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Author/s: PREETI WADHWANI

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Changing Connotation of Intelligence – Embracing IQ, EQ, SQ

Dr. PREETI WADHWANI
Assistant Professor
Department of Education
Dr. Harisingh Gour University, Sagar, India

Abstract: Human Intelligence, the greatest predictor of an individual’s success, reflected from his thinking abilities and behaviour, has taken different connotations in different ages. Primarily assessment of Intelligence was limited to its rational domain. Gradually, with humanistic psychology gaining significance and neurological findings giving neural base of emotional intelligence, the horizon of the concept became broad. But IQ-EQ paradigm fell short of explaining the richness and magnanimity of human behaviour. With the emergence of positive psychology, SQ became a vital component of human thinking and well-being. This paper is an attempt to view Intelligence with a multi-dimensional holistic perspective and propose a model of SQ defining it as a universal ability reflected in the routine behaviour of an individual that gives an edge to the human species over others. A review of assessment of Intelligence (IQ, EQ and SQ), and the implications in varied context have been discussed. It has been argued that in research, instead of fragmented and analytical approach, an inclusive and comprehensive approach be acquired while referring to the fundamental ability.

Keywords: Intelligence, IQ, Emotional Intelligence/EQ, Spiritual Intelligence/SQ, positive psychology.
GENESIS OF INTELLIGENCE

Intelligence has a powerful bearing on how well people do in their life (Herrnstein and Murray 1994). Human beings have excelled amongst all other species in creation. Their voyage from merely being a man of muscle to man of wisdom is filled with exciting discoveries and inventions, which can be traced to human Intelligence. But within the species too, different individuals react, respond, grasp, and benefit from the same situation in different ways due to many factors and one such important factor which has been the focus of researchers for decades is intelligence. Regarding intelligence, although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions and none commands universal assent (APA report 1995).

The developments in psychology as a discipline are vital while tracking the study of intelligence as they have a sound bearing on the researcher’s perspective towards the concept and the changing connotations. To begin with psychology had a pathological mission, discriminating amongst individuals for the purpose of selection for task, diagnosis of problem/mental health. Classically the concept has its origins with Galton’s passionate interest in human variability, specifically the study of individual differences in the mental abilities that led him to find this ability as “Hereditary Genius” (Woznaik 1999). Till some time later, intelligence was defined as ability to carry on abstract thinking and the prime abilities that were taken as criteria to assess intelligence were memory, vocabulary and perceptual discrimination (Terman 1922). In an effort to make the study more objective, connectionists gave a ‘mind and conscious less’ explanation of behaviour reducing it to physiological activities, merely a stimulus response combination and defined intelligence in terms of the learning ability that is subject to rewards and punishment. The biological perspective and the ‘nature’ focus in understanding the concept can be attributed to the influence of the structural approach to psychology. The role of causes and consequences in understanding of behaviour came in with the functional approach to psychology. Now, other than rational thought, the definition of Intelligence includes acting purposefully, dealing effectively with environment as signs of intelligent behaviour
(Wechsler 1944). The psychoanalytic perspective had added volume to the ‘mind’ by unveiling the unconscious and subconscious mind behind the behaviour. This broadened the room for study of intelligent human thinking by explaining retrieval from other than conscious memory for problem solving in the form of intuitions and insights.

Gradually the cognitive perspective led to the ‘mindful explanation’ recognizing the environmental effects, role of human thought and consciousness, and presence of strategies used while problem solving in intelligent behaviour through the developmental theories of intelligence with ‘nurture’ focus. Guilford’s structure of intellect with 150 Factors (Guilford and Hoepfner 1971) and later revision with 180 Factors (Guilford 1980) was a result of intersection of functional approach and cognitive perspective. Vygotsky, in 1978, accepted that proximal level of latent potential can be reached with guidance and thus gave an indication that there is more than what is explicit in regard to human mental abilities. Findings came in establishing the importance of ‘nurture’ role leading to the conclusion that it’s not just what you have as potential that counts but what is really important and makes a difference is what you do with it (Stevenson, Chen and Lee 1993). This marked the significance of socio-cultural influences on cognition.

