted between the prior to and after interventions consciousness quotient and intrapersonal and interpersonal skills of the experimental group. Likewise, significant difference was found between the prior to and after interventions consciousness quotient of the comparison group but no significant difference existed between the prior to and after interventions intrapersonal and interpersonal skills of the same group.

Thus, it could be construed that compared to the self-awareness sessions, the transformative consciousness exercises may have been instrumental in increasing the participants' intrapersonal and interpersonal relationship skills, and not effective for producing an increase in the overall Consciousness Quotient.

Based on these results, it looks like this type of intervention based on Wolinsky's Transformative Consciousness Modules didn't produce the necessary impact to increase the CQ of the participants.

In order to produce significant changes of the Consciousness Quotient, it is recommended to use an intervention with more impact, more than once a week, and more than 8 weeks.

**STUDY 4****Leadership Approach in relation to level of consciousness: a correlational analysis**

By Chauhan, V., Sharma, S., Satsangee, S.

Published in MIER Journal of Educational Studies, Trends & Practices November 2013, Vol. 3, No. 2 pp.

The present empirical study was designed to explore the relationship between the leadership approach of teacher trainees and their level of consciousness. A descriptive survey was conducted on 100 teacher trainees (both male & female in the ratio of 1:1). The level of consciousness of teacher trainees was assessed using Consciousness Quotient Inventory (CQ-i) by Brazdau (2011). To assess the leadership approach Multifactor Leadership Questionnaire (MLQ-6S) by Bass and Avolio (1992) was used.

The relationship between scores on seven leadership factors (comprising three leadership approaches) and the level of consciousness was studied using Pearson's product moment correlation. Results indicate a significant positive correlation to a varying degree between consciousness and three leadership approaches.

**STUDY 5****In Search of Conscious Leadership: A Qualitative Study of Postsecondary Educational Leadership Practices**

By Valita Jones, Doctoral Dissertation, San Diego State University

Results published in Elsevier Procedia – Social and Behavioral Sciences, 203 (2015)

The purpose of this study was to examine the leadership practices of postsecondary educational leaders who are practicing what can be described as responsible and accountable leadership or conscious leadership. Eight senior postsecondary leaders participated in face-to-face interviews designed to identify conscious leadership qualities and practices.

Four research open-ended research questions guided the study:

1. How do postsecondary educational leaders make sense of conscious leadership?
2. How is conscious leadership demonstrated on a daily basis?
3. How does context influence conscious leadership practices?
4. What implications does a conscious leadership framework have for conscious leadership practices?

This study captures an emerging paradigm within its natural context, using interviewing and information from the Consciousness Quotient Inventory (Brazdau & Opariuc, 2014). It describes and explains the

interpersonal competencies of individual leaders, while depicting the leadership practices of a variety of higher educational leaders.

Eight educational leaders from two and four year colleges and universities were identified as participants. Several demographics provide a general description: (a) generational age range, (b) highest educational degree, (c) ethnic identification, (d) gender identification, and (e) work locations. They all came from educational institutions that serve a diverse student population. A variety of administrators participated: Director, Associate Dean, Dean, VP and President. There were four were female and four were male, aged from thirties to sixties. The ethnic make-up was inclusive of African American and White administrators.

Initially, the follow selection criteria were used to select potential participants:

- The participants have been in leadership roles as senior postsecondary educational administrators for at least five years.
- The participants self-identify as experiencing a transformation in their leadership style or practice that is more relational and systems oriented.

The participants were contacted initially through e-mail at their respective colleges and universities. The e-mail introduced the researcher and the research study. Interested participants were asked to respond to the researcher directly by phone or e-mail. The researcher responded to all interested participants with an e-mail confirmation. Included in this confirmation was information about the research study purpose, confidentiality and consent procedures, and several potential dates for the actual interview. After the desired number of participants was successfully identified, the selection process concluded.

Initial research steps included all participants taking the online Consciousness Quotient (CQ) Inventory. The (CQ) survey, measures individual overall conscious awareness. It is self-scoring and was used to create a baseline for assessing the global awareness levels of each participant. The CQ Inventory scores, the summaries and responses from the interviews were used to provide context.

