



## RESEARCH ARTICLE

### OPEN ACCESS

Received 19.12.2023

Accepted 21.12.2023

Published 31.01.2024

### Corresponding author

[sandhyakanade@hotmail.com](mailto:sandhyakanade@hotmail.com)

**Copyright © 2024** Sandhya Kanade MD. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Published By** Journal of  
Quantum Science of  
Consciousness,

Center for Quantum Activism.

DOI: XXXXXXXXXXXXXXXX

Year: 2024, Volume: 01, Issue: 02, Pages: 80- 92

## THE HAPPINESS PROJECT- A LITERATURE REVIEW and an introduction to The Quantum Scale of Happiness and the Scale of Intelligence for measuring Spiritual Transformation

**By Sandhya Kanade MD, Dr. Amit Goswami PhD, Dr. Mahadev  
Kumar Saini PhD**

Department of Quantum Science of Health, Prosperity, and  
Happiness, University of Technology, Jaipur - 302020, Rajasthan,  
India

**Abstract:** Happiness is a much sought after quest not only by everyone in day-to-day life but increasingly by academia as well, given the personal and societal repercussions. This article aims to define and clarify what Happiness is, how it is produced, what factors influence it and the ways to measure it. We also explore the shortcomings of the measurements thus raising the need for a new way of measuring happiness using Dr. Goswami and Pattani's Quantum Science Spectrum of the Scale of Happiness and Intelligence.

**Keywords:** *Happiness, Multidimensionality, well-being, determinants, architecture and neuroscience of happiness, subjective and objective Happiness measures, Quantum Happiness, Quantum Science spectrum of Happiness.*

## INTRODUCTION

The quest for happiness is as old as civilization. All our acts are performed in pursuit of happiness. Defining it is, however, hard. All we can say is that it consists of several traits such as positivity, wellbeing, and stability in various aspects of one's life. It is a state of being that is multi-dimensional in its determinants thus seemingly going hand in hand with Well-being. Happiness is one of the determinants of Well-Being, and they affect each other. On the surface, it appears that happiness depends on physical and mental well-being, economic situation, love and relationships, family conditions to name a few. To promote mental well-being, it is important to focus on positive psychological concepts that act as a buffer against mental illness. Happiness is one such psychological concept that promotes mental well-being. That is not all; happiness is determined by the community and culture and not just the individual. Understanding the multidimensional aspect at an individual as well as collective level is important in our quest for happiness. It is only with this deep understanding can we help people and society. Nations can then determine what actions and policies are to be taken to enhance individual and collective happiness. This will ensure that we don't relegate an individual factor as causal to the creation of happiness. Many factors intersect and combine in complex ways to produce happiness. The creation of happiness is layered over by the fact people are passively affected by their conditions, but in turn, actively shape it by way of their response based on their values and behaviors.

It is important to pay attention to happiness since it has implications in philosophical, psychological, scholarly /research and governmental considerations. The study of happiness and well-being has thus become a field of great importance and interest.<sup>1,2</sup>

### DEFINITION:

Happiness has been defined from various angles. It is "a lasting, complete and justified satisfaction with life as a whole". Another definition is that "it is the belief that one is getting the important things one wants, as well as

certain pleasant effects that normally go with this belief. According to Argyle, Happiness is defined as a "positive inner experience, the highest good and the ultimate motivator for all human behaviors"<sup>3</sup>. It is a multidimensional construct comprising both emotional and cognitive elements.<sup>4</sup>

### TERMINOLOGIES TO DISTINGUISH FROM:

Many terms have been used interchangeably with happiness such as life satisfaction, flow, peak experience, well-being and quality of life. Happiness reflects psychological or subjective well-being, indicating a state of mind associated with success or satisfaction. Life satisfaction does not refer to the state of mind. Happiness is a global construct. Similarly, well-being is often used to mean happiness but the two aren't the same. According to Natvig, Albreksten and Qvarnstrom, the focus of wellbeing is broader than happiness and includes contentment, health, prosperity, wellness and happiness. Wellbeing is more than happiness and life satisfaction. It is defined as a combination of feeling good, functioning well: the experience of positive emotions such as happiness and contentment as well as the development of one's potential, having some control over one's life, having a sense of purpose, and experiencing positive relationships.<sup>5</sup> Subjective well-being equates to positive mental health.

To be noted is the fact that the concept of flow experience (as pointed out by Averill and More and peak experience as elaborated by Maslow) comes close to happiness. It needs to be pointed out that both are subjective experiences that are more focused on the moment than the experience of happiness which is a trait and not a transient experience.

Quality of life on the other hand, although used interchangeably with happiness, is broader and Happiness is a part of Quality of life. According to Meeberg, it has four critical attributes: the feeling of satisfaction with one's life in general, the mental capacity to evaluate one's own life as satisfactory or otherwise, an acceptable state of physical, mental, social and emotional health as determined by the individual and an objective assessment by another that the person's living conditions are adequate.<sup>6</sup>

**THEORIES OF HAPPINESS:** Happiness has been studied from a variety of perspectives thus indicating the various ways in which happiness can be achieved. Personality models define it as a stable trait that depends on the personality traits and there is a global propensity to experience things positively. According to the Life events model, happiness fluctuates over time with positive or negative life events, and it hints at happiness being the sum of many small pleasures.<sup>7</sup> Several theories such as Telic theory (happiness is gained when a goal or need is achieved), Activity theory (happiness is achieved through social interaction, leisure or other specific activities) & Social comparison theory states that happiness results from comparison between a standard and an actual condition. The Affective-state theory states that happiness is a person's overall emotional state and is somewhat like the Hedonistic view of happiness as an experience of pleasure for most part, while the life satisfaction view relates happiness to individual attitude towards their life.