EMERGENCE OF EMOTIONAL INTELLIGENCE

Humanistic Psychology accepting the importance of personal growth and holistic explanation of human potential paved the way for existence of non-cognitive factors in the intelligent behaviour, though its roots had appeared with work on social intelligence (Thorndike 1920). Wechsler (1940) also accepted influence of such factors on intelligent behaviour by emphasizing their definition and he tried to come close to these through ‘deal effectively’ word in his definition of intelligence, but it had more to do with the social intelligence rather than purely emotional intelligence (E.Q.) though both are complimentary but distinct (Kajal 2002). The narrow view of intelligence to accept the assumption of arbitrarily singling out some abilities as intelligence and others as not was being refuted. Gardner (1983) discreetly brought emotions in the arena of intelligence in the
form of interpersonal and intrapersonal intelligence but neither could give them their due recognition nor could place them as a major predictor of success of an individual. His theory also didn’t specify the relationship of emotional thinking with rational thinking that was measured by traditional intelligence test, but the multiple intelligence theory (Gardner 1983) and triarchic theory (Sternberg 1988) further encouraged the researchers to look ‘out of the box’ while studying intelligence.

The rising criticism of the traditional mode of referring to and testing the intelligence (Herrnstein and Murray 1994); new findings coming up from the cognitive neuroscience proving the dedicated neural system in brain responsible for Emotional Thinking (Damasio 1996) together sparked a new round of debate about intelligence. It led to the researches that found reason and logic were less important than self-awareness, ability to recognize other’s feelings, and handle relationships. Affective domain became more important than cognitive domain to achieve success and in fact helped it to work properly (Goleman 1996). Research findings made the researchers realize that focusing only on emotions as the cause of all maladjustment with no role for cognition to play in it is a narrow paradigm. This helped to resolve the historic division between reason and emotion. The ‘cognitive or emotional’ stand soon changed to ‘cognitive and emotional’ stand with the findings that both interact and are not independent of each other (Damasio 1996), Physiological arousal and its cognitive interpretation are two factors responsible for ‘feeling’ an emotion (Medvec, Madey & Gilovich 1995) and certain emotions like shame or guilt entirely depend on cognitive development (Baumeister, Stillwell & Heatherton 1994; Tangney et al. 1996). The relationship between cognition and emotion is a two way process, that is, emotions affect cognition and vice versa (Averill 1982; Zillmann 1983).

The integrated cognitive and emotional thinking abilities enveloped as intelligence soon appeared to be a shallow paradigm as the IQ-EQ model fell short in explaining the complex behaviour in totality and the physiological-psychological well-being in human beings. Researches explored, despite sound cognitive-emotional state, improved standard of living, and all gains in technology, that most people are
found to be distracted, frustrated, and bogged down and not thriving in their life. They are instilled with a reinforced sense of helplessness and isolation apparent from the alarming increase in behavioural problems (Frankl 1985). Scientists and doctors termed behavioural problems, like depression, addiction, schizophrenia, insomnia, alcoholism, eating disorders, brutal violence, etc. as the ‘diseases of meaning’ leading to chronic physical conditions (Jobst, Shostak and Whitehouse 1999). It is apparent that universally people are entering a post-materialistic world where they are more concerned with issues like quality of life, subjective well-being, meaningful and thriving life rather than their economic prosperity and success (Diener, Lucas and Oishi 2002); the problem connected with search of meaning in human beings is neither purely rational nor purely emotional problem, but is a spiritual one (Zohar and Marshall 2000).

EMERGENCE OF SPIRITUAL INTELLIGENCE

The philosophical causes were clearly seen gaining prominence over the physiological and psychological ones in explaining the holistic well-being of individuals. Psychologists asserted to highlight the previous imbalance in psychology in the form of its preoccupation with repairing the weakness in life and catalysed the change to amplify the strength and virtue by tapping the set of buffers of positive human traits already present in them to fight with the problem (Seligman, 2002). Searching the human potential, it was indicated that the sole reduction of negativity doesn’t necessarily promote optimal functioning (Riskind, Sarampote & Mercier 1996; Snyder & McCollough 2000). There is presence of thinking abilities in human beings to be tapped through intervention that can help resolve the negativity leading to physiological and behavioural problems (Gillham et al. 1995; Seligman 1991). There were witnesses of a shift in perspective where the focus of researchers moved from studying the problems and illness to strength and potential in human beings which sets them apart from the rest of the species.

