Chapter 3

MOLECULAR INDETERMINACY

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MOLECULAR INDETERMINACY (SUBSPACE CONNECTIVITY)

The complementarity principle of Bohr (1961) states that our knowledge of a physical system or process is always complementary to the measurements of its state. Bohr said that the word "experiment" refers to a situation in which what was done and learned can be told to others. The results of an experiment and the observations generated by the experiment must be expressed in straight-forward language through terminology of the physics of space-time concepts, utilizing the laws of momentum and energy.

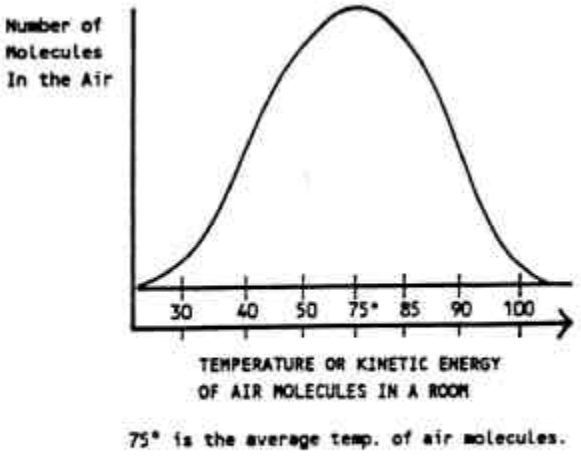
Thus this combination of kinematical concepts involving space-time conservation and conservation of momentum and energy are the suitable terminology to express the results of our experiment. Any measurement or experiment performed will interfere with the knowledge attained by the experiment and make predicting future events somewhat fuzzy.

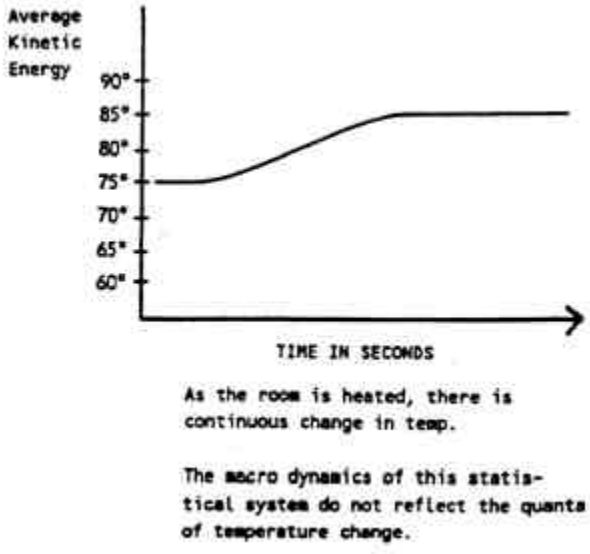
In the principle of complementarity a limit is set on the extent of knowledge obtainable by any measurement or experiment, and the interpretation of any such measurement or experiment must be taken with a grain of salt, because we have interfered by doing the experiment.

The principle of complementarity does not interfere with the classical physical systems of measurement, but the measurement of such systems affects our knowledge of the physical system we are dealing with.

This should not be confused with the uncertainty principle, which tells us that measurement of momentum or energy of a physical system cannot be known completely by the observer. This is a law of subatomic physics that sets boundaries on our ability to know. In Bohr's principle of complementarity we can see that our interference with the process of experimentation restricts our ability to know and to predict further events.

Thus we can see from the principle of complementarity that our ability to do experimental intervention and reach conclusions or postulates from such intervention is never perfect. The complementarity principle goes hand in hand with the uncertainty principle, which outlays a basic postulate that even the system itself, not interfered with through experimentation, will be uncertain in the momentum or energy that precisely relates to it. In other words, the uncertainty principle restricts the ability of a system knowing what would happen within it. The uncertainty principle does not need an outside observer to be uncertain. Within the guidelines of the Heisenberg uncertainty principle, what happens in a system beneath the measurable constant of Planck (known as the quantum constant, or Planck's constant) is a surprise to the system itself. The indeterminacy of a system is built into the system itself. As experimenters accumulate statistical data of our observations of biology, we are forced to realize the incompleteness or the inability we have to completely know any system. In fact we can't ever really know.





