

## A STUDY OF THE INFLUENCES OF BELIEF SYSTEM ON AN INDIVIDUAL'S SUCCESS USING FUZZY RELATIONAL MAP

M. MARY MEJRULLO MERLIN<sup>1</sup> & S. AROKIAMARY<sup>2</sup>

<sup>1</sup>Assistant Professor, PG & Research Department of Mathematics, Holy Cross College (Autonomous),  
Trichirapalli, Tamilnadu, India

<sup>2</sup>Department of Mathematics, Mother Gnanamma Women's College of Arts And Science, Varadarajanpet,  
Ariyalur, Tamilnadu, India

### ABSTRACT

The human belief system is the base of all our emotions, intrigues, decisions, actions and conversations. Belief system plays an important role, in determining whether one will be successful in life, become a failure or do nothing interesting. Empowering beliefs enable one to live a happy, abundant and successful life according to one's deepest desire. This paper focuses on the construct of human belief system and how does it affect an individual's life and success. This research work aims to study the causal relationship between the belief system of an individual and its impact on his/her success using Fuzzy Relational Mapping (FRM) model.

**KEYWORDS:** Fuzzy Relational Maps, Domain Space, Range Space, Hidden Pattern, Limit Cycle, Fixed Point, Individual's Success & Belief System

### INTRODUCTION

In this world of business, innovation and technology success has become a buzz word. Everyone lives, works and thinks to achieve success in some sense that is possible for them. There are umpteen numbers of websites, blogs, books and organizations available which explain what success is and teach methods and strategies to achieve it. The central theme of all the discussions is 'belief' and this implies that success is one's choice of beliefs. Independent studies have been conducted to study the beliefs and thinking pattern of successful people. This paper analyzes how different beliefs influence personal success.

#### Human Belief System

Beliefs are conclusions that are derived from perceptions, information and experiences. Beliefs can be both conscious and subconscious. Belief is defined as "an acceptance that something exists or is true, especially one without proof<sup>[17]</sup>. People live their lives according to what they believe to be right and wrong. Belief systems bind us together, structure our values, give us support and give us faith and a desire to live. A belief system gives each of us an identity of who we are!<sup>[24]</sup>. A belief system is a 'set of rules' that defines how one perceives the outside world through their conscious mind, processes the information received and stores them in the subconscious mind for future reference<sup>[4]</sup>. Human beings constantly create stories of what is happening around them to define their personal sense of reality. Every human being uses the belief system as a mechanism to 'make sense' of their world around<sup>[22]</sup>.

### **Influences of Belief System**

Human belief system distinguishes humankind from other organisms on the planet earth. What makes human beings rational or irrational is a set of beliefs they hold on to. Societies were founded, cohere, develop, degenerate and die based on their belief systems. <sup>[22]</sup> Every child comes into the world with a set of beliefs about life encoded in their DNA. As they move through life, religion, culture, politics, media and experiences affect their belief systems greatly. There are number of factors of the society that influence an individual in building one's belief system to various degrees of strength. Beliefs systems are based on one's upbringing, environment, personal experiences and emotional state. Every person differs from one another in their personal beliefs. Therefore belief system is not a homogeneous or identical structure and it varies from person to person in kinds and degrees.

One's belief system affects every aspect of their life, positively or negatively. Life and everyday experiences in turn affect one's belief system as beliefs are plastic in nature which can be eliminated, modified, or changed altogether. The life and belief cycle is vicious or virtuous depending on whether one influences the other negatively or positively. Beliefs are ingrained deeply in the subconscious mind and it accepts them as the ultimate truth <sup>[10]</sup>.

### **Measures of Success**

Human beings come into this world without their consent or freewill and exit without their knowledge. The choice of their parents, family, place of birth, features, etc., is not at all at their disposal. Yet everyone strives to improve upon themselves (personality, knowledge, intelligence and skills) and their life conditions (living conditions, wealth, income and status). What motivates one to work for a more fulfilling life is their urge to survive, experience love, peace and happiness and live a life that gives them the meaning and sense of their existence. When it comes to measuring success, people are of different opinions. But all agree that it cannot be measured with money or wealth alone.

Money and material things are essential for everyday life and very much required to fulfill the physical and emotional needs. They are the external signs of riches and individuals' success. Besides wealth and material things there are other riches that can be assessed only in terms of happy family, harmonious relationships and lasting friendships which bring health, happiness and peace into one's life. Hence success in life means not just acquiring wealth and money but finding meaning and fulfillment that are measurable in spiritual values <sup>[7]</sup>.