This consequently led to the emergence of positive psychology, a more holistic approach to behaviour, accepting cognitive judgements, affective reactions and spiritual elements as cardinal for a fulfilled existence and subjective well-being (Diener et al. 2002). The positive
personal traits of capacity for love and vocation, interpersonal skill, aesthetic sensibility, perseverance and forgiveness, optimism, faith, originality, future mindedness, high talent and wisdom; at the group level, the civic virtues and the institutions that move individuals towards better citizenship; responsibility, nurturance, altruism, civility, moderation, tolerance and work ethic, is all included in positive psychology (Seligman and Csikszentmihalyi 2000; Gillham and Seligman 1999).

Gardner (1999), while reframing his theory of Multiple Intelligence, also pondered upon “existential intelligence” explaining it as dealing with existential and spiritual questions but was hesitant to give it a place in his theory, as the neural basis of it was not available then. Simultaneously with psychology, there was witnessed a shift of perspective in neuroscience too and it moved its focus from identifying brain’s malfunction to brain’s super function coming with findings of, dedicated neural machinery in brain to address the philosophical and spiritual issues, a criterion feature of the species (Ramchandran and Blakeslee 1998); discovery of neural basis of coherence and integration in thinking (Singer 1999; Singer and Gray 1995); consciousness proved to be an intrinsic property of brain which shapes the perceptual stimulation from outside de-emphasizing the dominating role of sensory input in determining the ongoing cognitive process and leaving wide implications for the understanding the nature of consciousness (Pare and Llinas 1995); scientific explanation of the brain’s ability to transcend body, time and space orientation by the findings that the sensory input to the region processing information about space time and body orientation in brain is blocked during deep meditative concentration erasing the mind’s distinction between the self-supporting and non-self-supporting transcendence, and self is perceived as endless and intimately interwoven with everything (Newberg et al. 2001).

This spurred a wave of research in the field of Spiritual Intelligence and SQ was stated to be, the ultimate intelligence and a unitize thinking, necessary foundation for the effective coordination and functioning of both IQ and EQ, recruiting them in superior combination (Zohar and Marshall 2000); an adaptive use of spiritual information to facilitate everyday problem solving and goal attainment (Emmons
the human capacity to ask questions about the meaning of life, and to experience simultaneously the seamless connection between each of us and the world in which we live (Wolman 2001); a set of mental capacities which contribute to the awareness, integration, and adaptive application of the nonmaterial and transcendent aspects of one’s existence, leading to such outcomes as deep existential reflection, enhancement of meaning, recognition of a transcendent self, and mastery of spiritual states (King and DeCicco 2009); as a dimension of intelligence which gives the abilities of higher critical thinking/purpose seeking, integration, transcendence and will power conferring wider, richer, meaning, value and context to behaviour and life, leading to their transformation (Wadhwani 2013).

SPIRITUAL INTELLIGENCE IN ACTION

The behaviour gaining expertise from rational thought and effectiveness from emotional thought is more balanced and intelligent when the input from both is unified and coordinated. But other than merely exhibiting coordinated balance between reason and emotion, human behaviour, while seeking solution to the crisis, has the potential to super function rising above ego and emotion.

Mohandas Karamchand Gandhi was instrumental in establishing India as an independent nation, though he held no formal authoritative position from which he could lead people. His moral authority created such social cultural norms that it ultimately shaped the political will. Nelson Mandela won the Nobel Prize for peace for dedicating his life to fight against apartheid. Impelled by his imagination and conviction, he could envision a world far from his restricted confines of his experience in prison for 26 years. Mother Teresa dedicated herself whole hearted freely and unconditionally to the service of the poor and was awarded Nobel Prize for peace in 1979. Neither personal, logical, precise, rational thinking nor interpersonal, associative emotional thinking can give the above exhibited abilities. It is the spiritual dimension of Intelligence, which gives transpersonal, integrating, transcendental, searching, persisting and transforming thinking that supports these abilities.
COMPONENTS OF SPIRITUAL INTELLIGENCE