The second research step was an in-depth semi-structured interview with all the participants. The interview questions included 35 items, including various aspects of the conscious leadership practices, such as: How do you implement policies and procedures within your office/college? What does a transformative organization look like to you? How do you connect with other human beings? How do you believe humans are connected to each other? How do you handle an employee who becomes very emotional? How do you feel after you make difficult decisions? How do you react to new situations? What is your process for making-meaning of information? Please tell me how think your thoughts influence your actions and the decisions that you make? What

do you believe to be your purpose in life and how are you intentional in achieving your purpose? How do you learn? Please tell me about an experience when you acted off of intuition. Please describe how you share your leadership role with your employees. What is your specific worldview or perspective on leadership? Please tell me about your own belief and/or values system? What kind of impact do you believe you have on your employees and staff as a leader?

The data resulted from the interviews was later transcribed using NVIVO 9, in an effort to become familiar with potential patterns, themes and codes.

## Results

Most of the CQ responses demonstrated identical findings that indicated high global consciousness scores, with the exception of one. This participant's overall global consciousness score was relatively low in comparison to the other participants and resulted in a dramatically different perspective for most of her domain and the overall global consciousness score. In terms of where the leaders would place on a continuum of awareness, Leader #3 scores indicated that they are at the lower end of global awareness, while Leaders #2, #7, and #8 reflect a developing awareness level and finally, those leaders who scored in the 90's reflected a higher awareness level.

After the interview process, data was analyzed and interpreted for understanding and meaning. Five notable trends emerged and were developed into categories: (a) theoretical perspective; (b) epistemic practices of transformation and systems; (c) disposition; (d) socio-emotional/human consciousness capacity; and (e) cognition capacity. Nineteen codes were established to organize the data: Worldview or perspective on leadership; Integrated and networked environment; Transformational organization; Role as a leader; Innovative, creative, and collaborative partnerships; Shared leadership role; Get others to work together; Belief/value system; React to new situations; Manage weakness/strengths; Handle emotional employees; Feel after making a decision; Assess and analyze new situations; Self-knowledge; Learning; Making-meaning; Thoughts influence decisions and actions; Aware, accountable and responsible; Solve complex problems.

A leadership rubric was created and participant responses were measured against whether they exhibited qualities from the leadership rubric, as presented in Table 1.

Data revealed that Leaders made sense of conscious leadership through their awareness, consciousness and self-knowledge. Moreover, each of them subscribed to their own particular theoretical perspective, ideology or world-view that assisted in their development as a leader. There was recognition and acknowledgement of the interconnectivity



and humanness between themselves and other, while it is noted that reciprocity was practiced and evidence of a shared leadership approach was discovered.

The Leaders demonstrated conscious leadership daily through the examples of cooperation and collaboration in being efficient and effective. All supported innovation and creativity, as a needed process for supporting change and transformation. Emphasis was placed on building “communities of practice” where harmony and balanced relationships was critical to collective decision-making efforts. Thus, demonstrated intentionality and thoughtfulness. The context of a conscious leadership practice was noted by the acknowledgement of the organization becoming more networked and integrated, which allowed Leaders to recognize the many themes and patterns emerging within a living organizational system.

There was support of a networked environment because it facilitated better communications and engagement, which improved the efforts of meeting organizational goals. Findings revealed that the Leaders were more practice-based in attempting to accomplish goals and objectives rather than use standard behavioral techniques to create change and sustainability. Leaders were aware and reflective in their leadership practice and appeared to know that they were accessing higher consciousness of their thoughts and emotions, thereby developing holistic and healthy coping techniques and leadership practices. Finally, implications of a conscious leadership framework demonstrated clearly that organizations function as ecological systems.