### **DESCRIPTION OF THE PROBLEM**

Beliefs are at the helm of the ship called life. They are the base of all thinking, attitude and behavior. Whatever one is because of their beliefs they follow in their hearts constantly and consistently. Empowering beliefs influence a person positively and thus they lead a happy, abundant and successful life <sup>[9]</sup> whereas the limiting beliefs imprison a person and make their life hell. Hence successful people are those who have empowering beliefs and are capable of creating happy life for themselves and others.

"Whatever the mind can believe, the mind can achieve"-Napoleon Hill. Beliefs are the driving force of one's life which gives them the energy to move towards success and the capacity to encounter obstacles and adversities on the way of success. A strong belief can move mountains and clear all roadblocks in the path of achieving ambitions and goals. From the wealth of knowledge available we can decipher that there is a strong interconnection between one's beliefs and their life. Hence it becomes pertinent to study the effect of beliefs on the life and success of people.

### Measures of Successful Life

Success is not a set of achievements or a combination of external factors; it is a state of mind. Success is a mindset comprising of powerful beliefs and empowering thoughts that gives an individual the required energy to carry on with life. [6] Therefore we need a different scale to measure success in an appropriate and complete manner as it ranges from material to spiritual. Some of the factors of success from the collections of success stories are taken to present a rounder view of success.

*D*<sub>1</sub>: Being kind and Generous to the weak

*D*<sub>2</sub>: Capacity to create wealth for the family

*D*<sub>3</sub>: Caring for the family

*D*<sub>4</sub>: Content and happy with life and profession

*D*<sub>5</sub>: Contributing one's knowledge/creativity/wealth to the society

*D*<sub>6</sub>: Emotional and spiritual maturity

*D*<sub>7</sub>: Happy and healthy lifestyle

*D*<sub>8</sub>: Having positive impact on others

*D*<sub>9</sub>: Integrity in personal and professional lives

*D*<sub>10</sub>: Life with necessary comforts and facilities

### Beliefs of People

It is an accepted fact that successful people think and behave differently basing their faith on a particular set of beliefs while it can be otherwise in case of a failure. Hence we can conclude that there is a relation between belief system and personal success. The beliefs that influence an individual the most are about oneself, others, world, life and God. In this study we have identified some general beliefs of people that influence their life.

*R*<sub>1</sub>: Acceptance and Gratitude brings in more blessings

*R*<sub>2</sub>: Born to be a victim of circumstances

*R*<sub>3</sub>: Can create one's own reality

*R*<sub>4</sub>: Creative visualization gives power

*R*<sub>5</sub>: Everyone is part of the whole and connected

*R*<sub>6</sub>: Goals and ambitions are waste of time

*R*<sub>7</sub>: Life is driven by fate and it is challenging

*R*<sub>8</sub>: Life is full of chances and choices

*R*<sub>9</sub>: Money is a valuable tool

*R*<sub>10</sub>: Money is root of all evils

$R_{11}$ : Need to prove that one is better than others

$R_{12}$ : No belief in higher power

$R_{13}$ : People are selfish and not trustworthy

$R_{14}$ : People are helpful and catalysts

$R_{15}$ : There is a higher power which takes care of life

$R_{16}$ : World is not an even playground

## FUZZY RELATIONAL MAPS (FRMS)

In the year 2000, Fuzzy Relational Maps (FRMs) were first developed from the basic concepts of FCMs by Dr. W. B. Vasantha and Yasmin Sultana. They are special cases of FCMs wherein the causal associations are divided into two disjoint units in the sense of concepts. The two disjoint units are referred as domain space and range space with no intermediate relations among the elements. The number of elements in the domain space need not be equal to that of range space in general. Therefore the FRMs are not always square matrices as in the case of FCMs. FRMs are digraphs from domain space to range space with causalities as edges. FRMs with edge weights 0,+1 or -1 are called simple FRMs. FRMs are used to find out the relationship between concepts and causalities which are completely disjoint such as relationship between a doctor and patient, employee and employer and teacher and students <sup>[23]</sup>.

### Formation of Frms

Let D and R denote the domain space and range space of FRM respectively. Let  $D_1, D_2, \dots, D_n$  denote the nodes of domain space and  $R_1, R_2, \dots, R_m$  denote the nodes of Range space.  $D = \{ (X_1, X_2, \dots, X_n) \mid X_i = 0 \text{ or } 1 \}$  For  $i = 1, 2, \dots, n$  is called the instantaneous state vector. If  $X_i = 1$  then  $D_i$  is ON state and if  $X_i = 0$  then  $D_i$  is OFF state.

