

Analysis of Self Actualization using CETD Matrix

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Abstract: Self Actualization is the intrinsic growth of what is already in the organism, or more accurately, of what the organism is. Self-actualization implies the attainment of the basic needs of physiological, safety/security, love/belongingness, and self-esteem. It refers to the desire for self-fulfillment, namely, to the tendency for him/her to become actualized in what he is potentially. The objective of this paper is to analyze self-actualization using Combined Effect Time Dependent matrix (CETD) matrix. Self Actualization term was first introduced by Maslow. In Maslow's need hierarchy and model of the self-actualizing personality are reviewed and criticized. The definition of self-actualization is found to be confusing, and the gratification of all needs is concluded to be insufficient to explain self-actualization. To study the analysis of self-actualization, we defined four types of matrices called Initial Raw Data Matrix, Average Time Dependent Data matrix (ATD Matrix), Refined Time Dependent Data matrix (RTD Matrix) and Combined Effect Time Dependent Data Matrix (CETD Matrix).

Index Terms: ATD matrix; RTD matrix; CETD matrix; self-actualization; parameters of self-actualization

I. INTRODUCTION

This paper has different sections. In the first section we just recall the methods of applications of CETD matrix [8,10]. In section two we describe the parameters used to analysis self-actualization in order to characterize the needs of the different age group people. In this section we apply characteristics of self-actualization by using CETD model to find out the needs of different age of persons apart from fulfilling his basic needs. In final section we derived conclusions and gives suggestion

THE METHOD OF APPLICATION OF CETD MATRIX.

We give a very simple but a very effective technique on the collected data. From that data we recognized different characteristics of self-actualization such as acceptance and realism, problem-centering, spontaneity, continued freshness of appreciation, autonomy and solitude, peak experiences this are the characteristics we use to analyze the data using CETD matrix. Based on the above mentioned parameters we choose this attributes along the axis and results along the y-axis and thus entries are recorded accordingly.

AVERAGE TIME DEPENDENT (ATD) MATRIX

Raw data transform it into a raw time dependent data matrix by taking along the rows the parameters and along the columns results using the raw data matrix we make it into the Average Time Dependent Data (ATD) matrix (a_{ij}) by dividing each entry of the raw data matrix by the number of years i.e., the time period. This matrix represents a data, which is totally uniform. At the third stage we find the average and Standard Deviation (S.D) of every column in the ATD matrix. Refined Time Dependent (RTD) matrix Using the average μ_j of each j^{th} column and σ_j the S.D of the each j^{th} column we chose a parameter α from the interval $[0, 1]$ and the Refined time dependent Matrix (RTD matrix), Using the formula

$$\begin{aligned} a_{ij} \leq (\mu_j - \alpha * \sigma_j) & \text{ then } e_{ij} = -1 \text{ else} \\ \text{if } a_{ij} \in (\mu_j - \alpha * \sigma_j, \mu_j + \alpha * \sigma_j) & \text{ then } e_{ij} = 0 \text{ else} \\ \text{if } a_{ij} \geq (\mu_j + \alpha * \sigma_j) & \text{ then } e_{ij} = 1 \end{aligned}$$

We redefine the ATD matrix into the refined time dependent fuzzy matrix for here the entries are -1, 0 or 1. Now the row sum of this matrix gives the maximum age group.

COMBINED EFFECTIVE TIME DEPENDENT DATA (CETD) MATRIX

We also combine the above RTD matrices by varying the $\alpha \in [0,1]$, so that we get the Combined Effective Time Dependent Data (CETD) matrix. The row sum is obtained for CETD matrix and conclusions are derived based on the row sums. All these are represented by graphs and graphs play a vital role in exhibiting the data by the simplest means, which can be even understood by a layman.

