Chapter 5

TRANSFORMATION

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TRANSFORMATION

How does a cell transfer mass into information and back into mass?

As we saw in Chapter 4, there is an inherent process in all matter that tends toward an organization state. Thus all matter tends to fall toward certain fractals. Thus a system under total entropy, or chaos, will start to produce some organization, as shown in chaos theory. This will require us to establish new definitions of entropy, thermodynamics and statistical dynamics. In light of subspace dimensions of control over the indeterminancy of subtle items(the Nelson effect), entropy might only be a situational observation. Just because a set of data appears entropic from one vantage point it might not appear so from another. One person's entropy might be meaningfull to another. It is possible that nothing is really noise and that noise is really just unpercieved transmission. Biology produces much percieved noise, such as the infared or heat by product. Perhaps this is just another form of information transfer awaiting discovery. Perhaps there is no wasted functions in biology and the system uses every bit of possible exchange. The total list of possible energies needed to be analyzed would however be so vast and complicatedly intertwined that only fractals could describe it.

It is the point of this book that even this fractal organization of chaos is not enough to account for the phenomena of life. We define life as being able to metabolize and reproduce independently. Thus we have separated two general classes of physical processes. As we have said in this book, life has an indeterminate basis of operation, by virtue of the phenomenological conditions of the molecular motions, which are not dependent on Gaussian distribution or statistical mechanics. The second is a condition of statistical mechanics in which the values of large numbers or Gaussian distribution can account for nonliving systems dependent on entropy, thermodynamics, or statistics. Some subspace control over the shape and paths of molecules must be imposed for life to exist. This morphic resonance control we have labeled the Nelson effect.

Within the class of living units known as *vions* (labeled by Dr. James Isaacs), there are two essential processes which are subtly interwoven. Isaacs has called these "emergent" processes, and these processes must be quantic and have discrete features. They cannot act in continuous terms. Isaacs points out that in a quantic description of these emergent processes, we must value them as being non-dualistic and operative under the correspondence rule. This is to point out that the two processes of metabolism and reproduction are mutually exclusive and operate somewhat independently.

In a system of evaluating the statistical mechanics of a nonliving system, we will find that the values theory of large numbers generating Gaussian distributions will hold true. This gives us a way of analyzing nonliving systems. Thus in analyzing the air in a room, we find that it obeys Boyle's gas laws. Temperature variables, volume variables and pressure variables are all making continuous changes through different equation states. Thus an equation of these variables can be used to describe this system under the given conditions. As one variable changes, other variables will change, either in proportion or inverse proportion. Thus we can see how an equation can be used to study and to reflect an entropic, thermodynamic state, where continuity of variables is an underlying assumption.

A graph of the two variables is another way of looking at a thermodynamic or nonliving system. If we have a graph in two dimensions, X and Y axes, the X axis changes. If we know the equation of how X affects Y, we can see that the changes in X will provoke distinct changes in Y through a continuous flow on the graph. These graphs can be taken into other dimensional states; three, four, five and six dimensions, depending on how many variables we wish to attune our mathematical theory to. This can be done in a nonliving state. However, in a living, quantic state, the idea of continuous flow must be put on a shelf. We will see in quantum theory that discontinuous steps will hallmark the process. We will need to develop a system that is discontinuous to catalog and analyze these steps.

The quantic theory means that the processes will jump in quantic terms, and the process jumps in indeterminate ways. In the subatomic process, physicists have resorted to matrices such as the hermitian matrices. Changes in the energy state of the quantic particles in the process can be charted in a matrix, We can see the effects through matrix algebra that allow for changes in the various states.

Thus to understand the interchanges of energies within a quantic system, a matrix system would have to be developed. To this end Dr. Isaacs developed the hermitian matrices, allowing for the process and changing of energy states, accounting for the transfers of energy.

GENETIC CODING
PERFECT EXAMPLE OF A QUANTIC (NON-RANDOM) BIOLOGICAL EVENT

First Position (Read Down)	Second Position (Read Across)				Third Position (Read Down)
U	PHE / LEU	S E R	TYR / Stop Stop	CYS / TRP	U C A G
C	LEU	PRO	HIS / GIN	ARG	U C A G
A	ILE / MET	THR	ASN / LYS	SER / ARG	U C A G
G	VAL	ALA	ASP / GLU	GLY	U C A G

As we have stated before the interaction of molecular entities is not a bals and rod phenomena. There is instead an extremely complicated intricate encounter of quasi energetic particles. The vibrational rates of these compounds, orbital size, orbital nature, probability nature, spin momentum,angular momentum, etc. all effect the actual interaction. There must extremely complicated mathematicl events processed for energy and information transfer. The mathematical nature of this process can be best approximated with a matrix.

Isaacs has calculated how 600 different energy state transfers must be done in a cyclic way to bring life metabolism into process. In developing a matrix sophisticated enough to handle the various emergent processes of life, we must also realize that since these fall under quantic rule, there is a certain amount of indeterminacy that cannot be overcome in the system. Thus in developing a truly organized mathematical pathway to understand the emergent processes of biology, we must use a matrix system with a triphasic logic system, going past the computerized form of logic. In a normal computer logic is assumed through binary, meaning on/off states of the variable. This works in the statistical world of the mechanical computer: the value is on or off. However, in a quantic world we find that indeterminacy helps to shape this as the variable is on, off, or indeterminate; some state of probability of being on or off.

We know that rays come out of the molecules of decaying uranium. At a certain probability state we know that there is a quantic relationship, and the indeterminacy tells us the probability of the time the next ray will come. We can never know with absolute certainty, because of the indeterminacy built within the system. Thus, to understand the emergent processes of biology, our hermitian matrix will need a triphasic logic system with a subspace interlink.
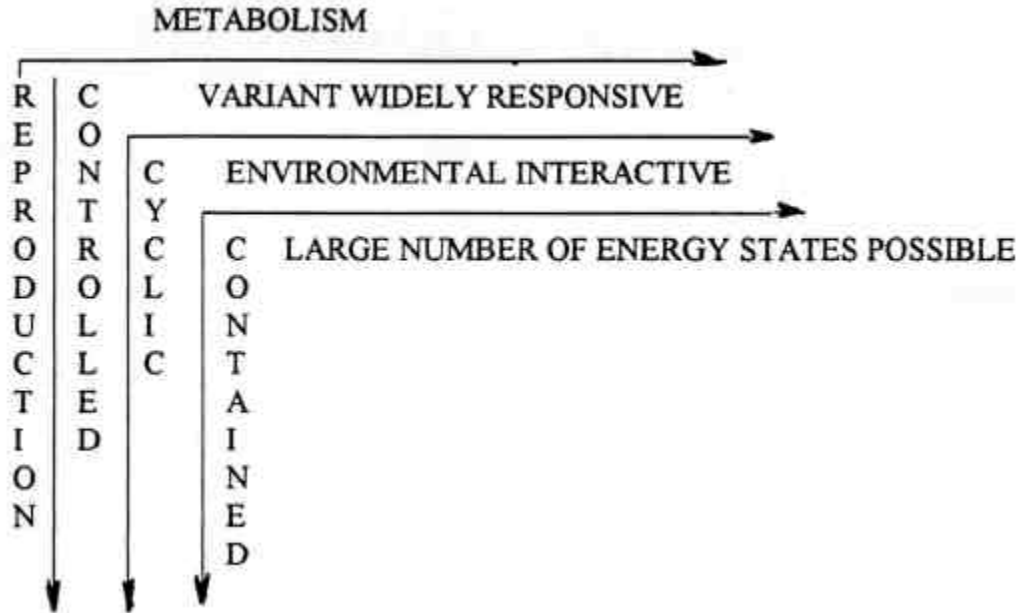
So our choice of mathematical blends will bring us to choosing a new type of abstract algebra. This will also point out the fact that we can make abstract claims or projections of thought that actually knowing the values within a quantic system such as biology will become impossible, since we are locked out of knowing by the indeterminacy principle (not being able to calculate momentum or position accurately). We also cannot know both time and energy distinctly.