Similarly,  $R = \{ (X_1, X_2, \dots, X_m) \mid X_j = 0 \text{ or } 1 \}$  for  $j = 1, 2, \dots, m$ . If  $X_j = 1$  then  $R_j$  is ON state and if  $X_j = 0$  then  $R_j$  is OFF state. Let  $D_i$  denote the nodes of the domain space and  $R_j$  of the range space of the FRM. Let  $e_{ij}$  be the weight of the edge  $D_i R_j$  (or  $R_j D_i$ ), then  $e_{ij}$  takes values from the set  $\{-1, 0, 1\}$ . The causal relationship represented by the relational matrix  $E$  is defined as  $(e_{ij})$  <sup>[23]</sup>.

### Basic Concepts of FRM

- **Dynamical System of FRM**

An FRM with cycles is called as FRM with feedback. An FRM with feedback is called a dynamical system in which the causal associations flow through a cycle in revolutionary manner <sup>[23]</sup>.

- **Hidden Pattern**

Let  $D_i R_j$  (or  $R_j D_i$ ) where  $1 \leq i \leq n$  and  $1 \leq j \leq m$  be the edges between the domain space and the range space of an FRM. When  $D_i$  (or  $R_j$ ) is switched ON, if causations flow between the disjoint sets of concepts and cause  $D_i$  (or  $R_j$ ), then this state of the system is called the hidden pattern <sup>[23]</sup>.

- **Limit Cycle**

If the FRM settles down with a state vector in the form  $D_1 \rightarrow D_2 \rightarrow \dots \rightarrow D_i \rightarrow D_1$  (or  $R_1 \rightarrow R_2 \rightarrow \dots \rightarrow R_j \rightarrow$

$R_1$ ), then this equilibrium state is called a limit cycle [23].

• **Fixed Point**

Fixed point is the unique state vector of the equilibrium state of a dynamical system. Suppose a dynamical system and switch ON  $D_1$  (or  $R_1$ ) and if the FRM settles with  $D_1$  and  $D_n$  (or  $R_1$  and  $R_m$ ) ON, i.e. state vector remains as  $(1,0, \dots, 0,1)$  in  $D$  [or  $(1,0, \dots, 0,1)$  in  $R$ ], this state vector is called the fixed point [23].

**Methods of Determining the Hidden Pattern**

Let  $D_i$  and  $R_i$  be the nodes of an FRM with feedback. Let  $E$  be the relational matrix. Let us suppose that  $D_1$  is switched on, that is the input vector is  $A = (1, 0, \dots, 0)$ . The data should pass through  $E$ , the relational matrix. The resultant vector  $AE = (r_1, r_2, \dots, r_m)$  is obtained after thresholding and updating. Now, let,  $B = AE$ . Passing  $B$  into  $E^T$ ,  $BE^T = A_1$ (say) is obtained as before. The procedure is repeated till we get a fixed point or limit cycle. [23]

**FUZZY ANALYSIS OF THE PROBLEM USING FRM MODEL**

Since a great deal of unsupervised data is involved in the belief system and in understanding success fuzzy approach would be appropriate in this research. Also belief system is an entirely internal component while success is external. Therefore human belief system and factors of success can be considered as two disjoint sets of entities.

**Methods of Determining the Hidden Pattern**

A fuzzy relational mapping can be established by taking the attributes related to beliefs as range space and the factors of success as domain space. From the Expert’s opinion, the Directed Graph is drawn.

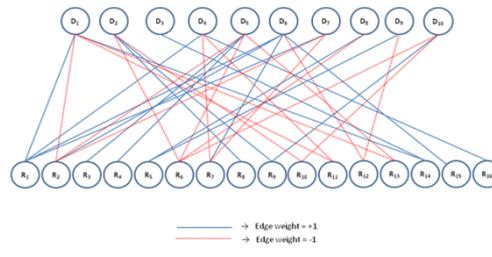


Figure 4.1: Fuzzy Relational Map of Expert’s Opinion

The relational matrix (E) is framed from the relational map by taking the attributes related to beliefs i.e.  $D_1, D_2, \dots, D_{10}$  as the rows and measures of success i.e  $R_1, R_2, \dots, R_{16}$  as the columns. Thus we obtain a 10 x 16 relational matrix of the map.