II. SELF-ACTUALIZATION

Self-actualization implies the attainment of the basic needs of physiological, safety/security, love/belongingness, and self-esteem. Maslow (1954), believed that man has a natural drive to healthiness, or self actualization. He believed that man has basic, (biological and psychological) needs that have to be fulfilled in order to be free enough to feel the desire for the higher levels of realization. He also believed that the organism has the natural, unconscious and innate capacity to seek its needs. (Maslow 1968) In other words, man has an internal, natural, drive to become the best possible person he can be. "He has within him a pressure toward unity of personality, toward spontaneous expressiveness, toward full individuality and identity, toward seeing the truth rather than being blind, toward being creative, toward being good, and a lot else. That is, the human being is so constructed that he presses toward what most people would call good values, toward serenity, kindness, courage, honesty, love, unselfishness, and goodness." (Maslow,

1968, p. 155.). The concept of self-actualization as the basic need provides this organizing principle. It clarifies, or eliminates, the confusion we face when we attempt to understand and order, or integrate, the multiplicity of often contradictory or opposing specific drives or needs in a hierarchy. There is no hierarchy in the sense that certain needs always take precedence over other needs. All the specific needs are subservient to the basic tendency for the preservation and enhancement of the self. The individual's specific needs are organized and assume temporary priority in terms of their relationship to the basic need for self-actualization. At any one time, the most relevant specific need assumes priority or prepotence or, to use Gestalt terminology, becomes the figure against the ground of other needs. "When it is satisfied, the next most relevant need in terms of self-actualization assumes prepotence or becomes the figure, while the others recede into the background. All are organized by the basic need for self actualization, and their significance or relevance is determined by the basic need Maslow's hierarchical theory of motivation is a ranked structure of human stimuli for satisfying various physiological and psychological needs towards self-actualization and further to move beyond with metamotivation. [3-7] Numerous researchers are found to be using the concept of self-actualization making it synonymous with self-realization in tourism paradigm by explaining the involved processes of lifting the real-self to the level of ideal-self.

HISTORY OF SELF ACTUALIZATION

It is noticed that the term self-actualization was originally introduced by Kurt Goldstein (1934) in biology, to indicate the tendency of the organism's innate motivation to actualize as much as possible which was subsequently extended (Rogers 1951) to humanistic psychology as explained in the above. However, Fritz Perls (1992) argued in this context, regarding the risk of confusing self-actualizing with that of self-image actualizing which was later clarified by Maslow himself (Glasscoe, 2011). Further, Paul Vitz (1994) categorically added that self-actualization should invariably be related to the exemplary people alone, based on their moral norms. Advancing all these concepts, Gnoth (1997) corroborated these theories in tourism studies by stating that the inner innate-desire, or a motive of a person, is responsible for the process of motivation in the form of a 'felt need' for actualizing the experiences, which sets the stage towards self-actualization. However, some scholars (Dumazedier, 1967; Krippendorf, 1987; Parker, 1983) from the West have connected free time and holidays to the concept of self-actualization or self-realization to redress the stresses and strains from the work-a-day life and/or to develop mind and body to its full-potential. Subsequently, Grunow-Lutter (1984) explained the concept of self-realization by describing the process of lifting the Real Self to the level of the Ideal Self. He has further argued that the process as a state of dynamic relationship between the Real- and the Ideal-Selves after satisfying basic and deficiency needs. Thus, the synonymous usage of self-actualization with that of the self-realization that is found in these explanations is disputed by some scholars including Ajit K Das (1989). Hence, the phenomenological thinking conceived by different researchers on the concept of self, self-actualization and self-realization appears to be subjective and relative, based on their individual perceptions. In view of these inherent ambiguities prevailing in these concepts by specifically referring to Eastern philosophies and Maslow's paving the way towards metamotivation led the author to probe into traditional Indian-scriptures for their detailed investigation.