Thus in setting up our "head"(Gedanken) experiment, we will use certain mathematical relationships for our hermitian matrices that might be able to produce the various energy states in a cyclic way, accounting for the processes of life. We will not be able to calculate magnitude through our system, but we will know terms of relationships possible in the light of our emergent processes of reproductive and metabolic functioning in living units.

Thus transformations or matrix algebra can be used to properly describe the various solutions of the energy exchanges in relationships, and these transformations will follow quantum rules that will be just as useful in biology as they are in chemistry.

Our transformations will need to have discreteness of action, the knowledge that a radically limited number of occupied energy states happens in the reproductive process, and a radically large number of energy states is accessible for occupancy in the metabolic process. Thus the reproductive process must be firmly defined and precise in its action, as we cannot allow any type of mutation to occur over once in every 10^9 trial. If this should happen, it could open the door for species variation, which would get out of control and produce havoc in the ecological response system.

So the energy states through the reproductive process must be limited in number, precise in activity, requiring strong drives and ease of access. In contrast, the energy states needed for metabolic process must have a rather large possible number of energy states, since metabolically we must respond to many different ecological terrains, or a wide range of variables in our meetings with the environment. We must to have strong responses to temperature, pressure, food access, air content, and so on. The extremely large amount of variance in our environment will also dictate a rather large number of energy states needed for transfer of the metabolic processes, as we will need to intake all types of foods, air, liquids, etc. The process will also have to be cyclic in nature, accounting for the need for preciseness; they must be very, very cyclic.

METABOLISM →

VARIANT WIDELY RESPONSIVE →
ENVIRONMENTAL INTERACTIVE →
LARGE NUMBER OF ENERGY STATES POSSIBLE

```
R  C
E  O
P  N  C
R  T  Y
O  R  C  C   LARGE NUMBER OF ENERGY STATES POSSIBLE
D  O  L  O
U  L  I  N
C  L  C  T
T  E     A
I  D     I
O        N
N        E
         D
```

Exchanges of molecules through time and space in different energy states, for reproduction, must have truly cyclic transforms. The metabolic process, however, due to its large number of energy states, will need to be radically open for handling molecular mass and energy through the transforms in interaction with the ecological environment. Therefore the metabolic process will have to be asymmetric; non-equilibrium and irreversible in many cases.

Thus we can see the need for these two emergent processes to occur through handling the different flows of material needed for reproduction and metabolism. We will need to have a cyclic, precise, closed transform and also an unclosed transform of many different energy states for metabolism.

If one is to two, two to three, three to four, and four to one, we have an example of a closed transform in which the beginning and the end are similar. This is the type of transformation needed for reproductive utilization, and this will also have to have a limited number of states.

States that are controled or restricted in the degrees of freedom by a subspace morphic influence and a voltammetric resistance or trivector impingement in our normal space. (see the International Journal of the Medical Science of Homeopathy, issue 4)

CLOSED TRANSFORM   OPEN TRANSFORM

1 2 3 4   A B C D...

2 3 4 1   E F G H...

OPEN TRANSFORM

1 2 3 4...

2 3 4 5...
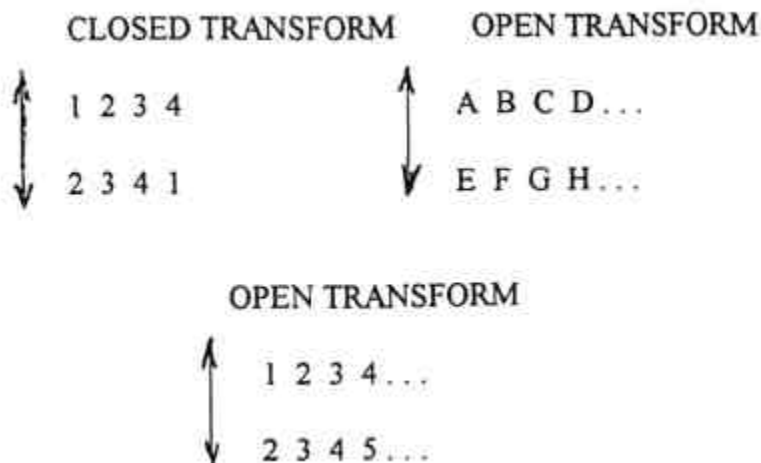
The second transformation will need to have an unclosed transform. An example would be: one is to two, two is to three, three is to four, four is to five; where the system does not end up where it starts. This type of irreversible system can be very useful at handling a variety of environmental variance.

Here Isaacs makes the analogy of the transformations needed to handle cybernetics. Cybernetics is not what a machine *is*; it is what a machine *does*. In other words, machines can be programmed to work against the laws of normal physics, and to handle fluctuations from one value into another; thus they can make transformations. The thermostat in a room can sense when the temperature is too low and turn on a heater. The natural tendency of physics is for the room to go to a cooler temperature. The thermostat would thus act *against* the normal laws by turning on a heater. We can program the thermostat to lock into a certain temperature for a certain amount of time, and to change, as in the case of some of the thermostats we use to regulate temperature in the house at different times for energy savings.

Thus we can see that machine transforms in cybernetics can be used to design functions and variables to control environmental states. Such a sophisticated machine has been designed in biology, in which the body and the living cells actually fight against the entropy and thermodynamics of the environment, and take in certain energy states, matter, vibration, etc., and mold them against their wishes through machine-designed transforms, to accomplish metabolism and reproduction.

It is the attempt of this book to outline one of the first feeble attempts to try to understand this phenomenon. We have made many points in this book that this phenomenon is quantic, and thus must be dealt with concerning the matrices. It is also indeterminate, because of its quantic energy, and must have a triphasic system of logic.

The reader is also challenged not to be intimidated by the word "indeterminacy". Many readers of this book and other books are turned off by the idea of not knowing. It is also the precept of this book that we know *through* indeterminacy that life somehow has a spark to be able to control the indeterminacy of this triphasic logic system. This is another way to open doors of understanding, and perhaps we will someday understand memory and life a little better by some of the doors that we can open in our thinking.

Thus DNA, RNA and other key transform molecules position themselves and other molecules within the cell to act as machine-like transformation complexes. Thus the intricacies of life follow a machine-type dictum, so they can take molecules, atoms, energy, vibrations, and convert them against the entropic flow of thermodynamics into a cyclic flow of reproduction and an open-ended, many-leveled flow of metabolism.

Development of a simple transformation complex idea would be ludicrous. We must resist the lure of reductionism. The vast complexity of life would dictate that this transformation be many-faceted, and thus, very complex. Yet, what would it take to satisfy the minimum requirements of life? As we have already dictated, the smallest living organism that does metabolize and reproduce on its own is only of a given size: 10^{-5} cm. To pack a transformation material into such a small package, it would have to be very intricate, but yet of a limited size, set under the guise of *Avogadro's molecular number*.

So Isaacs developed the hermitian matrix, which was a guesstimate of the transformation needed for living material. This minimum number of interchanges, the minimum ability of life to set up a transformation material to accomplish metabolism and reproduction, has been labeled by Dr. Isaacs as the "*vion*". This is a series of transformations allowing for metabolism and reproduction in its base unit. As we understand more about the vion, we realize that many larger cell materials can contain many vions. A mitochondria can be a vion, operating on its own within a cell. So larger cells will be made up of different vionic concepts.

In the periodic table the simplest element is hydrogen, satisfying that which is needed of an element, having a nucleus and one or more electrons revolving around it. Thus other atoms are quantic variations or assemblies of something similar to hydrogen. Through quantic law, we developed the periodic table, based on the amount of protons, neutrons and other subatomic particles, which are in the nucleus or revolving around it in the form of electrons.

