This is an excerpt from the PROMORPHEUS book that explains the functions of the Quantum Med. These abbreviated excerpts are only brief tasters of the concepts addressed fully in the PROMORPHEUS. This book can be procured from the Academy press in Budapest, Hungary.

THE FUZZY ARITHMETIC OF UNCERTAINTY

"Fuzzy numbers" was developed as a way of dealing with the real world, where exact relationships do not often happen. In the field of fractal and chaos dynamics we found that certain biological processes, as well as other real processes, do not follow distinct, entropic or thermodynamic laws. Rather, through bifurcation points and period doubling, they have peculiar phenomena.

The field of fuzzy numbers has led to the development of superb video equipment that can focus in and more closely approximate the function of normal biological optics, which work on uncertainty, through receiving numbers and treating them as probabilities rather than exactitudes. Included in some of the initial work from over a decade ago on fuzzy numbers were the papers by Kaufmann, Tanaka, Mizumoto, Nahmias, Dubois and Prade. This allows for the autofocus functions.

Machines like the Bicom, Mora, Rife and others use direct non-autofocusing equipment. The Odds of picking up a camera and having it focus first time are extremely improbable. These non-automatic devices are just as improbable and thus not only inaccurate but even possibly dangerous. The Quantum Med C.I. however uses a autofocus technique that allows for precise energetic medicine therapy. By using the technology in this chapter we can perfect energetic medicine for the future. The odds of picking up a camera and being already in focus are about a million to one. The ability of a therapy without autofocus is limited. This system uses a
autofocus fuzzy technique to hone in on the perfect treatment for the patient's individual needs.

The basic concept of a fuzzy number is that it contains an integral as a special case. Fuzzy arithmetic subsumes integral arithmetic. The case in point is not merely that integral arithmetic is a special case of fuzzy arithmetic. We will develop the point that fuzzy arithmetic approximates more of a language that has a far greater expressive power than integral arithmetic. This is due to the gradation of membership in a fuzzy set. Thus a fuzzy number may be expressed in linguistic terms. Indeed, linguistics is itself a study of fuzzy arithmetic.

A fuzzy number can be an expression in linguistic terms, making it possible to compute with words rather than numbers. The fuzziness of a fuzzy number provides additional degrees of freedom for representing various types of uncertainty as nonuniform possibility distributions over the real line. One important property of fuzzy numbers is their closure under linear combinations. This allows for simplistic computation. If A and B are triangular numbers, a linear combination of them is triangular as well.

This property, which is similar to the closure property of Gaussian probability distributions, makes it possible to characterize fuzzy numbers by a small number of parameters. This leads to the theory of the so-called L and R numbers developed by Dubois and Prade.

As we have developed in all our books, we must include uncertainty in our definitions of biology, as well as in our definitions of all physics. With the environment of the world becoming more uncertain, this will promote the use of an uncertainty relationship in our relationship, which can be utilized through fuzzy number dynamics.

In the past, the world must have seemed much simpler. Scientists attempted to reduce all complex phenomena to its simplest projections. This reducti
onism robbed us of safety in our biology and our medicine. Man's limited intellectual states caused him to view things in simplistic ways as he looked for push-pull, and ignored some of the uncertainty relationships or anything that didn't quite fit into his physics or cosmology. With present-day awareness, we are starting to realize that complex situations need complex analyses, and that uncertainty comes in. As Poincaré said, once we go past the two-body problem into a three-body problem, permutations have some strange implications.

In analysis of biology, with its million-body problem, we must develop different ways of analyzing. It is the point of this chapter to briefly summarize some of the fuzzy number formulas that can be utilized in transposing our biological matrices.

The reader may assume that this uncertainty leads into utter chaos; nothing could be further from the truth. The uncertainty of exactitude is what we are talking about. We will find that through this uncertainty there is an organization that expresses itself and allows for the development of a physics and a biology that are not utterly random chaos, but have a large degree of precision in their outcomes.

As Einstein pointed out, God does not play dice with the universe. God has some control over indeterminacy and its organization. We have outlined this in the Quantum Biology section as the Nelson effect. There seems to be some type of virtual photon or tunnelling effect of the photon in helping to control this indeterminacy. The simple fact is that in order for us to deal with any type of biological analysis, we must now enter into fuzzy arithmetic, and develop quantic analyses. This is the purpose of this book. Let us return to fuzzy numbers.