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16
D1	1	-1	0	0	0	0	0	0	0	0	-1	0	-1	1	0	0
D2	0	0	0	0	0	-1	0	1	1	-1	0	0	0	0	0	0
D3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
D4	1	0	0	0	0	0	-1	0	0	0	-1	0	0	0	0	1
D5	0	-1	1	1	0	-1	0	0	0	0	0	0	-1	0	0	0
D6	1	1	0	0	0	0	1	0	0	0	0	-1	0	0	1	0
D7	1	-1	0	0	0	0	-1	0	0	0	0	0	0	0	0	0
D8	0	0	0	0	1	-1	0	0	0	0	0	0	0	0	0	0
D9	0	0	0	0	1	0	0	0	0	0	0	-1	0	0	0	0
D10	0	0	0	0	0	-1	0	0	1	-1	0	0	0	0	0	0

### Fuzzy Relational Matrix of Expert's Opinion

To study the effect of each attribute of the domain space (or range space) on the dynamical system (the relational matrix E), the hidden pattern of each state vector is to be found <sup>[23]</sup>.

**Suppose the node  $D_1$  is in the ON state** i.e., the success factor being kind and generous to the weak is in ON state and all other states are in OFF state, the effect of the state vector on the dynamical system E is given as follows:

$$\text{Let } A = (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0)$$

$$AE \hookrightarrow (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0) = B(\text{say})$$

$$BE^T \hookrightarrow (1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0) = A_1(\text{say})$$

$$A_1E \hookrightarrow (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 1) = B_1(\text{say})$$

$$B_1E^T \hookrightarrow (1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0) = A_2(\text{say}) = A_1$$

The resultant vector is the fixed point given by the binary pair

$$\{(1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0), (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 1)\}$$

### Suppose the Node $D_2$ is in the ON State

$$\text{Let } X = (0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0)$$

$$XE \hookrightarrow (0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0) = Y(\text{say})$$

$$YE^T \hookrightarrow (0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1) = X_1(\text{say})$$

$$X_1E \hookrightarrow (0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0) = Y_1(\text{say})$$

$$Y_1E^T \hookrightarrow (0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1) = X_2(\text{say}) = X_1$$

The resultant vector is the fixed point given by the binary pair

$$\{(0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1), (0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0)\}$$

### Suppose the Node $D_3$ is in the ON State

$$\text{Let } G = (0 \ 0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0)$$

$$GE \hookrightarrow (0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0) = H(\text{say})$$

$$HE^T \hookrightarrow (1 \ 0 \ 1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0) = G_1(\text{say})$$

$$G_1E \hookrightarrow (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0) = H_1(\text{say})$$

$$H_1E^T \hookrightarrow (1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0) = G_2(\text{say})$$

$$G_2E \hookrightarrow (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 1) = H_2(\text{say})$$

$$H_2E^T \hookrightarrow (1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0) = G_3(\text{say}) = G_2$$

The resultant vector is the fixed point given by the binary pair

$$\{(1 \ 0 \ 1 \ 1 \ 0 \ 1 \ 1 \ 0 \ 0 \ 0), (1 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1 \ 1 \ 1)\}$$

Similarly the fixed points of the dynamical system E corresponding to the other nodes of domain space are found.

## CONCLUSIONS BASED ON THE STUDY

### RESULTS AND DISCUSSIONS

The result of the research indicates that the ON state of  $D_1, D_3, D_4$  and  $D_7$  behave almost similarly leading to the ON state of maximum number of beliefs in the range space. The ON state of the pair  $D_8$  &  $D_9$  and  $D_2$  &  $D_{10}$  leads to the ON state of same beliefs in their respective binary pair. The ON state of  $D_5$  &  $D_6$  have the least number of beliefs in the range space turned ON.

### CONCLUSIONS

This paper is a qualitative study of analyzing how different beliefs influence different measures of success in the life of an individual. From this research we infer that having a happy family enables one to have more positive beliefs and in turn lots of happiness and success in life. These are warm-hearted people who express and experience love in their relationships with their family and associates. These people accept life as it is but make every effort to transform the world with their kindness and maturity. The personal values such as being kind and considerate, happy and contented and following a happy and healthy lifestyle also enable one to have a balanced life. These are the people who put values before anything in life.

The factors having positive impact on others and integrity in personal and professional lives are very much interrelated, for only those who maintain integrity in their personal and professional lives alone can have a positive impact on others. These are self-disciplined people who are very vigilant in their dealings to set an example for others. These people believe that the whole humankind is connected to one another and experience a shared relationship.

People who believe that money is a valuable tool and there are plenty of opportunities, are set to work hard to create wealth and comforts for the family. These are the people who work hard and make money to experience happiness in life. For them success means money.

People who are willing to contribute to the society with their knowledge, creativity and wealth seem to emerge from two different kinds of beliefs, either from the fact that they are born into a difficult situation or from their hope and optimistic expectation that life will be different and better for the future generation. They are basically dreamers who strive to revolutionize the world.