S - ELECTRON: 1 = 0 SUBSHELL HOLDS 2 ELECTRONS
P - ELECTRONS: 1 = 1 SUBSHELL HOLDS 6 ELECTRONS
D - ELECTRONS: 1 = 2 SUBSHELL HOLDS 10 ELECTRONS
F - ELECTRONS: 1 = 3 SUBSHELL HOLDS 14 ELECTRONS

	N = 1	N = 2	N = 3	N = 4	N = 5	N = 6	N = 7
	K	**L**	**M**	**N**	**O**	**P**	**Q**
7							
6							
5							
4							
3							
2							
1							

QUALITATIVE DIAGRAM OF ATOMIC ENERGY LEVELS AFFECTED BY N AND L

Quantic law sets the determination for this material, and thus chemistry becomes a very precise science, as we start to understand more about the quantum mathematics that make it up.

	N = 1 (K)	N = 2 (L)	N = 3 (M)	N = 4 (N)	N = 5 (O)	N = 6 (P)	N = 7 (Q)
7					$5f(89-102)$	$6d(103-105)$	$7s(87-88)$
6				$4f(57-70)$	$5d(71-80)$	$6p(81-86)$ $6s(55-56)$	
5				$4d(39-48)$	$5p(49-54)$ $5s(37-38)$		
4			$3d(21-30)$	$4p(31-36)$ $4s(19-20)$			
3			$3p(13-18)$ $3s(11-12)$				
2		$2p(5-10)$ $2s(3-4)$					
1	$1s(1-2)$						
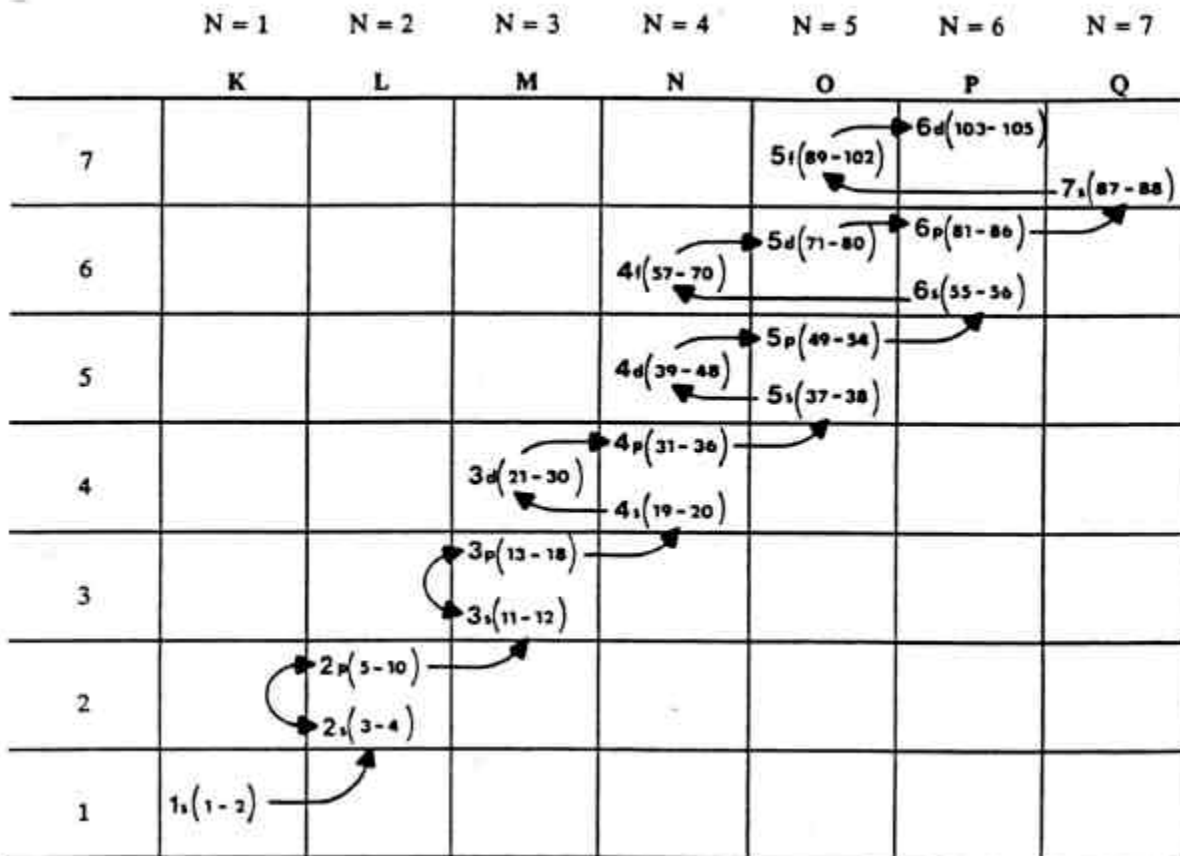
The development of biology has resisted this type of scientific examination because of the inability to adapt a quantic principle to it. Thus as we see the vion (the basic unit of life) we will understand the simplest form of metabolism and reproduction, and thus be able to assemble out of it the more complex organisms.

Isaacs outlines a transformation in which an operator acts on sets of operandi undergoing a transition in a set of transforms. In a computer or machine, when a certain input is arrived at via a certain number, it can transform another number in a certain way, as designed by the creator of the machine.

An identical transform is one in which we have no change from operator to operand; thus we have one to one, two to two, three to three, four to four, etc. This is an example of an open identical transform. Transformations of single values may have one to one additions, which is an example displayed in the Archimedean spiral, in which N corresponds to N plus one; thus one is to two, two to three, three to four, four to five, indefinitely.