Excerpts of this chapter are taken from Kaufmann and Gupta's book, "Introduction to Fuzzy Arithmetic". In the book's preface, the question is asked: "How, with very few words, would you be able to summarize the subjective construction of a fu
zzzy number?" The answer given is: What is the smallest number given to this uncertain number? What is the highest? Further, if we were authorized to give one and only one value, what value should we give? Obviously, with these three values, different from each other, we can construct a triangular fuzzy number." We would look for the highest, the lowest, and some point in between. Later, if we wish, we may construct some refinements that are convenient or subjectively convenient to the fuzzy number. This is the development of a concept that allows us to understand the processes of biology, which are not under the rmodynamic control, but quantic control. They need to be analyzed with quantum physics, and can be adapted to a fuzzy number set.

The system of biology has developed a torus in which there are maximum and minimum values for every subset. In the Bio-Quantum Matrix section many of these maximum and minimum values are outlined, and the torus (special attractor) is the ideal level of these values. Thus for whole blood potassium, the ideal level of whole blood potassium should be approximately 31 equivalents. Low numbers representing life-threatening values around 10. High numbers representing life-threatening values are around 55. The ideal value for serum levels of potassium is around 4.5. Low values are approximately 1, and high values are approximately 15. Thus we have generated three numbers for each of these situations, all reflecting the blood level of potassium.

With this type of fuzzy number, we can start to understand how the special attractor of the body tries to balance the potassium levels, both in whole blood and in serum. Our fuzzy arithmetic is an ideal dynamics for understanding this type of process, as it suits the situation of biology, which has a
high and low number for everything, as well as an ideal. Also, biology develops in a quantic procedure, and must have uncertainty plotted into its dynamics.

Chapter 3

HYSTERESIS This is an excerpt from the PROMORPHEUS on the science of energetic medicine

The state of any cell is determined not only by its instantaneous surrounding conditions but also by its past history. The conditions previous to those happening in the cell now set up an electro-chemical-physical system that shows hysteresis. The properties and reaction of any system are determined not merely by its present surroundings but also by the conditions in its environment and past history.

In our study of the central nervous system we will need to adapt some very complex forms of hysteresis study. We shall attempt to develop special mechanisms that will offer explanations for some of our quantic phenomena. This allows us to develop some of the different equations into a matrix.

The dictionary definition of hysteresis is: "The time lag exhibited by a body in reacting to changes in the forces, especially magnetic forces affecting it. The phenomena exhibited by a system, often a ferromagnetic or imperfectly elastic material, in which the reaction of the system to changes is dependent upon its past reactions to change." Our analysis of biology must embody the hysteresis of the past profile, and our embodiment of a new medicine would also need to take into account the past history of the patient.

Any system that is capable of several configurations of equilibrium for a given external set of sequences exhibits a pattern of hysteresis. The hysteresis pattern can have hills, valleys and geography, and
can consist of ups, downs and different trends. This type of hysteresis pattern allows the Academy program to chart the readings by looking at the hysteresis reactions of the patient and comparing them to average components.

If a disturbance brings the system from an equilibrium configuration A to another equilibrium configuration B, either may bring the system from a configuration C into a configuration D. Or it may be inadequate to displace the system from C. This depends on the relative stability of configurations A, B, C and D.

Let \( 1, 2, \ldots, n \) be the quantities that describe the configuration of the system, and let \( 1, 2, \ldots, m \) be those quantities that describe the external conditions. For instance, \( \gamma \) may be the concentration ratio of two reversibly-interacting substances which constitute the system, while \( \beta \) may represent the external temperature. The equilibrium configuration is characterized by a minimum of some function, which we shall denote by \( G \) (for instance, the potential energy in mechanical systems, the negative of the entropy, or the free energy in thermodynamics, etc.).

This function \( G \) is a function of the \( i \) and \( k \) and the equilibrium is determined by \( n \) equations

\[
G_{i} = 0
\]

which determine the values of \( i \) for prescribed \( k \). For stability of equilibrium it is sufficient that the matrix

\[
\frac{\partial^{2}G}{\partial i \partial j} > 0
\]

be positive definite.

If equations 1) have \( s \) solutions,
satisfying conditions 2), then in the n + 1 dimensional spac e the hypersurface

\[ 0 = G(1, 2, \ldots, n, 1, 2, \ldots, m), \]

which depends on the m parameters k, has relative minima for such values of i as given by equation 3.

If the parameters k vary continuously, the hypersurface (4) is deformed. In general, not only does such a deformation result in the change of the coordinates 3) of the minima, but those minima themselves may change by becoming more or less pronounced, owing to a change of 0. The situation is illustrated for the two-dimensional case by Fig. 1 (n = m = 1).

Let us now present to the subject a pair of stimuli Si and S k < Si, alternatively, and combine the stimulus Si with an unconditioned stimulus, producing the response R. Then R will become conditioned to the absolute value of Si.