Maslow's theory of human motivation and 'hierarchy of needs' talks about how leading a good life determines the amount of satisfaction experienced. Happiness increases as more needs are satisfied. Maslow's theory recognizes the various types of needs that are placed in a hierarchical manner. The first need is physiological, once this is satisfied, safety needs call for attention followed by love, belonging, self-esteem, self-actualization. According to Maslow, lower needs are tangible, individualized and more limited in its production of happiness, whereas the higher needs is subjective, not tangible but provide unlimited gratification, in turn leading to a greater depth of happiness. To achieve the higher needs, better environmental conditions such as family, economic, political and educational conditions are necessary.<sup>8</sup>



Abraham Maslow's Hierarchy of Needs

Psychological studies have shown that subjective happiness has two components emotional and cognitive. The emotional component is measured by subjective experience of more pleasure and less displeasure, whereas cognitive component comes from a personal awareness that their life is good.<sup>9</sup>

We increasingly recognize that most research on happiness focuses on measuring life satisfaction or positive affect- all parts of hedonic or evaluative happiness. Ryff et al and Vanderweele et al have shown that people do value other forms of happiness such as finding meaning and purpose in life, character development, personal development etc. This is where research is lacking.

How is Happiness Produced? What are the determinants of Happiness? Two fundamental concepts of happiness have guided the topic of Happiness assessment. Is Happiness a result of attaining pleasure and avoiding pain -Hedonic Happiness (Diener & Emmons 1984) or is it a product of finding meaning in life and self-realization (Eudaimonic Happiness) (Ryan & Deci 2001). Thus, studies measuring the degree of happiness are assessed either from Hedonic or Eudaimonic perspective.

The most used model- Diener's model of Subjective Well-Being (SWB) is rooted in Hedonic happiness. Ryan and Deci's self-determination theory bases its measurement on meaning in life, life satisfaction and to what extent a person realizes and functions at their

full potential. The theory of Authentic Happiness integrating Hedonic and Eudaimonic processes was developed by Seligman in 2002. It consisted of 3 distinct happiness factors: the pleasant life – engaged in pleasure attainment; the good life – a life absorbed in daily activities and the Meaningful life that was engaged in finding meaning and purpose. Different people report a high degree of happiness in one of the other types.

The topic of Happiness has caught the attention of academia too and thus exploring the Architecture of happiness seems apt. It focuses on the processes upon which it is built, how happiness is generated as opposed to the factors that influence happiness. Tim Lomas et al do exactly this. In their study titled “The Architecture of Happiness” they visit the six realms: genetic, biochemical, neural network, psychological, phenomenological and socio-cultural realms and attempt to connect the realms to create a theoretical model that integrates them under one umbrella.

Neurophysiologic dynamics provide the raw material for happiness. Genetic processes form the underlying physical substrate out of which the raw material is fashioned. The raw material is driven by genetics to produce the biochemical processes which are the basic elements giving rise to the phenomenon of happiness. Neural networks act on top of this layer in complex ways to produce psychological mechanisms that are in turn influenced by socio-cultural forces that finally produce the end product of the experience of happiness.<sup>10</sup>

Once happiness is created, there are factors that influence it. Mahon and Yarcheski have elaborated on the enabling mechanisms and personality characteristics pertaining to happiness in adolescents. There were three enabling mechanisms namely self-esteem, future time perspective and optimism and three personality characteristics – vigor, social support and inclination to change that were positively linked to happiness. In older adults a secure attachment style and a dismissive attachment style are positive predictors.<sup>11</sup> The effect of happiness in older people was the ability to grasp better, better attendance at community group activities, and a flexible attitude.

Likewise, there are studies that delineate variables associated with happiness. Extroversion is both a predictor and association of Happiness. However, the study by Hills and Argyle showed that emotional stability defined as the ability of people to stay and imperturbable and to have few complaints about their personal worries and anxieties – is associated more strongly to happiness than extroversion. Other correlates are agreeableness, conscientiousness, neuroticism, openness to experience.

Set point theory invokes the involvement of genetics in the production of happiness by the observation that people have relatively stable baseline or set points and these baselines vary among people. The role of inherited predispositions has been invoked as well. Genetic factors seem to be responsible for 20-50% of the variation in happiness. Scientists have tried to localize the gene responsible for happiness; the most studied being the 5-HTTLPR gene that regulates the transcription of Serotonin transporter gene SLC6A4. The short allele of this gene makes people susceptible to environmental influences, both good and bad. The direction taken depends on the complex interaction of factors in the subject. More recently, the focus has shifted from the search for individual genes responsible for or affecting happiness to genome-wide approaches to elucidating well-being as a function of multiple individual gene variants that contribute in a small way.<sup>12</sup>

It is not just enough to focus on the physiological dynamics. One needs to remember that psychological, phenomenological, socio-cultural also play a role in the creation of this Happiness.