People who are emotionally and spiritually matured accept life as it comes. Their beliefs are based on accepting whatever situation they are born into. This acceptance makes them feel calm and composed in hope of better future and grow in faith on God.

In order to have a positive and successful life and contribute to the success of the institution associated with, one has to

- Have clarity of one's own beliefs
- Care for the family

- Develop personal values
- Become aware of the beliefs of people around
- Get out of small ego and embrace beliefs that make life happy and successful.

### Future Direction

We live our lives based on what we believe about ourselves, our world, our capabilities and our limits. Many studies and researches show that we have the capacity to change our reality by just becoming aware of our beliefs and changing them for better. Self-belief, practice and more practice lead inevitably, justly and naturally to success<sup>[2]</sup>. If we can empower ourselves with positive beliefs we are only going to do good to ourselves and to the society we are living in. Therefore it becomes the need of the hour to introspect, study and understand peoples' personal and professional beliefs for the success of an individual and to know how important it is to the success of the organization one belongs to.

### REFERENCES

1. Adrian Furnham., Head & Heart management: Managing attitudes, beliefs, Behaviors and emotions at work.
2. Armstrong, D. (1973). Belief, Truth, and Knowledge. Cambridge University Press.
3. Aurora Adina Colomeischi, Predictors for Wellbeing: Emotional Factors and Expectancy for Success, Procedia - Social and Behavioral Sciences 190 (2015) 48 – 53
4. Edward B. Toupin., The Need for a Belief System a system of organization for your experiences, [http://www.bharatbhasha.com/self\\_improvement.php/4751](http://www.bharatbhasha.com/self_improvement.php/4751)
5. General belief systems, <http://www.trifax.org/general/beliefsystems.html>
6. Gilbert Ross (2009), 20 Powerful Beliefs That Will Push You Toward Success, <http://www.dumblittleman.com/2009/12/20-powerful-beliefs-that-will-push-you.html#>
7. Hill, Napoleon (1960). Think and Grow Rich. Rev. ed. New York: Fawcett Crest.
8. Jane Sturges (1999), What it means to succeed: Personal conceptions of career success held by male and female managers at different ages, British Journal of Management, Vol.10.239-252
9. Jeff Cohen. (2006), Self Improvement: Strong Beliefs Can Lead You To Success, [http://solveyourproblem.com/artman/publish/article\\_813.shtml](http://solveyourproblem.com/artman/publish/article_813.shtml).
10. John B. Kioustelidis. (2009), The mechanism of thinking.
11. John C. Maxwell. (2009), How successful people think.
12. Julia K. Boehm, Sonja Lyubomirsky, University of California, Riverside. Does Happiness Promote Career Success? Journal of career assessment.
13. Klir, G. J., and Yuan, B. (1995), Fuzzy Sets and Fuzzy Logic: Theory and Applications, Prentice-Hall, Englewood Cliffs NJ.
14. Lipton. B (2005), the Biology of Belief: Unleashing the Power of Consciousness, Matter& Miracles.

15. Milton Rokeach, (1968), *Beliefs, Attitudes and Values: A Theory of Organization and Change*.
16. Online dictionary, <http://www.merriam-webster.com/dictionary/belief>.
17. Oxford dictionaries, <https://en.oxforddictionaries.com/definition/belief>.
18. *Psychological Aspects of Social Axioms: Understanding Global Belief Systems* edited by Kwok Leung and Michael Harris Bond.
19. Schwitzgebel, Eric (2006), "Belief", in Zalta, Edward, *The Stanford Encyclopedia of Philosophy*, Stanford, CA: The Metaphysics Research Lab, retrieved 2008-09-19.
20. Steve Mueller (2016), *How Do You Measure Success? 16 Inspiring Suggestions*, <http://www.planetofsuccess.com/blog/2016/measure-success-16-inspiring-suggestions/>
21. The biochemistry of belief, T. S. Sathyanarayana Rao, M. R. Asha, K. S. Jagannatha Rao, and P. Vasudevaraju, *Indian J Psychiatry*. 2009 Oct-Dec; 51(4): 239–241.
22. Uso-Domenech, J. L.; Nescolarde-Selva J. (2016). What are belief systems? *Foundations of Science*. 21(1). pp. 147-152.
23. Vasantha Kandasamy, W. B., and Smarandache, F. (2004), *Fuzzy Relational Maps and Neutrosophic Relational Maps*, HEXIS, Church Rock.
24. Walter Sorochan., *Belief systems*, <http://www.freegrab.net/beliefsystems.html>
25. Zimmermann, H. J. (1988), *Fuzzy Set Theory and its Applications*, Kluwer, Boston.