Purpose seeking / higher critical thinking: It has been proved for animals and plants to have good emotional intelligence, which allows judging and feeling a situation and working within it. Even computers have serial and associative thinking, but it cannot think for itself or learn creatively to cover a task for which it has not been programmed. It is peculiar of human brain to raise fundamental, existential and philosophical questions. Its human beings who like to have sense, direction and purpose in life. There is sensitivity for higher meaning and value in life. The need to seek meaning through principle guided contributory acts makes them rise above other creatures. This ability given by Spiritual Intelligence is purpose-seeking tendency/higher critical thinking. Wigglesworth (2006) states this as ego self-awareness skill of S.Q. Longing for or deriving purpose from life experiences and contemplative ability on existential issues go hand in hand. One cannot say which precedes the other in a particular case. King and DeCicco (2009) have taken these two as separate capacities of spiritual intelligence, namely, critical existential thinking and personal meaning production, but these have been merged under the same ability in this study. Zohar and Marshall’s (2000) principles of SQ, namely, self-awareness, spontaneity, being vision- and value-led, sense of vocation and tendency to ask fundamental "Why?" questions, explain this ability.

Integration: The human behaviour in any situation is holistic in essence. There is an ability to grasp the overall context that links the components. Animal species close to man also exhibit such insightful thinking, but it is individualistic, need based and limited to components in immediate vicinity. Human thinking is not only value based but also has a wider context embracing the whole existence. Global affiliation, universal compassion, acknowledging the intrinsic worth of all creation, humbled use of power and freedom, sensitivity towards the flora-fauna life around, concern for environmental issues are the abilities given by this holistic, integrative thinking. Establishing such oneness with all existence can only be found in human beings. This is the integrative ability given by Spiritual Intelligence. This can be understood by the example of the incident of the former American President Abraham
Lincoln exhibiting this ability who, while going for an official meet in his presidential formal wear, without taking care of his status, and his clothes, got down from his car and entered the mud to rescue the stuck up pig. On being asked, he said he felt as if he was there in his place stuck up and trying to come out. Wigglesworth’s (2006) mentioning abilities as interconnectedness of all life, making compassionate and wise decisions, a calming, healing presence, experience of transcendent oneness is indicative of the said ability. Zohar and Marshall’s (2000) principles of SQ, namely, Holism, Compassion and humility explain this ability.

Transcendence: An emotionally intelligent person is known to understand and manage interpersonal and intrapersonal emotions, stress and relationships well. But human beings not only sustain the self in turbulence but also have the capacity to rise above the turbulence. With a shift in perspective they can see beyond the present moment, rising above the physical, mental and emotional situations with equanimity. This moving beyond knowledge, experience and what is visible gives strong imagination, high degree of awareness and opens the mind to a deeper sensibility. It generates better understanding of the abstract and unseen to seek new dimensions of existence. This is the ability of transcendence given by Spiritual Intelligence. Wigglesworth’s (2006) mentioning power of human perception, Zohar and Marshall’s (2000) principles of SQ, namely, field independence, ability to reframe, celebration of diversity and King’s (2009) model of SQ mentioning transcendental awareness as a core capacity is quite corresponding to the ability discussed here.

Will Power: Stephen Hawking (1942- till date), Helen Keller (1880-1968), Abraham Lincoln (1809-1865) are examples and many such others show a presence of an internal strength in human beings which breaks all capacity limitations and makes them outgo their physical and mental capabilities. The feature of this strength is a firm belief that leaves every reason and feeling behind to pursue the goal in spite of all odds. It enables to do what rationally might have seemed impossible. This strength doesn’t have its source in rational ego or subconscious emotion as both of them are driven and directed by it. It gives the persistence to the behaviour most required to attain the
difficult, ambiguous and novel goals. This ability given by spiritual intelligence is will power. Wigglesworth (2006) states this as sustaining your faith, keeping higher self in charge, seeking guidance from spirit and Zohar and Marshall’s (2000) principles of SQ, namely, positive use of adversity is also in correspondence to the said component of spiritual intelligence.

Thus, Spiritual Intelligence, to be understood in its true essence, can be defined as a dimension of intelligence which gives the abilities of purpose seeking, integration, transcendence and will power conferring wider, richer, meaning, value and context to behaviour and life, leading to their transformation.