A key reminder is the influence of Mind and Body over each other in the generation of happiness. Not only is there a direct cause and effect, but there is also the fact that different aspects of mental wellbeing affect physical health differently. Life satisfaction and affective happiness are more weakly related to physical health and longevity than forms of Eudaimonic happiness such as life purpose and optimism.<sup>13</sup>

No discussion on Happiness is complete without mentioning Wilbur’s integral framework which

straddles the mind-body divide, bridging the two upper dimensions and includes not just the individual but collective realms.<sup>14</sup> This is the first time that the collective conditions were acknowledged to influence an individual's happiness. The LIFE (Layered Integrated Framework Example) MODEL, introduced by Lomas et al, which came later in 2015, is a conceptual map that helps understand individual and collective influences for any experience, including happiness, with each factor being complex by itself yet intertwined with other factors in a complex manner. It is now recognized that both environmental and individual factors or conditions help create happiness and is dependent on a complex network of supporting conditions.<sup>15</sup> Thus multidimensionality demonstrates that an outcome such as happiness is the product of numerous intersecting variables. An interesting finding is that when it comes to relationships and community, "PERCEIVED" relational support seems to have a stronger relationship with happiness than objective indicators of support.<sup>16</sup> Perhaps such perceptions are positively affected by psychological mechanisms like mindfulness, self-compassion, and savoring.<sup>17</sup> For this reason, self-report scales that take into account a person's subjective and intersubjective experiences become equally if not more important than objective measurements.

As more and more research take place in the field of happiness, it becomes apparent that the conditions or factors that influence happiness are not just at an individual level but at a collective level, either directly or indirectly and they are interconnected in multiple ways. For example, community or the collective has a positive effect on individual happiness by potentiating "social capital" but may also impede one's happiness by impinging on their autonomy. In this context, it is vital to note the most reliable finding of the nexus between practices and values associated with religion and spirituality at both individual and collective levels. There is vast literature that links religion and spirituality to happiness in numerous ways via the beneficial qualities of generosity, forgiveness, gratitude, compassion, hope. Religion/spirituality also helps in generating the Eudaimonic forms of happiness such as generating meaning,

understanding existence and endowing one's life with purpose. As such, meaning also facilitates positive psychological outcomes such as clear identity and self-worth, helps allay existential fears around mortality and acts as a buffer against trauma. Spiritual practices promote positive health behaviors and outcomes, promote social conditions for happiness.<sup>18</sup>

Finally, a large body of research on 'Linguistic Relativity Hypothesis' has shown that variation in culture and language affects how people understand and experience the world. The experience of happiness is thus influenced by it as well and it is important not to undermine the role of cultural and geographic context.

**THE NEUROSCIENCE OF HAPPINESS AND WELLBEING:** We have all along described the subjective aspects of Happiness including subjective measurements. Recent research has identified the corresponding correlates in the brain using Brain MRI. Functional neuro imaging studies of Happiness found that the anterior cingulate gyrus, posterior cingulate gyrus and Precuneus and Amygdala were activated during arousal of happy emotions. A meta-analysis of functional neuroimaging data confirmed the involvement of these areas during emotional states.<sup>19</sup> In their study, Sato et al share their findings of a positive correlation between subjective happiness score, combined positive and negative emotional intensity, purpose of life scores and gray matter volume in the right Precuneus. Their conclusion was that the right Precuneus mediates subjective happiness by integrating both- the emotional as well as cognitive aspects of happiness. Proof of stable neural substrate comes from the fact that subjective happiness can be reliably measured and is influenced by genetic input.<sup>20</sup>

**Measurement of Happiness:** There are various tools to measure happiness of which most of them are subjective and are based on a person's report of the experienced happiness via a, self-reports, surveys and questionnaire. At the other end of the spectrum is the Objective Well Being, where observable variables are measured. E.g. measurement of life expectancy etc. There are several studies whose methodology rests in between. Some of these well-known subjective measures are the

Bradburn's Affect Balance Scale measures the affective aspect of happiness, as does the PANAS (Positive and Negative Affect Scale). The Affect balance Scale incorporates five items that measure positive affect and another five that measure negative affect is a scale that is mainly used in adolescents and young adults. It was devised by Bradburn and Caplovitz in 1965, and postulates that happiness is the difference between positive and negative affective states with the positive affect increasing happiness. This scale was found to have major weaknesses if used as a measure of psychological wellbeing in the elderly.<sup>21</sup> Kozma and Stones developed a new scale in 1980 to measure happiness in the elderly that combined the best features of all other scales that gave both short and long-term aspects of well-being called the MUNSH. It has 10 affects (5 positive & 5 negative), 14 experiences (7 positive and 7 negative).<sup>22</sup> This scale too has pitfalls in that it is dichotomous and there is no clear distinction if it is measuring short-term or long-term aspects of well-being. Satisfaction with Life Scale measures it from a cognitive point of view whereas the single item Delighted-Terrible Scale measures the subjective well-being in terms of life satisfaction. It is recognized that happiness has a temporal dimension, and it could be transient made of single ecstatic moments when goals are achieved whereas some understand it as a personal disposition that is durable and extends over time. Dambrun and colleagues devised two scales that measure these two aspects of temporality – the Subjective Fluctuating Happiness Scale (SFHS) and the Subjective Authentic-Durable Happiness Scale (SDHS) respectively. Suffice it to say that SFHS is more linked to emotional negativity than to emotional positivity. But this isn't what happiness is supposed to be – bursts of happy moments. A stable state measure is what one needs and the SDHS fits the bill; what's more it is directly correlated to positive affect and life satisfaction.<sup>23</sup> Psychological well-being scale was developed by Psychologist Carol Ryff and it measures six aspects of wellbeing and happiness: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance.<sup>24</sup> Measuring global subjective happiness is a recent attempt and the Subjective Happiness Scale developed