$$N \rightarrow N + 1 \quad (N = 1, 2, 3, 4 \ldots)$$

```
8
|    1 2 3 4...
|
9    2 3 4 5...
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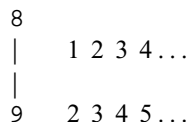
This is one of the simplest types of transforms, and is used by Isaacs to set up the first column of transformations. Another column used by Isaacs is the logarithmic spiral, in which 2 x N is to 2 x 2 x N; thus two is to four, four is to eight, eight to sixteen, sixteen to thirty-two, thirty-two to sixty-four, etc. This is another open transformation of a logarithmic nature.

A Fibernaci series can be used in which N is added to the N previous. Thus we make a transform of one/two, two/three, three/five, five/eight, eight/thirteen, thirteen/twenty-one, and so on. Isaacs found that adding a linear series to the Fibernaci series can produce a harmonic series, or at least a variation of a harmonic series.

Another transformation series used in the Isaacsonian matrix is that of 2^n; 2^0 being 1, 2^1 being 2, 2^2 being 4, 2^3 being 8, 2^4 being 16, 2^5 being 32, setting up a series.

$$2N \rightarrow 2(2N) \quad N = 1, 2, 3, 4 \dots$$

$$2 \ 4 \ 8 \ 16 \ 32 \dots$$

$$4 \ 8 \ 16 \ 32 \ 64 \dots$$

Thus in setting up these transformation series into a twelve-by-twelve matrix, Isaacs was able to make a guesstimate of the transformations needed to control the process of metabolism and reproduction, the base unit of transformations needed to account for life in its simplest form (see *Bio-Quantum Matrix*).

Here, as in other parts of this book, we must make the point that we must vary from linear causality thinking (that of mathematical equations and continuous flow), and shift to utilizing more of a nonlinear qualitative thinking, when we evaluate the whole and the transformations that are capable of happening in each step.

Thus as we see the unfolding of these large and complex transformations, this matrix will need to have reproductive levels, have a cyclic dimension, and thus have a radically recurrent dimension.

As Isaacs points out through our fractal dimension, this cyclic nature must happen through a phase space dependence on time; that is to say that the temporal constraint of the reproductivity of the cycle happens under a consistent time envelope. Thus the emergent process of reproduction would need to happen in a near-timely manner, such as with fuzzy logic, utilizing a reproductivity on a certain guideline; yet, allowing for an indeterminacy. Thus the phase space of the strange attractor of life would come into play. We will find that the very nature of life itself is the paramount example of the strange attractor.

As Isaacs points out, "It seems that information conservation, such as that in the epigenetic and genetic processes, may exhibit time-space and space-time regularities, which do insure a larger indeterminacy of molecular motion. However, the converse need not be true. Every temporal rhythm or spatial periodical does not necessarily exist phenomenologically in order to insure larger indeterminacy, which includes molecular motion. This is to say that the needed quantic indeterminacy for life to ensue is a product of the time-space irregularities, and thus indeterminacy insures the time-space phase shift, where the time-space phase shift does not insure indeterminacy."

In some series positive integers will remain the same through the transformations. These types of series can represent the cyclic nature of the reproductive class of emergent processes. These types of duplicating series with identical intervals can be accomplished by addition of linear and equidistant interval transformations. Thus the points of intersection of the Archamenian spiral with the line are equidistant.

Part of our matrix will have equidistant intervals, such as the equidistant intersection points of the Archamenian spiral of the line. A logarithmic transformation will have predictable logarithmic, but they will be duplicating or irregular in distances with the intersection of the line.

Positive integer series can be composed of limited states, where the integers will stay outside the classical limits imposed by the correspondence rule. These single value transformations will make one-to-one changes and fine closure through their one-to-one correspondence and through their time-phase space relationship, via the strange attractor.

Thus our logic leads us to the continuity and predictability of biological information transport, referred to as reproduction, via the indeterminate basis of discrete cyclic transforms. This is satisfied by the insufficient number of occupied energy states with an uncertainty product in the uncertainty relationship, so that the emergent process is indeterminate, thus discrete quantized, and can be cyclic and understood through the matrix algebra. We can understand this by the quantum rules, understanding the duplicated integer series, single value transformations, and the cyclic nature to restrict the number of molecules in the time-space phase system.

METABOLISM

OPEN

INFO

CLOSED

EPIGENETIC COMBINATION
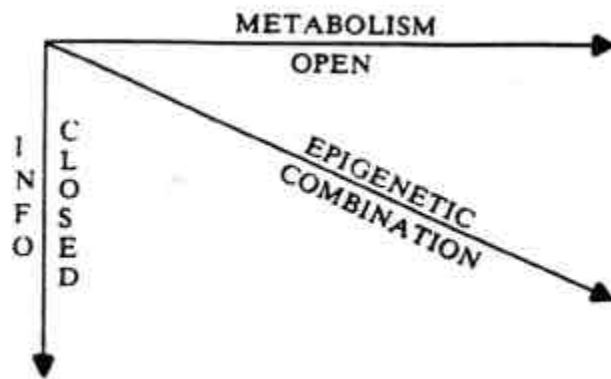
Information processing for reproduction is thus closed, and does not exchange mass and energy with the environment in any radical way, as does metabolism. If we look at what is known about cellular division, and how a cell changes from single to double though the process of mitosis, we can see that a closed principle is needed; the cells will not need to intake any more mass, matter or energy to accomplish this task. At a certain time they go into reproduction, and this is the closed side of the reproductive state. There is a regularity of this replication process as it happens around the time-space variance. There is a predictability about the time involved, and many other correlates can be seen to further validate our hypothesis for explanation of the variables of reproduction.

At this point (as noted throughout the book) we can see the need for a whole new type of thought pattern to understand biology. Our old types of thought patterns, of linear thinking through Newtonian dynamics and reductionistic thought processes, will not give us the needed cranial material and modalities to comprehend the material of this book. We must evolve to a new type of thought pattern, where reductionistic logic will be seen as a fallacy, unable to explain biology. We will need to evaluate the entire qualitative system to understand biology. We will need to have more of a quantic matrix allowing for indeterminacy, allowing for the basic principle that we can only obtain knowledge within certain limitations. This whole new type of thought pattern is called for in this book. It is a challenge in the evolution of thought to try to comprehend these values.

In our society we can always find that some foremost razor technology thinkers who are always looking ahead and conceiving some of the different ideas that are in this book. We realize that the majority of society will not be able to accept them for another ten to twenty years; but hopefully, this will start the ball rolling, and at the least, maybe offer a bifurcation point in the thought process of human society, the results of which I hope will be positive.

As we have pointed out, our metabolism transformation will need to be asymmetric, open, and have a radically large number of energy states accessible for occupancy. If the process has an enlarged uncertainty product, and is thus indeterminate and quantic, the metabolic process may be represented in quantum rules for positive integers in our matrices, duplicating the type of transformations needed to reflect the asymmetry that is needed to keep open the transport of mass and energy with the environment.

Isaacs relates two biological laws to offer some explanations in the metabolic class of processes: A, the law of initial values of physiology, and B, the Arndt-Schultz law of pharmacology. These laws refer to metabolic processes, and by their discrete limitation in the quantity, fall under the three qualifications of the quantum rules. These two laws of pharmacology involve dose response and intensity of response involving small stimuli. The machine of life supplies the needed power source to respond to these small stimuli. Thus we can see that the small stimuli of a poison or of any other input (chemical or otherwise) into the system will provoke some type of response via the organism operating with a threshold energy or trigger reaction. This involves the double-knee curve of the incremental negative resistance of the electrical nature of the cell.
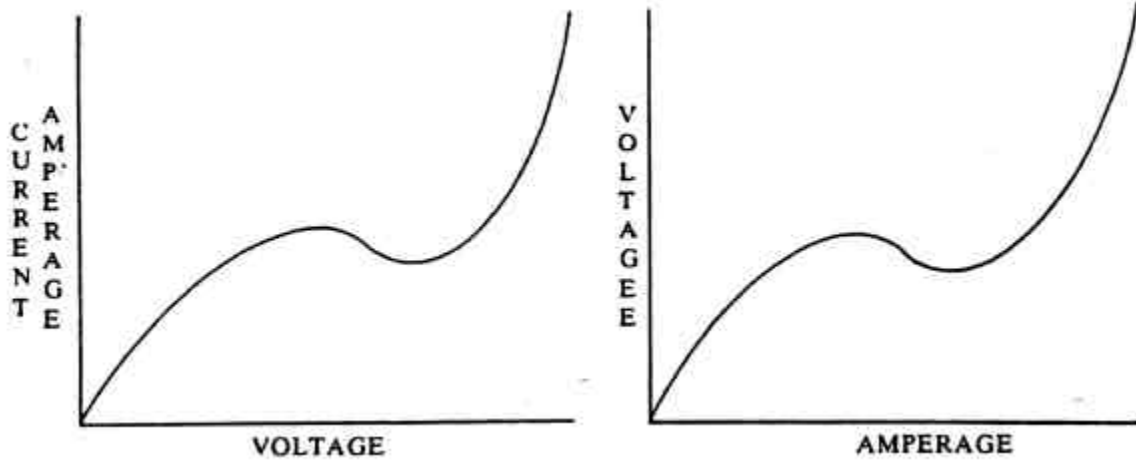
A new set of biological laws for metabolism is thus unfolded, to understand the dose response or the intensity sensations of living organisms.

In Fechner's law, a logarithmic function in linear relationships can be found over short segments of a curve representing dose response, or intensity sensation relations in neurological testing. When administering small doses of anesthetics, stimulating effects will happen to the organism. Starling's law of the heart shows us that the contractile action of a heart muscle is related to the stretch of that muscle at the commencement of contraction.
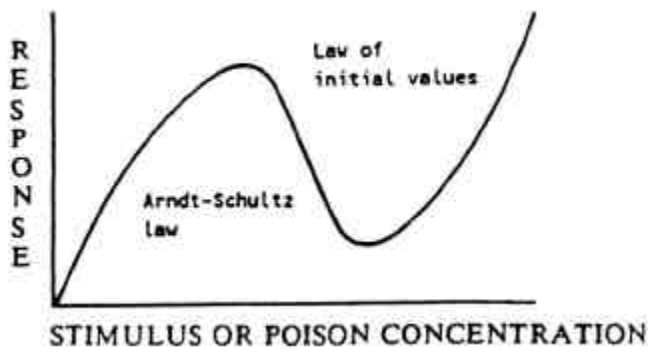
As we evaluate the curve of the dose response in the Arndt-Schultz law of pharmacology, there are particular reasons why reversal of response happens. Isaacs has related this paradoxical response to the operational characteristics of incremental negative resistance. Irritability, contractility, homeostasis, temporal rhythms, and spatial patterns of metabolism are all explained with a new type of thought pattern through the idea of incremental negative resistance.