CHARACTERISTICS OF SELF-ACTUALIZED PEOPLE

- **Acceptance and Realism:** Self-actualized people have realistic perceptions of themselves, others and the world around them. Self-actualized persons are not ashamed or guilty about their human nature, with its shortcomings, imperfections, frailties, and neither weaknesses nor they are critical of these aspects of other people. They respect and esteem themselves and others. Moreover, they are honest, open and genuine, without pose or facade. They are not, however, self-satisfied, but are concerned about discrepancies between what is and what might be or should be in themselves, others and society. Again, these characteristics are those that Kelley, Rogers and Combs and Snygg include in their descriptions
- **Problem-centering:** Self-actualized individuals are concerned with solving problems outside of themselves, including helping others and finding solutions to problems in the external world. These people are often motivated by a sense of personal responsibility and ethics. Self-actualizing persons are not ego-centered but focus on problems outside themselves. They are missions-oriented, often on the basis of a sense of responsibility, duty or obligation rather than personal choice. This characteristic would appear to be related to the security and lack of defensiveness leading to compassionateness emphasized by Combs and Snygg.
- **Spontaneity:** Self-actualized people are spontaneous in their internal thoughts and outward behavior. While they can conform to rules and social expectations, they also tend to be open and unconventional. They are not conformists, but neither are they anti-conformist for the sake of being so. They are not externally motivated or even goal-directed-rather; their motivational is the internal one of growth and development, the actualization of themselves and their potentialities. Rogers and Kelley both speak of growth, development and maturation, change and fluidity.
- **Continued Freshness of Appreciation:** Self-actualized people tend to view the world with a continual sense of appreciation, wonder and awe. Even simple experiences continue to be a source of inspiration and pleasure. Self-actualizing persons repeatedly, though not continuously, experience awe, pleasure and wonder in their everyday world.
- **Autonomy and Solitude:** Another characteristic of self-actualized people is the need for independence and privacy. While they enjoy the company of others, these individuals need time to focus on developing their own individual potential. Self-actualizing persons, though dependent on others for the satisfaction of the basic needs of love, safety respect and belongingness, are not dependent for their main satisfactions. "Rather they are dependent for their own development and continued growth upon their own potentialities and latent resources". Combs and Snygg and Rogers include independence in their descriptions, and Rogers also speaks of an internal locus of control
- **Peak Experience:** Individuals who are self-actualized often have what Maslow termed *peak experiences*, or moments of intense joy, wonder, awe and ecstasy. After these experiences, people feel inspired, strengthened, renewed or transformed.

III. DISCRPTION OF THE ANALYSIS OF THE SELF-ACTUALIZATION

In this paper we analyzed the self – actuated persons in different age groups of people. Self-actualization concept was first introduced by Maslow. In that Abraham Maslow noted, the basic needs of human must be met (e.g. food, shelter, warmth, security, sense of belongingness) before a person can achieve self-actualization-the need to be good, to be fully alive and to find meaning in life. The survey data has given the age group of people in which maximum persons are self-actualized. We give an effective technique on the collected data. From our interviews we saw the age group of people who become self-actuated. For that we have interviewed and recorded 100 people in different ages. From our interview we recognized about 90% of people of 31-40 age groups become self-actuated because in that age they have achieved society reward motivation primarily based on esteem, love and social needs. In the survey we have used various parameters for analyzing the self-actualization i.e. Acceptance and Realism, Problem-centering, Spontaneity, Continued Freshness of Appreciation, Autonomy and Solitude, Peak Experiences. The age groups in years 11-20, 21-30, 31-40, 41-55, 56-65, 66-75(above) are taken as the rows of the matrix. We analyze these self-actualization using fuzzy matrix, we call the RTD Matrix as fuzzy matrix for that take their entries from the set $\{-1, 0, 1\}$. So the terms RTD matrix or fuzzy matrix mean one and the same matrix. The estimation of the maximum age group is five-stage process. In the first stage we give the matrix representation of the raw data. Entries corresponding to the intersection of rows and columns are values corresponding to the live network. The 6×6 matrix is not uniform i.e. the number of individual years in each interval may not be the same. So in the second stage we in order to obtain an unbiased uniform effect on each and every data so collected, transform this initial matrix into an Average Time Dependent Data (ATD) matrix. To make the calculations easier and simpler we in the third stage using the simple average techniques convert the above average time dependent data matrix in to a matrix with entries $e_{ij} \in \{-1, 0, 1\}$. We name this matrix as the Refined Time Dependent Data Matrix (RTD Matrix) or as the fuzzy matrix. The value of e_{ij} corresponding to each entry is determined in a special way described. At the fourth stage using the fuzzy matrices we obtain the Combined Effect Time Dependent Data Matrix (CETD Matrix), which gives the cumulative effect of all these entries. In the final stage we obtain the row sums of the CETD matrix. The tables given are self-explanatory at each stage. The graph of the RTD matrix and CETD matrix are given.