However, if we present each time, during the process of conditioning, a different pair, Sm and Sr > Sm, and always combine the stronger stimulus with the unconditioned stimulus for R, then, since every time different neuroelements, Nm, Nr, etc., are involved, the absolute value of the stimulus S does not become conditioned to R. But every time a stronger stimulus is presented after a weaker one, D is excited, provided that the difference between the stimuli is large enough. Hence, D becomes conditioned to R.

If we now present alternately a pair of stimuli, Sp and Sq > Sp, which were never used during the process of conditioning, then presentation of Sq after Sp will produce R via D. But the presentation of Sp after Sq will not do that, since D then r
emains unexcited. We have here a response to the abstract relation "larger than".

This simple scheme leads to the following consequences.

The presentation of a single stimulus of sufficient intensity is accompanied by an excitation of D. Therefore, an animal or subject trained to respond to a single stimulus Si, will, when presented alternately with two other stimuli, Sp and Sq > Sp, always choose the bigger one, Sq. In some cases this may perhaps actually be so. In cases when this does not hold, we must complicate our scheme somewhat. We may, for instance, assume that a spontaneously and constantly excited center excites an inhibitory pathway which normally inhibits D. A stimulus S, through a proper connection, may inhibit the inhibitory pathway and thus disinhibit D. If, however, the time which it takes to disinhibit D by S is longer than the interval during which \( -j > 0 \), then a continuous presentation of Si does not excite D, unless Si is repeated at intervals shorter than \( \tau \).

Several other complications and generalizations of this scheme are apparent and suggest a number of mathematical investigations to derive relations between the thresholds of discrimination, the interval between presentation of the two stimuli, etc.

Connecting the pathway A (Fig. 1) to a center F, through a pathway H of the ordinary inhibitory type, results in an excitation of F only when a weaker stimulus is presented after a stronger one. In this way we obtain a mechanism corresponding to the relation "smaller than".

Now, consider two centers, A and B, in a state of constant excitation with intensities EA and EB. Those excitations act as stimuli on the two pathways I and III, of which the first is an excitatory, the other an inhibitory, pathway and both of which lead to the connection s Fig. 3 with an excitatory pathway II. In a rather wide range of values of S we may then have, with good approximation,
Referring again to Fig. 3 and remembering that the role of $S$ is now played by $EA$ and $EB$, we have

$$2) \quad E = I \ h \ \log \frac{S}{h}$$

Let

$$4) \quad 1 = 3 = \emptyset; \quad I_1 = I_3 = I; \quad h_1 = h_3 = h.$$ 

At $s$ pathway I gives

$$5) \quad ( - j) 1 = P_I \ h \ \log \frac{\emptyset}{h} > 0,$$

and pathway III gives

$$6) \quad ( - j) 3 = Q_I \ h \ \log \frac{\emptyset}{h} < 0,$$

The total amount of $-j$ at $s$ is equal to

$$7) \quad - j = I \ h \ \log \frac{P}{h} - Q \ \log \frac{\emptyset}{h}.$$

If, now, besides 4) we also have, in this particular case, $P = Q$, then

$$8) \quad - j = P_I \ h \ \log \frac{\emptyset}{h}$$
The intensity of excitation $E_2$ of pathway II being a function of $-j$ only is, as we see, a function of the ratio $EA/EB$ of the excitation of the two centers A and B and is independent of the absolute values of $EA$ and $EB$. If $EA < EB$, pathway II is, however, unexcited, $-j$ being negative. However, by considering a perfectly symmetric arrangement of another set of pathways, I', III', and II' (Fig. 3), corresponding identically with pathways I, III, and II, we shall find, by a similar argument, that the pair of pathways II and II' is always excited in the same way for a constant ratio $EA/EB$, regardless of the absolute values of $EA$ and $EB$.

BIO-ENERGETIC-THERAPEUTICS

To determine what energetic therapy is best for what condition takes some degree of difficulty. The Quantum Med C.I. uses various forms of therapy. These therapies are computer cybernetic loops of treatment patterns followed by signal monitoring in a continuous loop. The treatment differs in pattern intensity and other electrical variance. We can take this opportunity to describe the treatments realizing that the actual specifics of the loops and therapies must not be revealed to protect the proprietary nature of the work.

The system has been labeled as the CLASP program becaus
e of its ability to handshake with the patient's body and thus self correct or adjust to the patient. The device self calibrates and alters its treatments to fit the patient. The system uses an autofocus technique to adjust the therapy and diagnosis to the individual patterns of the patient.