```
ELECTRON POISING
CURVE
                                    Thyroid/Fatty Acid-
D  O                                Dependent
E  X
G  I
R  D
E  A
E  T
   I
   O          Steroid-
O  O          Dependent
F  N
     ELECTRON POTENTIAL
```

DEGREE OF OXIDATION
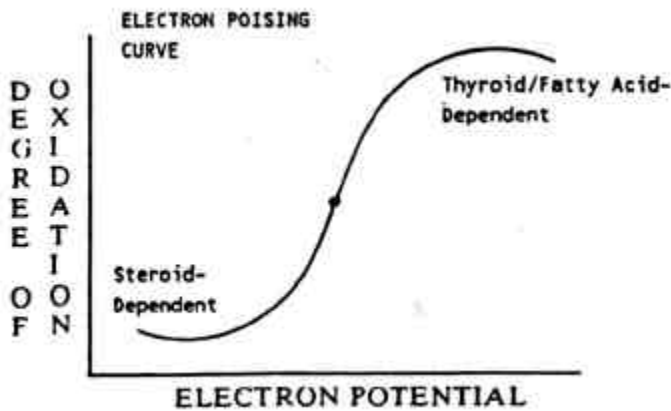
        As we can see, if a steadily-increasing voltage is applied to certain electrical circuits, the current will be seen to increase rather than decrease. It will increase through a fluctuating fashion with respect to the voltage. Certain other circuits, when applied with a steadily-increasing voltage, will increase at a small amount, then jump to a higher level, followed by a steady rise.
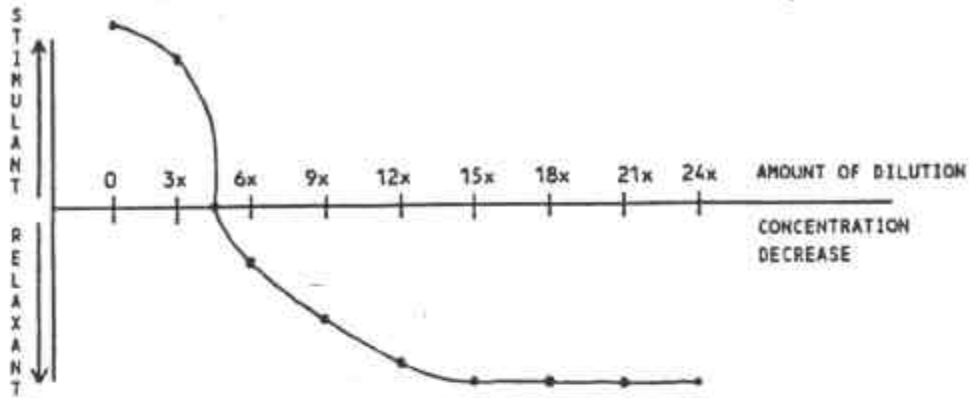   As we can see from Ohm's law, in which Volts = Amps x Resistance, there is a distinct relationship between the voltage, amperage and resistance of any circuit. Fluctuations of voltage and amperage will have certain effects on electrical circuits, and each will definitely affect the others.
        As we can see in *New Biology*, the new study of voltametry in biology allows for the analysis of voltage and amperage in the electrical system of cellular metabolism and reproduction. Voltage has a correlate with the catecholamines, such as adrenaline and its ability to spark voltage surges through a circuit of biology. Amperage, however, has its correlate in the indolamines, such as serotonin, dopamine, melatonin; and amperage has its correlate in life force. Changes in each can affect the other in the hermitian matrices of life.
        In realizing the electrical nature of our cells, we will find that our incremental negative resistance will range to a variety of stimuli given to the cell; not only electrical in nature, but also of photons, chemicals, vibrations, and any of our other classes of stimuli.

COFFEE PROFILE

(Effects on patients vary)

STIMULANT

0   3x   6x   9x   12x   15x   18x   21x   24x   AMOUNT OF DILUTION

CONCENTRATION
DECREASE

RELAXANT

RATTLESNAKE VENOM

CARDIO STIMULANT

0   3x   6x   9x   12x   15x   18x   21x   24x

CARDIO RELAXANT

BELLADONNA

REDNESS DRINESS

0   3x   6x   9x   12x   15x   18x   21x   24x

ANTIREDNESS ANTIDRINESS
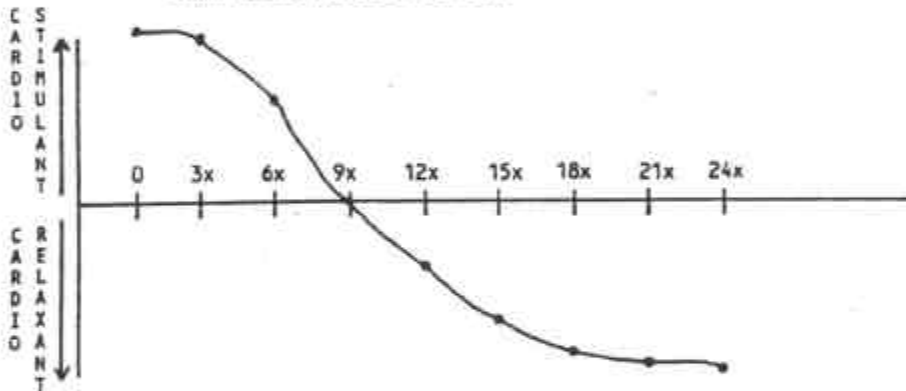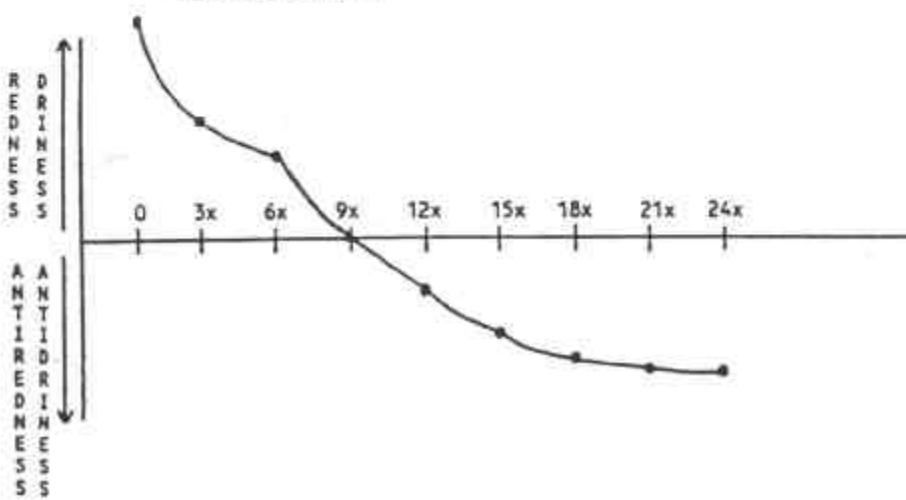
Our double-knee curve shows that metabolic processes operate as opposites of an energy curve, with changes in the incremental negative resistance. If an increasing physiological stimulus is applied to the energy input of a metabolic process, the physiological response will be seen to increase, decrease, then increase again. This is the law of initial values. As we take increasingly smaller amounts of an item, we can see that sometimes there is a paradoxical shift; what the item does in a large amount might have reverse values, and sometim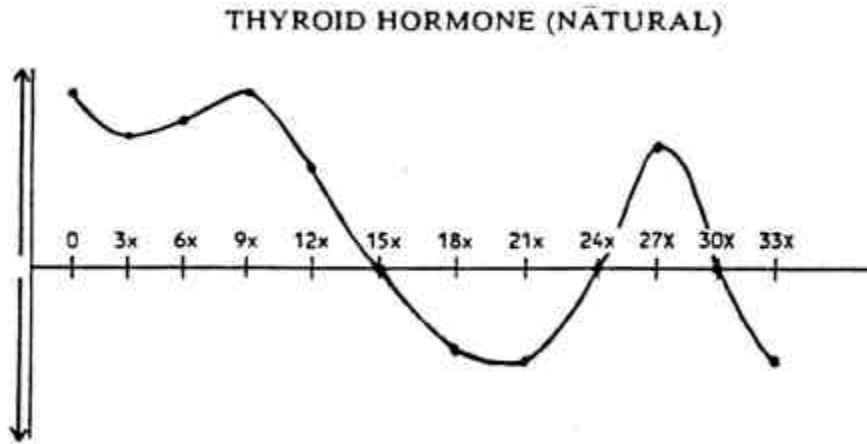es there might be a spike at certain smaller values. Or a very small trace amount of an item can have similar results to a larger quantity.

THYROID HORMONE (NATURAL)

We must simply point out that the process of biology (the process of life) is not one that is geared on a simple linear curve. More is not better, as pointed out in the Benedictine drug fiasco, where sinthetic companies were given the license to sell Benedictine as a morning sickness pill. The smaller amounts that the women took had the more grave reactions to their children, producing a variety of learning disabilities, and often other more severe dysfunctions. The women who took larger quantities of Benedictine did not appear to have the same results, even though some did, accounting for the unpredictability of some of the reactions of people to such sinthetic toxic poisons.

As we leave our linear idea of the mathematical flow of biology, we will see that we must reconsider some of the things we have been doing in medicine and in pharmacology, and how we might apply a quantic evaluation to biology. If a decreasing amount of pharmacological poison begins just above the minimal amount of poisoning, in the energy input of a metabolic process, the pharmacological response may be seen to decrease, increase, and then decrease.

DOUBLE-KNEE
CURVE

This multi-value behavior is described through the Arndt-Schultz law, which must be taught to anesthesiologists. Small amounts of poisons can have paradoxical reversal effects.

Modern science and pharmacology have often tried to shovel underneath the carpet some of the baffling ideas of research done on certain hormones, antigens, hypersensitizing agents and allergies. Micro stimulant research provoked such a conflict, in which people couldn't understand the type of thinking that homeopathy demanded.
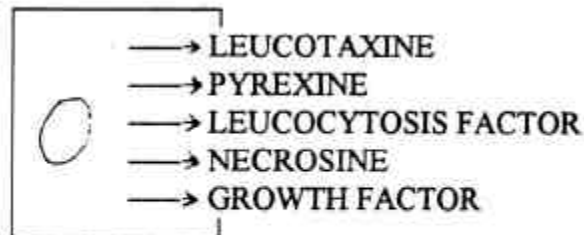
The fallacy that more is better is so entrenched into the American way of thinking that even studies that indicate that more is *not* better in biology seem baffling to the intellect. Originally, when they started to develop chlorination for water to purify it of bacteria, they found that smaller amounts of chlorine seemed to work better than larger amounts, but this was baffling to the minds of the developers of the chlorination process. Thus they rejected this precept and put in larger amounts of chlorine to manage water. Even though the chlorine or fluorine might have had detrimental risks, the fact was that that was not their goal; their goal was to reduce the amount of bacteria in the water.

Other hormone research has shown how factors of thyroid hormone can have dramatic effects on biology, even at concentrations below 10^{-10}. Sometimes just one molecule per cell can have profound effects to prevent blood clotting, change muscle contraction, control urinary secretion, control liver functioning, make or break hyper-immune reactions, and control the polarization and depolarization of cell membranes. Some of the more important research has shown that hormones have been found in different percentages to have profoundly different effects.