by Lyubomirsky and Lepper is one such<sup>25</sup>. It is a 4-item scale designed to measure subjective happiness and each item is completed by choosing one of the 7 options that complete a given sentence fragment. The Oxford Happiness Questionnaire is a 29-item improved instrument developed in 2002 by Hills and Argyle, Department of Experimental Psychology, University of Oxford in 1980 to assess subjective well-being.<sup>26</sup> It is a broad measure of personal happiness and has been used worldwide. It has adapted its design and format from the Beck Depression Inventory. The Chinese Happiness inventory is based off this. This was modified as The Oxford Happiness Questionnaire which has single item that can be answered on a 6-point Likert scale. It is an easier and more compact version with an endorsement over an extended range.

The newest member to the Science of Happiness is the "Measure of Happiness" (MH) scale. All the prior measures lack a specific reference to the source/sources of experienced happiness. The missing piece is the answer to the question - what domains of an individual's life contribute to the global level of experienced happiness. This new measure is multidimensional, has four domains for measuring happiness – a perceived physical and mental health status, economic conditions, family and social relationships and future perspective.<sup>27</sup> Happiness as measured by the MH captures happiness as a continuous and not episodic condition. It is recognized that mental and physical health are important in the experience of well-being. The lack of which gives rise to anxiety and depression which are negatively associated with happiness. Since it measures tangible life dimensions, it is an objective measure.

Something to keep in mind is the fact that for some people happiness may refer to their feelings or emotions whereas life satisfaction indicates an external, socioeconomic situation along with the state of mind. Since wellbeing and happiness are used interchangeably, we could use measurable elements of wellbeing as elucidated by Seligman in 2011 such as positive emotions, engagement, relationships, meaning and accomplishment.<sup>28</sup>

The vast number of measurement tools for happiness and still more coming only confirms the lack of complete clarity in the understanding of the concept of Happiness as well as the numerous variables influencing it. It is not surprising that the best measure would be one that incorporates many factors, including the assessed population, psychometric characteristics of the measure, the number of items and scale accessibility.

Most available research focuses on hedonic happiness with a further narrow focus on life satisfaction or positive affect. This caters to the needs of societies that are influenced by the ideals of consumer capitalism, societies that are labelled as “WEIRD” – Western, Educated, Industrialized, Rich and Democratic- by Heinrich et al in 2010. None of these scales measure aspects of Happiness that we have further elaborated on as Eudaimonic. As mentioned above, there is a greater depth to happiness and multidimensional influences or conditions that are responsible for the production of happiness. More people want to come out of the basic human condition of eating, sleeping, and making merry since it doesn’t produce real or lasting happiness. They have begun to question the meaning and purpose of life. There is a spurt in the interest in life coaching, life improvement and personal development. Spirituality is slowly becoming mainstream. It is thus important to focus on measures or scales that include spirituality as a measure. Moreover, most measures are cross-sectional and provide measures at a point in time with no longitudinal quality that is useful in measuring self-improvement or transformation. Hence the need for a scale that includes spirituality and thus impacts mind-body angle and is useful for a longitudinal follow-up.

Dr. Goswami’s scale of happiness & the Scale of Intelligence helps address this gap. A scale that is longitudinal with clear definitions of each stage helps with any transformational study.

Before delving into this, let us visit some of the novel objective measures of happiness. Apart from questionnaires to detect the state of Happiness, researchers are venturing into measurement of human emotions via physiologic characteristics such as smiling,

blushing etc. Happiness is known to involve human psychology, physiology, behavior etc. Measurement of facial expressions can be used to detect if a person is happy or not. Happiness here is a surrogate to well-being. There are several studies exploring human emotions via facial expression. The caveat is that sometimes smiling can be pretentious. To overcome this, emotion researchers used physiologic signals since it is not influenced by the mind and subjective consciousness. The physiological indices measured are heart rate (most common indicator) , skin conductance, blood pressure and respiratory rate.<sup>29</sup> The peak amplitude of the Electrogastragram (EGG) has been found to correlate with the degree of arousal assessed subjectively by film-assisted methods. Perspiration responses in the perinasal area have been used as an emotional marker by Pavlidis et al. They also introduced Thermal imaging technology to detect perspiration signals unobtrusively. Unfortunately, all these physiological measurements need different contact sensors to measure changes in response of the body.