ASSESSMENT OF INTELLIGENCE

Till the early 20th century, I.Q. score given by the traditional intelligence test was the only centre of attraction. Greenfeild (1997) observed that the cognitive ability test presumes a particular cultural framework, which is not universally shared. They reflect values, knowledge, and communication strategies of the culture of their origin and this makes them appropriate measures within their own culture, but ethnocentric when taken to a new culture. The individual’s IQ score by itself has resulted to be a useful but limited tool for identifying the potential performers with the findings that it accounts for only 25% of variance in performance (Goleman 1996). Critics found a wide range of intellectual components that were ignored and left un-assessed by the traditional test (APA report 1995). Emotional Intelligence attracted the researchers as a concept possibly explaining the rest of the variance and two competing theories of it being trait (Bar-On 1997) or mental ability (Mayer and Salovey 1997) formed on the basis of the tools developed to assess it.

ASSESSMENT OF EMOTIONAL INTELLIGENCE

The multifactor emotional intelligence scale (MEIS), an ability theory based tool developed by Mayer, Caruso and Salovey (1997) assess three factors – perception, understanding and management of emotion and is reported to possess sound validity and reliability. But the
critical evaluation of the tool in Indian cultural context by Pant and Prakash (2004) revealed that the tool is codified for American culture and most of the reliabilities of the subtests are weak for Indian sample. Shanwal (2004) adapted the tool for Indian population of children omitting stimuli from the ‘Perceiving Emotions’ subtests thus diluting the validity of the adapted tool.

One of the first self-report tools of Emotional Intelligence based on the trait theory is developed by Goleman consisting only 10 items and it has a very low and unacceptably weak reliability coefficient of 0.18 (Thingujam 2002). Another Goleman model based self-report measure with 60 items is developed by Singh (2004) assessing self-awareness, self-regulation, motivation, social awareness and social skill. It is noted that the tool is based on the old model given by Goleman which he later revised himself removing the motivation component. Bar-on (1997) developed a self-report measure of Emotional Intelligence (EQ-i) in 1997 and assessing aspects were interpersonal, intrapersonal, stress management, adaptability, general mood, total EQ and positive impression. The divergent validity of the tool states 4% of variance of EQ-i being explained by the cognitive intelligence test and high convergence is stated with the other measures of Emotional Intelligence. Critics argued that if ‘Intelligence’ word is to be used, proper convergent validity has to be established with other types of Intelligence tools and the tool is assessing the variety of personality traits already being assessed by well-studied existing personality inventories (Thingujam 2002). The exclusiveness of the sub-scales is found to be quite unclear due to a high overlap and the tool is found to be largely explained by 16 PF, anxiety, alexithymia, neuroticism, dimensions of big five and depression (Thingujam 2004).

Schutte et al. (1998) developed a unifactorial 33 item self-report measure of Emotional Intelligence based on the dimensions delineated by Salovey and Mayer (1990). The tool has been reported not to assess the general Emotional Intelligence and has failed to measure the said model of Emotional Intelligence. Further the factor analysis shows that the tool is not unifactorial. Emotional Intelligence is referred as a trait as well as Information processing ability, whereas the former is related to personality and the latter is an attempt to find the new domain of

**ASSESSMENT OF SPIRITUAL INTELLIGENCE**

There are many tools assessing spirituality, spiritual beliefs and related constructs (MacDonald and Friedman 2009). A self-report four point Likert scale of spirituality is developed by Wolman in 2001 assessing seven factors including divinity, mindfulness, extrasensory perception, community, intellectuality, trauma, and childhood spirituality. The tool specifically assessing spiritual thinking as Intelligence is developed by King, a 24 item self-report Inventory for assessing spiritual intelligence through four components, critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion in university undergraduate students. Criterion validity of the tool has been ascertained using criteria of mysticism, intrinsic-extrinsic religiosity, satisfaction with life, emotional intelligence, meaning in life and the coefficients of correlation have found to be significant.

**IMPLICATIONS**

**Researchers:** A holistic approach must replace the analytic approach of the researches in the field of Intelligence. Researchers studying the two dimensions out of three state that IQ and EQ are not related (Anandmani 2006) but there is significant high positive correlation found between Spiritual Intelligence and Emotional Intelligence (Dhingra, Manhas and Thakur 2005; King 2009). There is a need of more studies to find the relationship among the three dimensions of Intelligence and develop effective interventions to build
thriving individuals. Assessment of the dimensions and tool development need attention of researchers. Cross-cultural longitudinal studies to assess EQ and SQ in temporal order will help establish the environmental/cultural effects.