ESTIMATION OF MAXIMUM AGE GROUP OF SELF-ACTUATED PERSONS

The raw data analyzed by taking some personal interviews of different age groups based on the different characteristics of self-actualization and collected the respective data for calculation. Some data is collected by taking online questionnaire survey of different age groups and collectively framed the raw data matrix. In this section we apply six characteristics i.e., A1-Acceptance and realism, A2- problem-centering, A3-spontaneity, A4- continued freshness of appreciation, A5- autonomy and solitude, A6-peak experience to the CETD model.

Table 1: Initial raw data matrix for Self-Actualization of order 7 x 6

Age	A1	A2	A3	A4	A5	A6
11-20	2	2	9	3	1	3
21-30	3	2	6	4	5	5
31-40	5	4	3	4	5	4
41-55	3	6	4	2	2	3
56-65	2	4	3	1	2	3
66-75	2	1	2	2	1	3

Table 2: The ATD Matrix of self-actualization

Age	A1	A2	A3	A4	A5	A6
11-20	0.2	0.2	0.9	0.3	0.1	0.3
21-30	0.3	0.2	0.6	0.4	0.5	0.5
31-40	0.5	0.4	0.3	0.4	0.5	0.4
41-55	0.2	0.4	0.27	0.13	0.13	0.2
56-65	0.2	0.4	0.3	0.1	0.2	0.3
66-75	0.2	0.1	0.2	0.2	0.1	0.3

Table 3: Average and S.D of the above ATD Matrix

Average	0.267	0.283	0.428	0.255	0.255	0.33
Standard Deviation	0.110	0.121	0.227	0.120	0.120	0.09

We have taken the value $\alpha = 0.1, 0.3, 0.5$ & 0.8 to find the CETD matrix

The RTD matrix for $\alpha=0.1$ row sum matrix

$$\begin{bmatrix} -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & 1 & 1 & 1 \\ -1 & 1 & -1 & -1 & -1 & -1 \\ -1 & 1 & -1 & -1 & -1 & -1 \\ -1 & -1 & -1 & -1 & -1 & -1 \end{bmatrix} \begin{bmatrix} -2 \\ 4 \\ 4 \\ -4 \\ -4 \\ -6 \end{bmatrix}$$

The RTD matrix for $\alpha=0.3$ row sum matrix

$$\begin{bmatrix} -1 & -1 & 1 & 1 & -1 & -1 \\ 0 & -1 & 1 & 1 & 1 & 0 \\ 1 & 1 & -1 & 1 & 1 & 1 \\ -1 & 1 & -1 & -1 & -1 & -1 \\ -1 & 1 & -1 & -1 & -1 & 0 \\ -1 & 1 & -1 & -1 & -1 & 0 \end{bmatrix} \begin{bmatrix} -2 \\ 2 \\ 4 \\ -4 \\ -3 \\ -3 \end{bmatrix}$$