Newer contactless technology has been developed for detecting and measuring emotions which are more reliable and noninvasive. Two such technologies are Thermal Imaging (TI) and Hyperspectral imaging (HSI). TI & HIS measure blood flow, heart rate and respiratory rate by spectral technologies. TI measures tissue blood flow and detects changes in skin temperatures and perspiration responses of the targeted regions. The drawback is that TI becomes less reliable when ambient temperature changes suddenly.

Detecting happiness using hyperspectral imaging technology: HSI on the other hand, measures affective features and is not affected by the ambient temperature. It obtains images of a scene in hundreds of contiguous narrow wavebands in the bandwidth of infrared and visible regions of the electromagnetic spectrum. The physiologic change measure when one is genuinely happy is facial tissue oxygen saturation and a study by Hao et al demonstrates its utility in a small well-designed study.<sup>30</sup>

Happiness through the lens of Quantum World View: We have learned all along the various mechanisms for Happiness and the factors affecting it. If we were to pay attention, certain pleasurable moments or certain activities or positive emotions produce a feeling of expansion of the heart with a movement towards our higher self. New positive emotions can evoke the same expansion indicating that happiness can occur without prior memory. Extending the role of life satisfaction as a surrogate for happiness, Quantum Science encourages us to pursue the exploration of objects of intuition as opposed to outward accomplishments such as money, power fame for selfish motives. Exploration of the objects of intuition such as higher noble values like Goodness, Abundance, Love, beauty, Truth, Wholeness, especially abundance and power, if directed for the wellbeing or good of others would expand consciousness providing a level of happiness with more depth and satisfaction. We feel more open, more giving, more tolerant, more loving. Any experience accompanied by the expansion of the heart is central to Quantum Happiness. Such a practice aided by creativity and intuition would lead to a state where one experiences "FLOW". One is so immersed that there is no separation from the outside world, there is no space or time. We truly experience our higher self here. During a flow state our identity moves back and forth between our ego self and higher self or the Quantum Self. This joy of flow is spiritual joy. Thus, one can say that lasting happiness, which has a different quality to it, is produced whenever we are operating from our higher or quantum self and when we perform all actions for the highest good without any inclination towards personal gain. With Quantum Science of Happiness, we can achieve this state where we are mostly in a state of flow and joy and still experience the joys of the world. Renouncing the world isn't necessary and this state has been named Quantum enlightenment. There are certainly certain factors that cloud this joy- our habit patterns, belief system, me-centeredness and pleasure -seeking behaviors. The transient happiness obtained when based out of such activities, is not accompanied by an expansion of consciousness which is the differentiating feature.

Quantum Science recognizes a nobler altruistic aspect of us that seeks to "Be Good, Do Good and see Good"- the higher self – the Quantum Self. We toggle between this quantum self and the ego. Most people reside in their ego self for most part. Quantum Science can explain the two aspects of the self- the Quantum self which we experience spontaneously, is the cosmic part that is part of the supreme consciousness which is all pervading. Hence, when experiencing this self, it doesn't need any communication lines. The transfer of information is instantaneous since it is all part of the universal consciousness. The ego self, on the other hand, is formed from experiences that are repeatedly reflected in the mirror of memory of past events. The time taken for this reflection is about half a second after an experience comes into our field of awareness. Any impression and response, thereafter, comes from our ego self. It is easy to understand that children most often stay in their quantum selves that gradually diminish as one gets older. It is therefore easy to fathom why children are happy for the most part and it doesn't take too much to make them happy. Until "the clouds of unhappiness cover the sun of happiness". The clouds are nothing but our negative emotions such as anger, greed, jealousy, lust etc., that with repeated experience form brain circuits that are negative in nature. Negative emotions, me-centeredness and pleasure-seeking behavior are the main drivers for unhappiness. So, Quantum Science says, in order to be happy, one needs to reduce the negative emotional circuits by replacing with positive circuits, move away from me-centeredness to include the other, pursue nobler activities as opposed to perpetual pleasure-seeking behavior, as well as, instill a higher life purpose that benefits the self and others. Thus, Quantum Science can define all aspects of us, explain how they communicate and function as one unit, describe the drivers for unhappiness and provide a prescription for the pursuit of happiness. Another important contribution to the pursuit of happiness, is recognition of the predominant dichotomies in this world, such as unconscious(transcendent) - conscious (immanent); outer world-inner world and the male-female dichotomy, accepting and integrating them so we become "whole". The transcendent-immanent or the sacred -mundane or above and below is the situation where we