As Isaacs pointed out, the difference between an alpha and beta receptor is not a profound difference in the hormone, but a difference in the concentration. The new science of hormesis has given us explanations for understanding some of the processes of the Arndt-Schultz law of pharmacology and Wilder's law of initial values.

Just as various pH detectors are sensitive to various pH and might turn a different color, we can also see that concentrations of hormones could have varying effects on receptor sites. Grape juice has a certain pH factor characterized by its color. As we bring it more toward neutrality by adding water, there is a subtle change as it approaches more of the neutral pH. This change in color is shown as a much softer blue. This is a pH factor, not related directly to dilution.

H + MENKIN SUBSTANCES
IRRITATE ———

⟶ LEUCOTAXINE
⟶ PYREXINE
⟶ LEUCOCYTOSIS FACTOR
⟶ NECROSINE
⟶ GROWTH FACTOR

Stimulation of leucocyte production
provokes cellular destruction.

FUNGUS

VIRUS

HISTAMINE

NATURAL INFLAMMATION
PROCESS IS A REACTION
PHASE NEED IN BIOLOGY
TO BURN UP TOXINS

BACTERIA

Pork
SUTOXINS

AUTOTOXINS

FALSE
PROTEINS
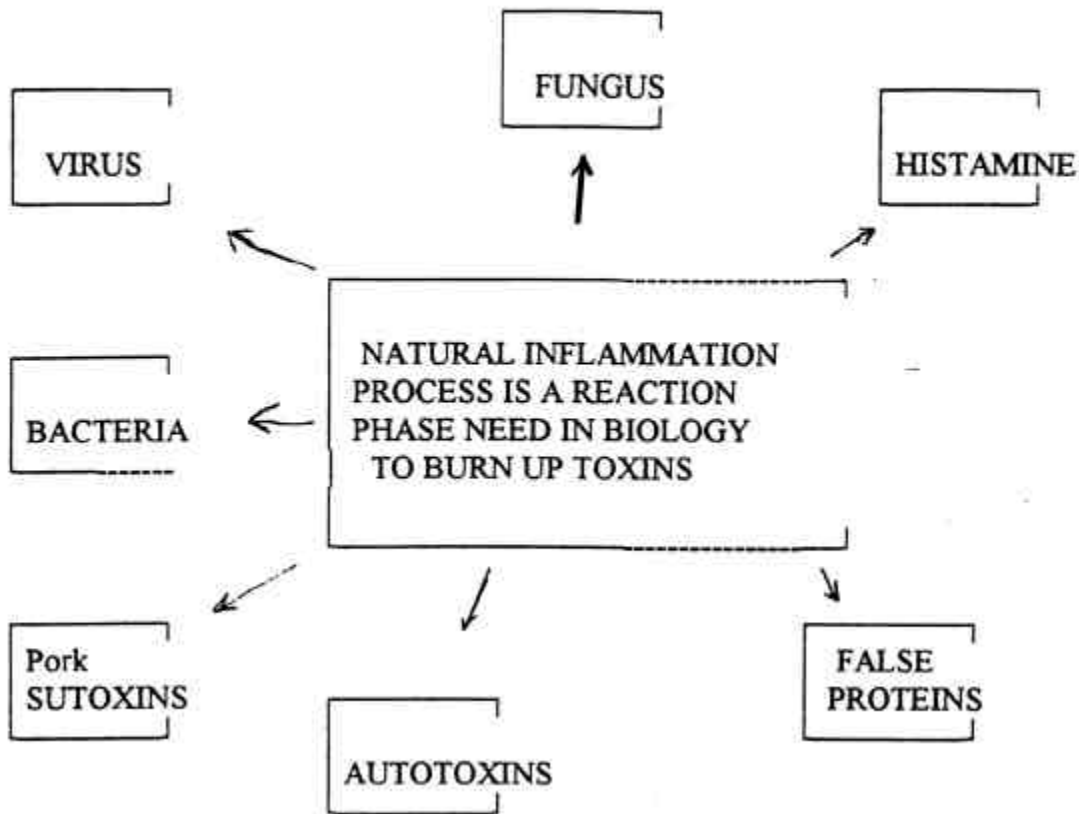
Subduing inflammation, fever, swelling, etc. too early, without a chance to do its job, can have serious effects on the patient as it robs the patient of his ability to detox and lets toxins build up to cause problems later. Inflammation is not always our enemy; often it is our friend.

There are many dyes in the plant and animal kingdom that are pH-sensitive, and they sense the amount of negative or positive ions in a concentration. Many receptor sites are also hormonal concentration-sensitive. Thus the alpha and beta receptors are not sparked by different hormones, but by the concentration of those hormones.

As we understand more about biology, seeing it through a new nonlinear system in which more is not better, we must cultivate an understanding of how biology can respond to very, very small stimuli, including polymorphic shapes, quantic energy patterns, liquid crystal functions, and perhaps even other dimensional states. We can understand more of the effects that homeopathy and vibrational medicine can have on the human being.

A thorough review of the literature regarding hormesis is recommended at this point.

In the field of hormesis, recent studies have found that small amounts of toxic elements can have stimulatory and profoundly positive effects on various organisms. At the University of Wyoming studies have shown how small amounts of radiation and other toxins can have positive effects on enhancing the life span of insects and small mammals. Hormesis has been found to have very positive effects and ramifications for biology. Hormesis is a pinnacle example of the Arndt-Schultz law, and how small amounts of toxic elements can have the reverse effect on biology.

We can see that the classical homeopaths, stretching back two hundred years, have described a very profound modality of medicine that screams for more understanding, provided that the practitioner has the tools for understanding needed to evolve the thought process beyond the linear, reductionistic mode.

For a complete study on some of the effects of homeopathy and proof of its existence as a medical modality, we wish to point the reader at this time to *The Natural Repertory* of Dr. Nelson, which will describe

scientific research, pointing out not only the efficacy, but also some theories of philosophy regarding the use of allersodes, nosodes, isodes, sarcodes, and combinations.

IATROGENIC AUTO-AGGRESSION DISEASE
AUTO-IMMUNE DYSFUNCTION
ANTI-BODY FORMATION

AUTO SYSTEM   DISEASE LIKELY TO BE
                                          CAUSED BY IATROGENIC
_____

AUTO SYSTEM	DISEASE LIKELY TO BE CAUSED BY IATROGENIC
Nervous System	Encephalomyelitis, neuritis, polyneuritis, multiple sclerosis, optical neuritis, ophthalmia.
Articulations	Arthritis, polyarthritis, coxitis, paraheumatic illness
Lungs	Eosinophilic infiltration, TBC caverns
Bone Marrow	Agranulozytosis, leukemia, osteomyelosclerosis, thrombophenia, idiopathic leucopenia, hemolytic anemia
Vessels	Hemorrhagic gangrene, peri-arteritis nodosa, vasculitis, thrombocytopenic purpura
Heart	Endomyocarditis rheumatica, angina pectoris
Liver	Fatty liver, frosted liver, indurated liver, lardaceous liver, saffron liver, yellow liver, chronic hepatitis, cirrhosis, dysprotein anemia, para protein anemia,
Kidneys	Albuminuria, acute glomerulo-nephritis, nephrosis, nephro slerosis, amyloidosis
Connective Tissue	Collagenosis, sclerodermy, fibrosis, sclerodermy, erythematodes, dermatomyosis, amyloidosis, hyalin-ization, fibroplasy

       Hormesis is an application of the Arndt-Schultz law. Other fields of homeopathy have shown us applications of the law of initial values. Both of these are used to determine the laws of metabolism. The laws of reproduction utilize a different type of procedure.

       In our reproductive emergent class of processes we have certain laws known as the first and second Mendelian laws of inheritance, the laws of cellular and tissue differentiation, and epigenesis. As an example, ontogeny recapitulates phylogeny. Gene duplicating operations to replication and information transfer happen through operations vs. operandi that can duplicate themselves with identical linear intervals.