Statistical accumulation of events in the development of the bell curve allows us some idea of the processes involved. So statistical mechanics can allow us to catalog observations, but cannot account for the process of life.

Gross World of Thermodynamics
Determinism of physics

Transition into Quantic world of uncertainty
Determinism with subspace universal consciousness control

We are taught in statistics classes about the randomness of the population sampling and the randomness of the population flow. If the population we are sampling is not of randomness, statistical mechanics will not be the primary choice of endeavor to understand that process.

Statistical mechanics does pose a good way to analyze the temperature of a room. The temperature that would be displayed on a thermometer is the average of the collective kinetic energy of the molecules in that room. Thus we can see from the bell curve that the collective kinetic energy of the molecules of the room are not always precisely at 75E. Some of the molecules are at higher energies, some at lower energies, but the average is at 75E.

As heat is imposed into the room the change in temperature goes from 75E to 76E (for example) through a continuous curve that can be displayed on an X and Y axis. This criterion fits the idea of statistical mechanics because there are a large number of subatomic entities, and each entity must obey some processing rules, such as Boyle's gas laws.

Thus statistical mechanics (Gaussian distribution) is a good process for analyzing the temperature of the room, but if the process we are going to analyze does not fit the statistical mechanics, and the number of events is very small, a new type of dynamics would be used in the analysis.

The complementarity principle does not allow for the statistical Gaussian distribution of conjugate variables in the molecular movement of living processes. Statistical mechanics is not appropriate in the explanation of the essential biological processes. Statistical mechanics concerns behavior of the subatomic entities in large numbers. Thus statistical mechanics describes many situations, and through Gaussian distribution, approaches a central limit theorem of probability. These are the dynamics of thermodynamics and entropy, and the statistical events must be in a random structure. However, this is not accountable for the functions of biology.

Biology is not a random event; if it were, the nose might occur in one spot or another on the face; yet, we all have noses in the same spot. We all have ears in the same spot. Biology needs to be controlled, not random. Even the organization of its behavior at the subatomic level must echo the control. The *quantic* control of cellular function dictates life, not the statistical randomness described in thermodynamics. A restriction of the degrees of freedom of the molecules of life occurs in biology through an electrical process. A volt , amp, and resistance field or a trivector field is imposed by the bio electric capacities of the cells of an organism that control the molecular movement and restrict the molecular degrees of freedom. This allows for the control or organisation needed by life over the chemicals that make it. Since this field is of a quantic nature and is thus susceptible to the Nelson effect. The subspace field is the key to the field strenght and nature. Subspace allows for transfer of information and shape , and for shape restriction of the motion of the biological molecules. So morphic resonance is a subspace Phenomena. Since subspace is not restricted by time and space, 4 dimensional thinking will not apply. Much of the factors of life are not expained well by such limited thinking.

In fact the size of the complexity of life, the response of life to insurmountable challange, the quantic nature with its indeterminancy, and the abilities of life to transcend existance bring us to the most outstanding hypothesis of all ' How can some scientists still see life in such reductionistic and limiting terms'. When a man points at the moon some scientists just see the finger. To work with the coil of life and not see it's indeterminancy side or it's magic is sad.

Under the complementarity principle the uncertainty relation may be employed to establish the mechanistic indeterminacy for molecules, in view of the conditions for which biology occurs. Quantum theory is open-ended, and can accommodate a mechanics for quantization of molecular motion. This will allow for a non-deterministic, unexpected quantum explanation for large molecular actions as the basis of the necessary processes in living units.

Of course, the Bohr correspondence rule, under generalized complementarity, places a boundary upon the broader quantum descriptions precisely by limiting conditions in which statistical mechanics are appropriate. First we must understand fundamental theory.

Physical theory is concerned most fundamentally with the motions of bodies and interactions of the motions of bodies. This is to say that descriptions of physical processes are concerned with, or can be reduced to, a description of mechanical action of mass or energy transport in space and time in correspondence with the laws of motion.