are all one when in unconscious state, but when awareness sets in, there is a subject (the one who sees) and an object (the seen). The transcendent state or the state of Oneness, is always a possibility and this is the highest potential that we can achieve, a state that induces the highest happiness. If we aimed for it and tried, we could certainly achieve it. Instead, society makes people mistakenly believe that worldly achievements that augment the self are what makes us happy and that is what we need to aim for. The second common dichotomy is the Outer-Inner. It is easy to understand what Outer means- the world outside of us. Inner refers to our inner world of experience and the agent responsible for such an experience- the mind. The mind is the one that flavors our experience with subtle feeling, meaning as well as experience the noble values such as Goodness, beauty, power, Love etc. When we pay attention to these inner experiences, we add far greater value and happiness. Lastly, the male-female dichotomy- which is not truly a sexual differentiation or gender bias. We have aspects of the masculine such as goal orientation. Intense focus, competitiveness etc while going with the flow, feeling emotions, understanding, kindness are feminine traits. One needs to use either one of the faculties at any given time. There needs to be a good balance. We all have aspects of ourselves that are not well developed. Accepting this and paying attention to the development of feminine aspect in the male and the masculine aspect that is underdeveloped in the female would enhance our life experience by improving traits that are characteristic of the masculine and feminine. Quantum Science addresses these dichotomies and shows us how to integrate them into our lives and balance them. Dr. Goswami, along with Sunita Pattani, have devised the scale of Happiness to assess where an individual stands and evaluate if spiritual practices are impacting our level of Happiness. It is now clear that this scale is helpful for longitudinal assessment as opposed to prior measures that would provide information at one point in time. Quantum Science also recognizes that, unlike the religious movements, where some wanted to escape the wheel of unhappiness, the cycle of birth and death, by giving up on experiencing life, it can provide a prescription “to cut the cake and eat it

too’. One can experience life to the fullest and be happy without having to sacrifice the experience of worldly life. This stage has its own level on the happiness scale and is called Quantum Enlightenment. There is still the option of opting out of this world and being happy. Since the mind is the key to our experience of the world and thus happiness, it makes sense how the scale of happiness incorporates mental health as part of the happiness profile. Abraham Maslow gave a simple scale with three divisions- Pathological, Normal and Positive. Dr. Goswami and Pattani have further subdivided it based on several factors into seven levels of happiness, from Level 0-6.<sup>31</sup> The levels represent a continuum and people move freely between levels, especially the midlevel. The actual level then is determined by the level at which we attain stability. The scale is not meant to categorize people but to serve as a guide to determine where we stand and if we are progressing. It is a self-reflection tool. One can assess the level of happiness by its stability, assessing how long it takes to return to baseline or normal, following an emotional upset or stressor, whether one has negative emotions, what does one do with it, is one engaged in spiritual exploration and integrating the fundamental and archetypal dichotomies etc.

Here is how the scale goes.

#### **Quantum Science spectrum of Happiness:**

**Level 0- STAGE OF PSYCHOSIS.** There is no self-awareness or happiness. Consciousness is contracted and even the perception of pleasure lacks the emotional component that goes with it. Pleasure is experienced in a mechanical way. They have features of psychosis. They have trouble focusing and meditating and thus are not amenable to any intervention to aid transformation. Negative emotional upsets could last months or years.

**Level 1- STAGE OF NEUROSIS.** There is moderate self -awareness and minimal happiness. People at this stage experience happiness via pleasure and this could be accompanied by the awareness of a temporary expansion of consciousness. They can focus to a certain extent and are able to relax with

momentary experience of wholeness providing some relief from neurosis. They are amenable to therapy and would certainly benefit with help from guides and therapists. Bouncing back from emotional upsets can take many days.

Both Level 0 & 1 are pathological.

**Level 2- STAGE OF NORMAL MENTAL HEALTH.** There is maximal awareness of the ego-self with moderate happiness. At this stage, people still mistakenly believe that worldly achievements that augment the self are the ones we need to aim for. However, with spiritual practices one could move to the next level by trying to counter the negative circuits with new positive emotional circuits. This stage or level can further be categorized as level 2 minus, 2 and 2 plus and people frequently fluctuate in this range. The reason it is labelled Normal Mental health is because it represents people who can cope with their neurosis in most situations and occasionally needing help of a therapist. They enjoy a balanced psyche without too many ups and downs and are able to live reasonably happily. The ability to cope with neurosis puts a person on level 2 minus. They still have a me-centered personality and continue to struggle with pleasure-pain dynamics. Not only do they seek pleasure invoking pleasure circuits of the brain, but they also experience pain from negative emotions. A new addition to the problem is addiction to information and technology such as cellphones, TV, social media etc.

They start to move up the scale through 2 to 2 plus when they start getting interested in exploring happiness, trying to find their own meaning of things rather than just seeking information. At level 2, happiness is still based on pleasure, however, it is not all mechanical acts. They have occasional feelings in the body along with pleasure but that is short-lived. Very rarely do they find happiness from exploration of meaning and purpose and the joy of being in the flow. Flow state can be achieved with creativity, both situational and fundamental, which is based on outer worldly activities. Thus, most of the happiness at this stage is derived from pleasure and accomplishments. They have intimate relationships, but it is based on pleasure bond.

If they start to explore human values and noble feelings, they are at level 2 plus.

At level 2 plus, they can be inspired and coaxed to explore inner creativity and personal growth but largely depend on guidance from a guru or therapist. They follow the same contexts as the Guru or guide. Thus, the maximum benefit of a Guru or guide or therapist is seen to occur with LEVEL 2 HAPPINESS.

The hallmark of this stage is lesser recovery time from emotional upsets- lasts a few minutes if the emotional upset stems from acquaintances. But emotional upsets emanating from intimate relationships still take hours to days.