Modern science has made phenomenological observations of the process of reproduction, and chemical attempts to explain this process have fallen tremendously short. The process of entropic thermodynamic chemistry could not possibly explain the reproductive process. Organized quantic control through some type of electrodynamic process, capitalizing on a computer-like precision and utilizing the long-range forces and virtual photon harmonic, is the only conceivable way to explain such a dynamic process as reproduction. This represents a very powerful threat to the entire chemical structure of sinthetic pharmacology, and yet future generations will know and research this energetic connection.

In 1945 Schrödinger emphasized the importance of molecular stability and negative entropy in genetics. Negative entropy is information conservation. Expressed in rules given by Schrödinger, the quantum rule will produce a concept that like will produce like cycles, and that genetic information is thus conserved through the cyclic nature of the periodical movement of the transformations. This can happen through the restriction of the number of molecules in space and time, needed in the process of reproduction, and holding the reproduction process closed through its cycle.

Schrödinger has given us the idea that <u>like will produce like</u> through the reproductive cycle; Hahneman laid out the idea that <u>like will *treat* like</u> through the metabolic process. This is the Arndt-Schultz law of pharmacology; the law of initial values of Wilder, and a point taken by other researchers of physiology and pharmacology.

In the closed process of reproduction we can see how <u>like will produce like</u>. In the open process of metabolism we can see how <u>like might *treat* like</u>. So a minute amount of an element could have a paradoxical reversal to a larger amount of it. This accounts for the phenomena of hormesis and homeopathy.

A proving in homeopathy is accomplished when a homeopath gives a substance to a group of people for a period of time, and then sits down and reports all of the symptoms they present. Then the homeopath will evaluate what commonalities are presented by the patients involved in this proving. It is then assumed by classical homeopaths that whatever this proving accomplishes, a minute amount of this homeopathic will reverse. This antiquated form of homeopathy has now proven to be incorrect. A more recent evaluation finds that there is more complexity, and that this paradoxical reversal happens in some items, but not in all. A new type of homeopathy is presented in this document, supported by a much higher degree of science.

Homeopathy

1. Allersodes
2. Sarcodes
3. Isodes
4. Nosodes
5. Combinations
6. Classical

In the open metabolism matrix, with a radically large number of shells, we can see that a rule would form in which like would treat like. The metabolic process of physiology, being open and sensitive to stimuli due to its radically large nature, would thus respond to a homeopathic. If an organism had a symptom that was going the wrong way and in in a disease state, a very small amount of something causing a similar state might help to trigger the metabolic cycle for change. It might open a door for homeopathics of various chromosomes to allow for changes in genetic states, as the metabolic state can be responsive to a homeopathic of the chromosome, which might help to change the polymorphic structure of the improper chromosome.

More and more is made of chromosome activity and its link to genes. As we banter about the "nature vs. nurture" argument of modality, the realization is that we cannot reduce all disease or medicine to one or the other; we must have an open door and evaluate both. This is the Janusian concept of true intelligence: realizing that the world is not a linear, reductionistic system. In doing so, and realizing what we have outlined in this book; that perhaps small amounts of material can have profound effects in changing biology, we might now open the door to an understanding of how homeopathy might offer true changes, where gene splicing, tissue transfer, surgical intervention, and other profoundly disturbing directions chromosome research has taken us will not hold up in the long run. Perhaps vibrational medicine and homeopathy might have the answers for metabolic disease and variations in DNA.

At the time of this writing there is only one company in the world that provides homeopathics of these proper DNA chromosomes; that is New Vistas (Pharmaceuticals), located in Denver, Colorado. Not enough practitioners have used these chromosomal materials to date in any controlled fashion to accumulate any type of theory. But according to the theories of biology outlined in this book, the answers lie in these holistic methods of

homeopathy, vibrational medicine, photon control, and naturopathy, not in the more disturbing works of surgery, gene splicing, or allopathy.

Isaacs breaks down three generalizations about the transformations needed for biology:

One, the transport of genetic information will need to follow single-value transformations, reflecting the cyclic nature of the emergent processes of reproduction, undergoing a type of closure that will have a time-phase space cyclic nature, have one-to-one addition of linear intervals, fall under the idea of quantum interaction, where genetic information will be conserved through cyclic time-space variables.

Two, epigenetic information transport will need to also follow single-value transformations, reflecting the cyclic nature of these processes, have a degree of closure, have one-to-one relations, with the addition of a logarithmic interval, or a combination of logarithmic and linear intervals. Thus epigenetic information will not be *conserved* through time and space, as with genetic information; epigenetic information will be *expressed* cyclicly through time and space.

Three, metabolic processes involving mass and energy transport will follow *non*-single value transformations, which will reflect an asymmetrical, irreversible, non-equilibrium, and be open in nature. Thus the exchange processes of living units with the environment will be exchanged asymmetrically and irreversibly.