The RTD matrix for $\alpha=0.5$ row sum matrix

$$\begin{bmatrix} -1 & -1 & 1 & 0 & -1 & 0 \\ 0 & -1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & 1 & 1 & 1 \\ -1 & 1 & -1 & -1 & -1 & -1 \\ -1 & 1 & -1 & -1 & 0 & 0 \\ -1 & -1 & -1 & 0 & -1 & 0 \end{bmatrix} \begin{bmatrix} -2 \\ 3 \\ 4 \\ -4 \\ -2 \\ -4 \end{bmatrix}$$

The RTD matrix for $\alpha=0.8$ row sum matrix

$$\begin{bmatrix} 0 & 0 & 1 & 0 & -1 & 0 \\ 0 & 0 & 0 & 1 & 1 & 1 \\ 1 & 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & -1 & -1 & -1 \\ 0 & 1 & 0 & -1 & 0 & 0 \\ 0 & -1 & -1 & 0 & -1 & 0 \end{bmatrix} \begin{bmatrix} 0 \\ 3 \\ 4 \\ -2 \\ 0 \\ -3 \end{bmatrix}$$

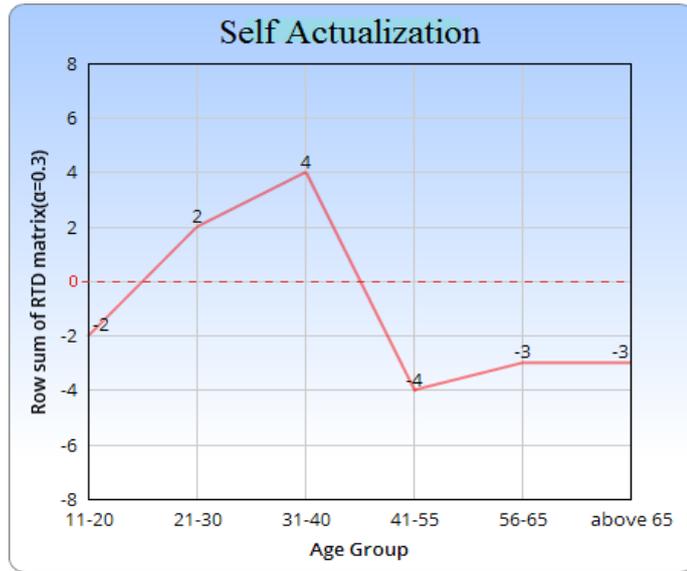
The CETD matrix row sum matrix

$$\begin{bmatrix} -3 & -3 & 4 & 2 & -4 & -2 \\ 1 & -3 & 3 & 4 & 4 & 3 \\ 4 & 4 & -3 & 4 & 4 & 3 \\ -3 & 4 & -3 & -4 & -4 & -4 \\ -3 & 4 & -3 & -4 & -4 & -4 \\ -3 & -4 & -4 & -2 & -4 & 1 \end{bmatrix} \begin{bmatrix} -6 \\ 12 \\ 16 \\ -14 \\ -9 \\ -18 \end{bmatrix}$$

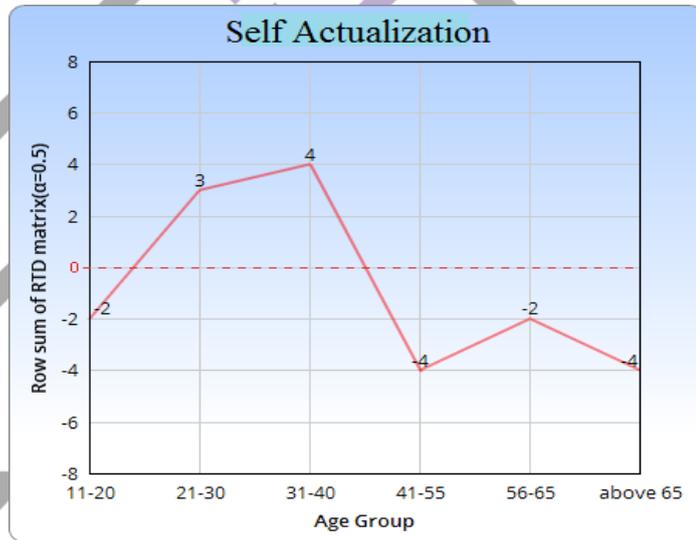
Graph 1: Depicting maximum age group of people self-actualized for $\alpha=0.1$