### Leadership Rubric Continuum

Leadership Themes	Beginning Qualities	Developing Qualities	Advanced Qualities
Theoretical Perspective	Behaviorist	Transformative Change Oriented Integrated and Networked	Sociocultural/Reciprocity. Quantum Interconnectivity Systems Perspective/ Thinking
Epistemic Practice of Transformation and Systems	Reactive and Low Expectations	Nurture Change Responsive to Problems Follower Perspective	Have a Focus, Plan, Observe and Collect Info, Interpret, Translate, Cooperative and Collaborate Implement; Shared Responsibility View Practice in Context
Disposition	Focuses on Fixed Behaviors, Traits, Competencies or Styles	Charismatic Intrinsic Motivation Inspirational/Motivational Influential/Social Architects	Flexible, Authentic and Creative and Innovative Intentional/ Purposeful Take a Holistic Perspective, Evolutionary/Transcendence Positive/Inclusive; Have Spiritual Aspect

Socio-emotional/ Human Consciousness Capacity	Outside Observers Not Aware of the Relationships Around You or Does Not Value	Affective/ Feeling Self-efficacy Some Self-knowledge Some Value Towards Relationships	Knowledge of Self Observe Thoughts as they Arise Inspirational; Relational and interconnected to Universal Law/Nature
Cognition Capacity	Exertion to Lead or Develop Habits of the Mind	Learning from Experience Limited ability for New Thought Becoming a Critical Thinker Beginning to be aware of being aware	Use Cognitive and Metacognitive Skills Reflective; See Patterns and Themes in the Environment and use to Make Meaning Capacity for New Thought

Being conscious and aware of the emotional status of others and themselves was reported as valuable to their leadership practice. Most of the leaders were discussed being very in touch with this perspective and articulated it as a core principle. Responses supported the idea that the majority of the leaders acknowledged the value of having insight into not only their own personal perspective regarding emotions, but concerning their employees as well. The basic acceptance of their employees and working environments as being more than just factories putting out widgets is relevant to the concept of humanness of being conscious of themselves and others. These trends emerged in spite of the hierarchal structures the Leaders operated within.

In the end, most of the leaders demonstrated evolving leadership patterns towards becoming more conscious leaders. They all agreed that emotional capacity was critical to having a functional work environment. This belief originated around the conversation we engaged in regarding relationships, relationships building, awareness of different emotional states, and cooperative and collaborative interactions. Leaders who were aware of, and responsive to, their emotional states appeared to be more skilled at navigating positive collaborative interactions between themselves and their staff; thus connecting and interacting with regards to emotions and human consciousness, were expressed as critical components of the leadership practice, which is more aligned with more advanced leadership stage development. This social-relational construct of understanding people in the sense of human consciousness and socio-emotional perspective gained notoriety during the emergence of the emotional intelligence philosophy. In other words, the importance of humanness was also expressed.

The literature review provided valuable information regarding shared or participatory leadership styles, such as Love-based leadership, Open Leadership, and Soul Leadership (Chopra, 2010; Church, 2010; Li, 2010). Each of these leadership approaches requires the leader to be

reciprocal, cooperative and collaborative. Interview data revealed that several of the Leaders subscribed to a participatory or shared leadership practice.

Leader #1 shared: “I believe in leading by inclusiveness, meaning I bring everybody along telling them what we are doing, how we are trying to do it and give them an opportunity to have input. That way when you get to a decision, people will more likely be on board about the decision and you don’t have to worry about the excuses side. When they are not on board, you run into conflict”.

## **Discussion**

Prior to conducting this research, limited information existed about the potentiality of applying a conscious leadership framework to higher educational practices. Additionally, little information was known about how current Leaders practiced leadership, whether traditional or transformative, especially within educational institutions that have become increasingly interconnected and networked. From a researcher’s perspective, it would be critical to gain additional insight into the application of a conscious leadership framework on a broader scale. The data analyzed offered evidence that elements of conscious leadership are currently being practiced by some higher educational leaders.

Results from this study provided evidence to suggest that formal exposure to a conscious leadership curriculum would be beneficial and assist in developing a community of conscious leaders. The implication for developing a leadership theory and practice, which supports continuous transformation, is of great importance. Higher educational leaders must become more adept in their leadership practices by developing improved leadership acumen. All eight of the Leaders expressed that their respective working environments were rapidly changing and that being transformative, cooperative and collaborative was necessary to achieve their department goals.