$$CHOH = \text{Generalized Carbohydrate}$$

$$A = \text{Oxygen or Sulphur}$$

$$CO_2 + 2H2A + \text{Light}$$

$$CHOH + 2A + H_2O$$

Thus existence on the planet dictated that we needed at least two major types of living units; one being plants that could take in carbon dioxide, sunshine and water, and give off oxygen and energy materials, known as carbohydrates, sugars, etc.; and animals, which could take in these carbohydrates and oxygen and give off light, carbon dioxide, water, and fertilizer.

$$\text{LIGHT}$$
$$C_6H_{12}O_6 + 6O_2 \qquad 6(CO_2) + 6(H_2O)+$$

Since the metabolic nature of life is open and responsive to environmental concerns, to stabilize the ecological system we needed to have these two units. Keeping these two units in balance across the world has been the goal of living things since their beginning on the planet. Now this balance has been put in jeopardy by reductionistic minds; the people who have tried to reduce pharmacological sinthetic variables to one component in an over-simplified biology, and have made, through profiteering motives, large amounts of chemical products, which have been dumped into the atmosphere and ecological system and have jeopardized the balance. They reduced farming to one variable of productivity. Whatever enhances productivity was fair regardless of consequences.

Destruction of large amounts of plants have put into jeopardy the oxygenation balance. The evolution of human thought has finally realized some of the dangers we have caused by our system of over-reductionistic linear thinking. It remains to be seen if we can save it. This is the challenge of generations present and to come; to undo the damages done by sinthetic, chemical, reductionistic thinking.

There are other ways to profit, including self-satisfaction, the joy of ecological safety, communion with the environment; the idea of knowing that your children will have a clean environment to grow and prosper in. Some of these profiteering motives will need to take the place of over-simple economical profit motives. Thus the evolution of human thought offers another challenge: to be able to profit without having to profit financially; not that profiting financially is bad, but to profit *only* financially at the expense of the environment or any living creature shows a primitive type of thought pattern. Another type of evolution of thought is needed in generations to come.

Epigenesis, or epigenetic phenomena, is the class of transformations that are not quite genetic and not quite metabolic. There are certain external interactions with the environment from a living unit that involve internal information transport beyond the genetic variety. Thus as we develop more complex situations, where there are

many vions within a cell, there must be a development of various types of information transport between these vions. So epigenesis does not develop until more complex biological organisms appear. Thus the transformations of
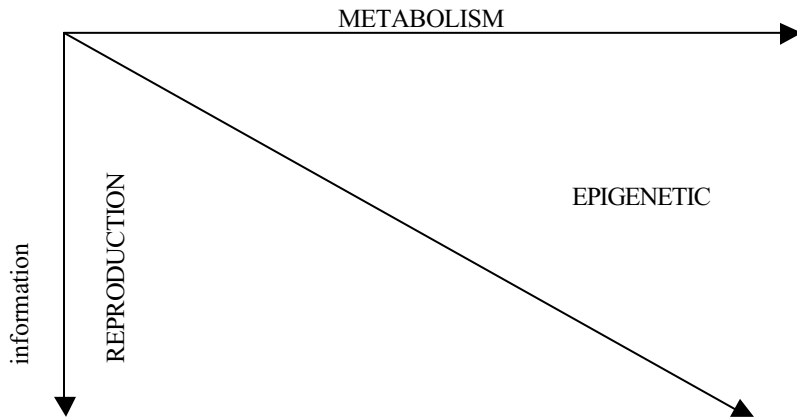
epigenesis fall between the genetic and reproductive states. Such are the systems of hormones, which in very complex multi-cellular organisms were needed to handle information transfer. Hormonal information transfer accounts for the chemical part of the epigenetic factors of a multi-cellular organisms. There are photon epigenetic phenomena in which there is certain energy transfer of photons in multi-cellular organisms, which can stimulate response, and they have their chemical backup in hormones.

Thus, in the Isaacsonian matrix, when metabolism moves from left to right, reproduction moves from top to bottom. The cross of the vector, showing the diagonal from upper left to lower right, shows the epigenetic phenomenon, which is where the hormones lie across that diagonal. Mass, momentum, energy, charge, information, storage retrieval, all happening through a ten-dimensional system in a trinary logic system present a rather strange and much more highly-evolved system of biology vs. what has gone before.

Biology is much more complicated than we ever imagined; in fact, biology might be more complicated than we ever *can* imagine.

Work	Intensity Factor	Capacity Factor
Gravitation Mass	Height Distance	Mass
Electricity Charge	Voltage Amperage	Charge
Momentum Expansion	Pressure	Viscosity Momentum
Heat Photon	Temperature	Q/T
Subspace Polymorphic Influence	morphic resonance	influence over subtle

It is the purpose of this book to recount some of this phenomena that Isaacs outlined in his 1960s book, "The Complementarity of Biology".

SUMMARY

1. THERE IS A SOPHISTICATED NON-RANDOM TRANSFORMATION PROCESS FOR BIOLOGY.

2. AN INDETERMINATE MATRIX SYSTEM MUST BE USED IN BIOLOGY RATHER THAN CONTINUOUS FORMULAS SUCH AS GRAPHS. SUBSPACE POLYMORPHIC CONTROL MAINTAINS A SUBTLE PATERN CONTROL OF THE MATRIX.

3. THERE ARE THREE BASIC KINDS OF SYSTEM MASS TRANSFORMS:

   A. METABOLISM-- OPEN RESPONSIVE, ADAPTIVE
   B. EPIGENETIC-- SOMEWHAT METABOLIC, SOMEWHAT REPRODUCTIVE
   C. REPRODUCTION-- CLOSED, RESTRICTIVE, REPETITIVE

4. THE DOUBLE-KNEE CURVE OF INCREMENTAL RESISTANCE MAKES THE ELECTRON POISING CURVE OF DR. ISAACS.

5. VOLTAGE, AMPERAGE, AND RESISTANCE ARE THE BASIC VARIABLES NEEDED TO UNDERSTAND SIMPLE ELECTRO-BIOLOGY. WITHOUT THESE THREE VARIABLES ENERGETIC MEDICINE IS INCOMPLETE.

6. VOLTAMETRY IS INDICATIVE OF LIFE FORCE AND WILL POWER.

7. HORMESIS IS EXPLAINABLE WITH THE ARNDT-SCHULTZ LAW FORMAT.

8. WE EAT TO MAINTAIN NON-ENTROPY.

9. THERE ARE THREE TYPES OF INFORMATION TRANSFORMATION:

   A. GENETIC-- CYCLIC, PRECISE, SMALL
   B. EPIGENETIC-- CONNECTIVE BETWEEN A & B
   C. METABOLIC-- LARGE, ADAPTIVE.

10. ENERGETIC MEDICINE IS NOW PROVEN BY SCIENTIFIC AND MATHEMATICAL CONSTRUCTS.