These programs use a variety of algorithmic mathematical variations of cybernetic interaction. The Mathematical formulas outlined in this book from fuzzy numbers to harmonic resonance are all used in the computer program in analysis and treatment. I can assure you that the answers to all questions are in this text. Please read it all before you ask questions on how the Quantum Med C.I. works. But for a brief description:

ELECTROACUPUNCTURE

In this therapy we now the fuzzy band boundaries of the normal meridians and points on the meridians. This has been calculated from years of research. The factors of hydration, capacitance, inductance set the pattern in general. The computer must perform several fuzzy calculations to perform the function. The computer generates a sine or square wave signal that tests the meridians. The frequency should pass through the system and return unchanged to the computer. If the signal is absorbed by the system or is potentiated or amplified then the meridian or point is over or under charged. An improper point is then treated with resonance till the proper response is achieved. If any point is uncorrectable during the time limit or if an alarm response develops during treatment then the computer will record these uncorrected points and display them on a screen.

RIFE THERAPY

Rife developed the idea of using frequencies to treat the diseases of the body. He tested many frequencies and their effects on different diseases in people. He found that different infective organisms also could be destroyed o
r controlled by electrical frequencies. He postulated the possibility that viruses could be destroyed by certain frequencies. The perfect resonance would shatter the virus like a certain sound can destroy a glass. These harmonics frequencies also can be used to test the polarity of different glandulars. The Quantum Med C.I. starts at a low frequency and raises the frequency noticing the reactivity of the patient at each shift. Frequencies where the patient has excess reaction determines the polarity of the specific organs in the freq. band. The computer notes the excess reaction freq. and allows for correction of the aberration reaction. This happens through a stabilization pattern of harmonic frequencies in the near freq. areas. These harmonic related frequencies then can sedate high reaction. Direct freq. therapy on weak reactive points can correct them. This can detect and correct hysteresis disturbances and various inductive and capacitance disorders. The formulas in this chapter are utilized in the computer program. The principles of harmonics and fourier analysis are utilized as well.

COLOR THERAPY
The beneficial therapies of color have been utilized by the Germans for years. By using these frequencies, beneficial results can be achieved. This perhaps the softest and most noninvasive of all the therapies. Color reaction can be tested to determine the color which is most reactive to the patient.

SCALER
A scaler wave results from two equal but opposite waves interacting. The neutralization produces an infrared wave with nonhertzian components. These scaler waves have positive effects on biology and disease. By inputting a signal and a reverse equal signal the cancellation produces the null field or scaler function. Since the cancellation of the energy in normal space is transferred into the other dimensions and since the chakra are connections to these other dimensions,
our scaler wave treatments can correct and treat the chakra. Our research has validated the hypothesis. In the International Journal of the Medical Science of Homeopathy we further analyze the scaler treatments. We refer you to this study for consideration.

ALLERGY DESENSITIZATION

The existence of an allergy seems to be connected with emotional stress. Allergens have distinct trivector fields, the reactive organs have distinct fields, as does the reactive symptoms. By using the electrical therapy to induce desensitization in the organs and the organism we can lower antibodies and mast cells reactivity. This is combined with NLP techniques of reprogramming stress reaction to deepen the effect. The end result is a powerful desensitization of allergic reaction. After 3 to 4 sessions allergic symptoms can be treated.

TRIVECTOR AND BICOM MORA LIKE THERAPY

There are a wide variety of frequencies running through the body. There are frequencies that are essential for life and necessary for health. Other frequencies are associated with cancer or other disease states. Some researchers have found that by using a band wave separator they could separate these frequencies. The healthy frequencies are amplified and the unhealthy frequencies are inverted. This is the basis of the Bicom or Mora type therapy. By charting these frequencies with the trivector field we can achieve a superior response over the mora and Bicom devices used in the past. This takes a fast acting response of a cybernetic loop within a computer to maximize the refined therapy. The units sold mostly in Germany in the past are one way treatments that are flawed by the lack of cybernetic interaction. Our cybernetic loop of check and double check allows for a self adjusting program that can more accurately treat the energetic dysfunctions.

NEURO-LINGUISTIC-PROGRAMMING
The science of NLP has snowballed for decades. It has gained tremendous popularity. The basis is the idea that emotional or physical traumas effect our neurology. The ideas and thoughts shape our minds and come out in our interaction. Using NLP techniques coupled with electrical stimulation for reshaping of neurology we can effect behavioral change. This allows us to maximize emotional and mental treatments.

SUMMARY

1. Phase space reaction is time dependent. The magnetic reaction of a body must be measured over a time phase for best measurement due to the hysteresis.

2. Using advanced mathematical algorithmic techniques such as outlined in this book we can assemble and direct an interactive computer module capable of treating and diagnosing the human body.