Three implications for practice emerge as the research unfolded: (a) process for preparing conscious leaders; (b) applying conscious leadership practices within changing higher education environments; and (c) the meaning of a conscious leadership framework to institutions of higher education systems).

This research served as a pilot study for gaining insight into the practicality and relevance of applying a conscious leadership framework to postsecondary educational environments. Three recommendations for future research are offered: (a) investigating the deeper meaning of a conscious leadership practice; (b) conducting research studies on a larger scale and across diverse environments; and (c) examining the impact of conscious leadership practitioners as mentors and coaches.

Building leadership development programs that incorporate a

conscious leadership framework can aid in appropriately preparing leaders for complex and rapidly changing organizations. Conscious leadership assists us in transforming our educational institutions to reflect our highest values, those that embrace interconnectivity, networking and sociocultural ways of being.

## **STUDY 6**

### **The Consciousness Quotient – a new predictor of students' academic performance**

By Ovidiu Brazdau, Cristian Mihai

Paper presented at the Teachers for the Knowledge Society

Conference – 2011, 17-19 March, Sinaia, Romania.

Published in Elsevier – Procedia: Social and Behavioral Science 11 (2011).

The purpose of this study was to establish the practical usage of the Consciousness Quotient in the field of educational psychology. The basic hypothesis of this study was to determine the incremental validity brought by the Consciousness Quotient in the prediction of academic performance. The study was based on 138 participants from the Ecological University of Bucharest, Romania. The “Consciousness Quotient Inventory” (CQ-i) and “General Ability Measure for Adults” (GAMA) are used to evaluate the Consciousness Quotient and the Intelligence Levels.

Data analysis revealed a positive correlation between the global consciousness quotient and the academic performance. (Pearson  $r=.209$ ,  $p<.05$ ).

The intelligence quotient (Pearson  $r=.320$ ,  $p<.01$ ) is strongly related to the academic performance, which was expected since many studies have shown approximately the same level of correlation (Mathiasen, 1984).

It is important to mention that there are no significant levels of correlation between the CQ score and IQ (Pearson  $r=.137$ ,  $p>.05$ ). This result suggests that CQ and IQ are totally differently psychological constructs. This fact is important, because CQ represents a non-cognitive predictor of the academic performance.

The statistical analysis showed that students with higher IQ are more likely to have a better performance. ( $R^2=.102$ ,  $F(1,136)=15.462$ ,  $p<.001$ ). Furthermore, the moderate correlation between the CQ and result of the academic performance criterion suggest that people with a high CQ can perform better to the exams than the students with a low CQ level.

The influence of the CQ in the prediction of the academic performance was tested using a linear regression analysis. The result of statis-

tical procedure, suggest that only 4% of the variances of academic performance, could be explained by consciousness quotient ( $R^2 = .044$ ,  $F(1,136) = 6.209$ ,  $p < .017$ ). For that reason, it was conducted a simultaneous design that included the academic performance as a criterion and both intelligence quotient and the consciousness quotient, as predictors.

The results of the multiple regression analysis suggest that the CQ supplies an increment in the prediction of academic performance. ( $R^2 = .130$ ,  $F(2,135) = 10.078$ ,  $p < .001$ ). In conclusion, using both measurements, CQ and IQ, could better predict the performance in the academic field. The increment brought by assessing the Consciousness Quotient in the prediction of academic performance ( $\Delta R^2 = 0.028$ ) is about 3% of variance. For this reason, the assessment of consciousness, has a moderate role in the prediction of academic performance, but a statistical significantly contribution ( $\beta = .168$ ,  $t(135) = 2.077$ ,  $p < .04$ ).

## VII. CONCLUSIONS

The operationalization of the CQ construct was an extended and delicate task, but it was a necessary step in introducing the CQ as a variable in psychological assessment. As CQ-i is one of the first inventories of this type, it was hard to find similar patterns of thinking during the literature research. An important element of feedback was provided by the practitioners of various religious, spiritual and self-development practices, as most of them related to the study by describing their own conscious experiences. Further studies are necessary in order to establish the criterion-related validity of the CQ-i.

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