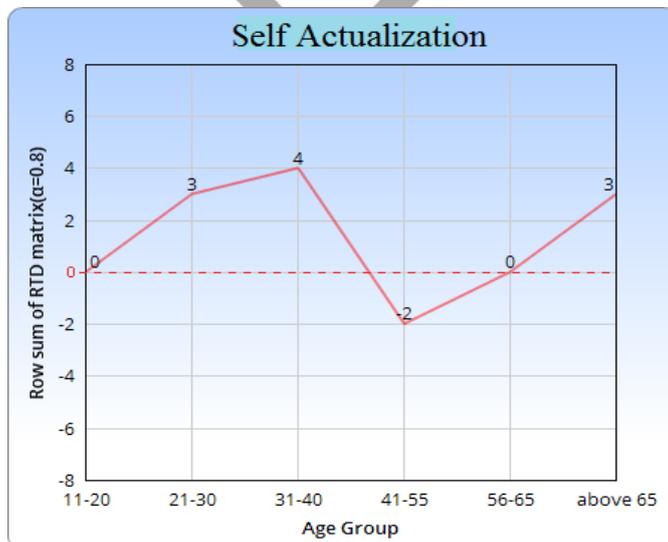
Graph 2: Depicting maximum age group of people self-actualized for $\alpha=0.3$



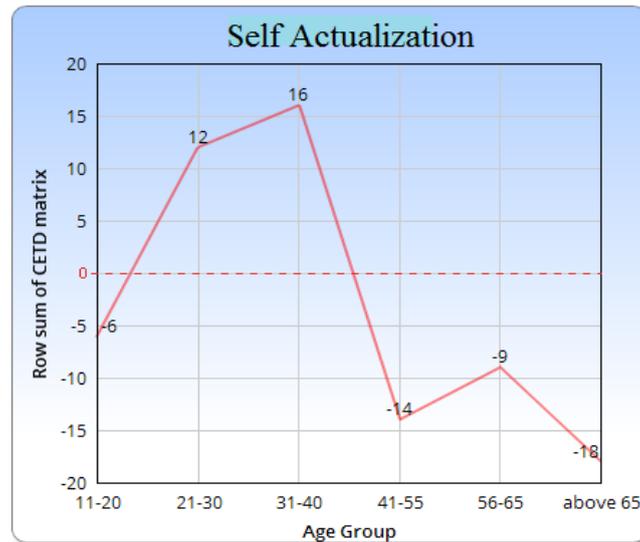
Graph 3: Depicting maximum age group of people self-actualized for $\alpha=0.5$



Graph 4: Depicting maximum age group of people self-actualized for $\alpha=0.8$



Graph 5: Depicting maximum age group of Self-actualized person for CETD matrix



IV. CONCLUSION AND SUGGESTIONS

From the above given analysis using CETD matrix, it has been concluded that 31-40 age group of people has been more self-actualized than the other age group of people. The need for self-actualization drastically changes as the age predominantly increases as the needs of people changes invariably. To analyze the self-actualization the values of the parameter has been varied as $\alpha = 0.1$, $\alpha = 0.3$, $\alpha = 0.5$, $\alpha = 0.8$ which ranges between 0 to 1. So the peak in each and every graph is in the age group of 31-40. So the peak of the CETD matrix is also in the age group of 31-40. Thus the result is concluded that 31-40 range of the people are more self-actualized because this range is the range when people are more stable and can focus on their own thought.

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