**Level 3- Stage of Positive Mental Health** where the positive emotions successfully counter the innate negative emotions. They develop positive emotional brain circuits, balance the negative emotional circuits to some extent and acquire SOME EMOTIONAL INTELLIGENCE. One is more happy than unhappy daily. Persons at this level begin to consciously engage in personal growth and self- enhancement. One explores human potential fully and starts working on embodying and expressing the archetypes. However, they follow the precepts of Gurus and Traditions, using situational creativity. They are unable to experience much fundamental creativity. They experience changes as quantum leaps. At this stage, they know the meaning and importance of authenticity and have experienced some balance in fundamental dichotomies of transcendent-immanent and to a certain extent outer-inner experience as well.

**Level 4-** One moves to stage 4 by directly engaging and exploring their chosen archetype followed by embodiment of the chosen archetype. This process known as INDIVIDUATION was conceptualized by Carl Jung. One has mostly integrated all the three fundamental dichotomies (Transcendent-Immanent; Outer- Inner; Male-Female) in their day to day living and experiences the quantum self. They are happy most of the time. They experience the “Joy of Flow” in a significant manner, frequently experiencing the “flow state”, living in the flow for at least some period of their time daily. They bounce back from

emotional upsets very quickly but recovery from emotional upsets from intimate relations still takes some time. They are beginning to gain mastery of EMOTIONAL INTELLIGENCE.

#### **Level 5- STAGE OF QUANTUM**

**ENLIGHTENMENT-** living in a constant state of “Flow”. STAGE 5 is the state of WHOLENESS. In order to begin the exploration of wholeness, one begins to explore archetypal dichotomies such as beauty-ugly, good- evil, true-false. Once a person explores, integrates and gains mastery all the 3 fundamental dichotomies such as transcendent-immanent, outer-inner, male-female as well as the 8 archetypes of Truth, Beauty, Abundance, Power, Justice, Goodness, they arrive at a state of Wholeness. They are able to live in a constant state of “CREATIVE FLOW”. For this reason, this stage is a kind of enlightenment where one is living in a constant state of joy with NO evidence of CONFLICT. Only the SELF archetype is left unexplored. They chose not to go out of the game of the ego but stay in the world to serve the world and help others ascend. According to Buddhism, this stage is referred to as the state of the Bodhisattva- which means “an intellect guided by fundamental creativity’ in Sanskrit.

#### **Level 6- STAGE OF TRADITIONAL**

**ENLIGHTENMENT.** In addition to Flow, one has intuitions or experiential wisdom- state of traditional enlightenment, state of PERFECT HAPPINESS. One can jump out of bondage of the world, by going out of the ego trappings and live in an enlightened state constantly. They have now experienced the reality of who a human being truly is, achieving a state of SELF REALIZATION. Moreover, they attempt to live it. If they can live it constantly, they achieve the highest state of this level, namely, NIRVIKALPA SAMADHI. They don’t experience any separation at all. This is the most exalted state of GOD REALIZATION.

### **SCALE OF INTELLIGENCE**

**STAGE 1 – PHYSICAL STAGE** where one spends his/her life by constantly engaging in physical pleasures. They are not interested in understanding the meaning and purpose of life. They are also interested in information processing and addiction to technology.

**STAGE 2 – MENTAL STAGE-** some interest in living life in a meaningful way with understanding of an experience rather than information processing.

**STAGE 3 – VITAL WAY OF LIVING.** One lives with positive feelings around the body’s associated chakras, pays attention to the inner world of emotions as well as the outer world. They attempt to incorporate the meaning of feelings into their experiences. Stage of Emotional Intelligence

**STAGE 4- SUPRAMENTAL WAY OF LIVING OR SUPRAMENTAL INTELLIGENCE-** where one lives a life of purpose, guided by one or more chosen archetypes. They use intuition and creativity for their everyday life experience. They move effortlessly between the higher self and ego self since the connection to the spirit is strong- experiencing a FLOW STATE.

It is worth mentioning that Gurus, guides, psychotherapists are needed to help at the lower end of the spectrum of Happiness. After Level 3 is achieved, they serve to provide inspiration and collaboration rather than a true guide. Quantum Science of happiness is the unifying science that works at all levels and helps people advance. And this is where the utility of the scale of happiness and intelligence lies, especially given its eudemonic basis. There is greater characterization of each level and clarity as to what variables contribute to a certain level of Happiness. It is standardized and can be used uniformly for therapy and research purposes. Following this scale can help figure out the kind of intervention needed. Thus the QUANTUM SCIENCE SPECTRUM of the SCALE OF HAPPINESS and INTELLIGENCE help diagnose, treat and monitor an individual’s state along the spectrum in a longitudinal and meaningful way.