**Education:** Absence of negativity doesn’t assure developed positivity. SQ being placed at the pinnacle amongst the thinking abilities, educators need to see the unique personal significance of each student in the light of multidimensional status of Intelligence to move beyond the aim of overall development to the optimum development. Resource allocators need to keep a provision for creation of desired environment for the facilitation of E.Q and S.Q. along with I.Q.

**Society:** Human beings as a member of a society have to be seen as a rational, emotional and spiritual being. Dominance of rational thinking has given the current scenario of society full of fragile relationships, growing terrorism and depleting environment. As yet, spiritual thinking has been treated as a matter of interest for only those who stay away from the web of relationships and usual activities in which common man is involved. It has become necessary to accept spiritual thinking in its true essence. Only with it Spiritual Intelligence can be established as a potential to be essentially developed in all members of the increasingly complex, materialistic, interdependent yet self-centered, competitive and fast pacing society for peaceful coexistence and harmonious growth of civilization.

**CONCLUSION**

It’s high time that we get intelligent about Intelligence as a human potential and its testing. It is apparent that no one has studied an aggregate notion of Intelligence because scholars have investigated only the specific facets/dimensions of Intelligence. IQ is arbitrarily defined by Intelligence tests, designed by compiling what the test makers think the intelligent people are likely to know. To evaluate everyone only by his rational way of thinking fails to recognize the multiple talents and worse, it instills an enduring sense of failure in those who do not conform to this narrow measurement as well as a false sense of success in those who achieve high scores on Intelligence tests. The theory of
Intelligence that all valid dimensions of intelligence must have moderate correlation with each other to fall under the name ‘Intelligence’ is further raising questions on the status of EQ and SQ. If this criterion is not being fulfilled through psychometric testing, perhaps the fault lies with the poor assessment tool and a right tool might have the potency to manifest the relationship amongst the dimensions proven by the neurological studies. Though spiritual concepts are complex due to the religious, traditional-cultural undertone attached to it, getting it a place with other dimensions of intelligence through psychological assessment may seem difficult at the moment, but the APA report on intelligence (1995) that with new ways of assessing intelligence in near future, it may be possible to relate the test performance to specific characteristics of brain function indicates the researchers to be alert about this aspect of intelligence testing.

The controversy of Emotional Intelligence to be termed as a mental ability or a trait doesn’t lower its importance in successful living especially when research has proved the integrated and coordinated nature of human thinking. Such questions for Spiritual Intelligence may be in waiting to be surfaced. If the effect of culture on Spiritual Intelligence (Yang and Wu 2009), its development over the life span (King and DeCicco 2009) and effect of culture on Emotional Intelligence and its development over the life-span (Sibia, Srivastava and Misra 1983) makes them susceptible to be a social skill/trait, isn’t IQ also open to the same question after the similar research findings for it (Greenfield 1997; Stevenson, Chen, and Lee 1993)? Emotional Intelligence significantly predicting cross-cultural adjustment of 618 foreign students from 15 countries (Jazaeri and Kumar 2008); Spiritual Intelligence being stated as a fundamental ability for the delivery of truly holistic care of humans in a multicultural society (Yang and Wu 2009) indicate that despite cultural influence there may be fundamental abilities that helps connect with others as human beings, moving beyond the culture factor and the need to study these abilities by removing the culture factor is what is emphasized. We agree with Sibia et al. (1983) that a viable concept of Emotional Intelligence and its assessment needs long-term commitment and concerted efforts, and argue that the same approach is required for the other dimensions as well.
Our multiple intelligences being variations of our basic IQ, EQ and SQ, and the neural arrangements in the brain (Zohar and Marshall 2000) and positive psychology explicitly stating all three to be cardinal for a fulfilled living (Diener et al. 2002; Gillham and Seligman 1999; Seligman and Csikszentmihalyi 2000), a holistic assessment incorporating all the dimensions is required to unleash the true human potential that sets them apart from other creations. An opportunity to reorient our views and reconstruct our approach is calling for attention of researchers.

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