## REFERENCES

1. Diener, E. *Subjective well-being: the science of happiness, and a proposal for a national index.* *Am Psychol* 2000,55,34-43.
2. Lyubomirsky, S; Sheldon, K.M.; schkad, D. *Pursuing Happiness: The architecture of sustainable change.* *Rev.Gen. psychol.*2005, 9, 111-131.
3. Argyle, M. (1987). *The Psychology of happiness.* London Methuen
4. Hills, P. & Argyle, M. (2001). *Emotional stability as a major dimension of happiness.* *Personality and Individual Differences*, 31, 1357-1364
5. Hupper FA. *Psychological wellbeing: evidence regarding its causes and consequences.* *Appl Psychol Health Well Being.* 2009;1(2):137-64. <https://doi.org/10.1111/j.1758-0854.2009.01008x.>
6. Meeberg, G.A. (1993). *Quality of Life: A concept analysis.* *Journal of Advanced Nursing.*, 18, 32-38.
7. Deiner, E. (1984). *Subjective well-being.* *Psychological Bulletin*,95, 542-575.
8. Maslow A. (1970). *Motivation and personality.* New York: harper & Row Publishers
9. Lyubomirsky, S. *Why are some people happier than others? The role of cognitive and motivational processes in well-being.* *Am Psychol.* 56, 239-249 (2001)
10. Lomas, T., Bartels, M., Van De Weijer, M., Pluess, M., Hanson, J., & VanderWeele, T. J. (2022). *The Architecture of Happiness.* *Emotion Review*, 14(4), 288- 309. <https://doi.org/10.1177/17540739221114109>
11. Mahon, N.E. & Yarcheski, A(2002). *Alternative theories of happiness in early adolescents.* *Clinical Nursing Research*, 11(3), 306-323.
12. Okbay, A., Baselmans, B.M., De Neve, J.E., Turley, P., Nivard, M.G., Fontana, M.A., ... & Rich, S.S., (2016). *Genetic variants associated with subjective well-being, depressive symptoms, and neuroticism have been identified through genome-wide analyses.* *Nature genetics*, 48(6), 624-633. <https://doi.org/10.1038/ng.3552>
13. Trudel-Fitzgerald, C., Millstgein, R.A. von Hippel, C., Howe, C.J. Tomasso, L.P. Wagner, G.R., & VandeWeele, T.J. (2019). *Psychological Wellbeing as part of the public healthdebate? Insight into dimensions, interventions, and policy.* *BMC Public Health*, 19 (1), 1712. <https://doi.org/10.1186/s12889-019-8029-x>
14. Wilbur, K. (1997) *An integral theory of consciousness.* *Journal of consciousness studies*, 4(1), 71-92.
15. Lomas, T. (2027b). *Recontextualizing mindfulness: Theravada Buddhist perspectives on the ethical and spiritual dimensions of awareness.* *Psychology of Religion and Spirituality*, 9, 209-219. <https://doi.org/10.1037/rel0000080>
16. Lakey, B., & Orehek, E. (2011). *Relational regulation theory: A new approach to explain the link between perceived social support and mental health.* *Psychological Review*, 118(3), 482-495. <https://doi.org/10.1037/a0023477>.
17. Wilson, J.M., Weiss, A., & Shook, N.J. (2020). *Mindfulness, self-compassion and savoring: Factors that explain the relationship between perceived social support and well-being.* *Personality and Individual Differences.* 152, 109568, <https://doi.org/10.1037/j.pai.2019.109568>.
18. Lomas, T., VanderWeele, T.D., *The Complex Creation of Happiness: Multidimensional conditionality in the Drivers of Happy People and Societies.* *The journal of Positive Psychology*, 18:1, 15-33. DOI: 10.1080/17439760.2021. 1991453.
19. Kober, H. et al *Functional grouping and cortical-subcortical interactions in emotion: A meta-analysis of neuroimaging studies.* *Neuroimage* 42, 998-1031 (2008).
20. Sato, W. et al. *The structural neural substrate of subjective happiness.* *Sci. Rep.* 5, 16891; doi: 10.1038/srep16891(2015)
21. Kozma, A., Stones, M.J., & McNeil, J.K. (1991). *Psychological well-being in later life.* Toronto, ON: Butterworths.

22. Kozma, A., & stones, M.J. (1980). *The measurement of Happiness: The development of the Memorial University of Newfoundland Scale of Happiness (MUNSH)*. *Journal of Gerontology*, 35, 906-912.
23. Dambrun, M; Ricard, M; et al. *Measuring happiness: from fluctuating happiness to authentic durable happiness*. *Front.Psyhcol*. 2012,3,16.
24. Ryff et al.,2007; *National Survey of Midlife Development in the United States (MIDUS II), 2004-2006; Documentation of the Psychosocial Constructs and Composite Variables in MIDUS II Project 1*. Ann Arbor, MI: Interuniversity Consortium for Political and Social research.
25. Lyubomirsky, S; Lepper, H.S. *A measure of subjective happiness. Preliminary reliability and construct validation*. *Soc.Indic.Res*.1999, 46,137-155
26. Hills, P., & Argyle, M. (2002). *The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being*. *Personality and Individual Differences*, 33, 1073-1082.
27. Matteo Rizzato, M; Di Dio, C;Miraglia, L; Sam, C; D'Anzi, S; Antonelli, M; Donelli, D. *Are you Happy? A Validation Study of a Tool Measuring Happiness*. *Behav. Sci*. 2022, 12,295.
28. Seligman, M. (2010). *Flourish: positive psychology and positive interventions*. 231-243
29. S.D. Kreibig, "Autonomic nervous system activity in emotion: a review,"*Biological Psychology*, vol 84, no.3, pp. 394-421, 2010.
30. M Hao, G. Liu, A. Gokhale, Y. Xu & R. Chen. *Computational Intelligence and Neuroscience* Jan 2019, DOI: 10.1155/2019/1965789
31. *Quantum Psychology and the Science of Happiness*. Amit Goswami PhD and Sunita Pattani M.Sc