Newton, in the development of calculus, laid out an interaction for understanding larger real world events in terms of breaking them down through calculus into very small units. He then approximated the integral of the acceleration, or by reversal, calculated the differential of the equation. Thus Newton saw the need for breaking into small parts the movement of different items in the real world. His approximation of the calculus was indeed a step in the direction of quantic theory, because it now allows for the idea of a noncontinuous process, the idea of a specific jump or collection of different readings that would make the calculations function.

It should be pointed out that Newton's observation was of statistical events, following classical physics and outlines. He interpolated the connections in developing calculus. This is a phenomenal achievement in mathematics and science that has allowed for tremendous understandings. However, applying calculus to biological events inside the cell or the organism has always come up on shaky ground.

In the events that Newton observed and measured, watching falling and moving objects and developing calculus, he was looking at a determinate, statistical process of dead interaction; he didn't look inside the cellular metabolism, where he probably would have found a different type of organization.

In dealing with the laws of motion, Newton had the luxury of dealing in the macro world, where he could measure his conjugate variables, such as mass and motion. Accordingly, he would be able to calculate momentum. As we move down into smaller and smaller events, eventually we bump into the Heisenberg uncertainty principle, which tells us that we can no longer know both of these conjugate variables at the same time. We will be unsure of position, or unsure of movement, but we will not *know* all of these variables, because of uncertainty.

O2 in room air can be charted via closed statistical dynamics. It obeys Boyle's gas laws.
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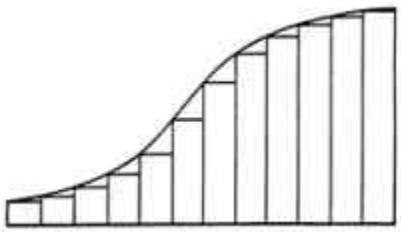
NEWTON'S CALCULUS

Change in Velocity
Equal Acceleration



Several approximations of increasingly smaller steps led to the calculus.

Uncertainty of Position
X
Uncertainty of Momentum
=
Planck's Constant

The Bohr correspondence rule dictates a place where these events will change from a macro ability to a subatomic process, where we will lose the ability to accurately measure. This is also set out in the Heisenberg uncertainty principle. When measurement *does* interfere significantly with the measurement of the conjugate variables, then we are at the point where the process becomes indeterminate. This happens in the values of life, because to truly measure and observe intercellular phenomena would be to severely interfere with the process, and thereby lose our ability to know the details needed to make a predictive system. At the quanta of Planck's constant there is a shift from macro dynamics (statistical grouping) to micro dynamics (indeterminacy).

Another step in the formulation of our fundamental physical theory for biology is to establish a minimum number of general necessary classes of living processes. To call a thing a living unit we must see two criteria: one, that it is able to metabolize on its own; and two, that it is able to reproduce on its own. Thus most viruses are not true living units by our definition, because they cannot reproduce on their own. Some viruses *do* have DNA, such as the adeno virus. Still, they need help in their reproduction cycles.

Life needs to independently:

1. Metabolize -- widely responsive to environment
2. Reproduce -- restricted for small numbers of variance.

Metabolic processes are radically open or asymmetric regarding mass and energy transport in space and time. Mass, momentum, charge and photons go in and out of the living unit. Reproduction processes are radically recurrent or cyclic. This generates limitations of the number of large molecules of the living units in time and space. Thus metabolism must be open to be able to take advantage of the variety of foods, nutrients, and environmental conditions a living organism needs to provide life. This establishes the need to have different mechanisms of detoxification or excretion of the unused and other excreted units. However, reproduction must be very cyclic. If there is more than one genetic variation for every million potential offspring, then the biological unit will lose control of its environment. The species will be unable to respond and will have difficulty in interacting with its environment. Reproduction will need to be radically closed.

The third step in the formulation of the fundamental physical theory for biology is to establish a description of the mechanical action of this metabolic and reproductive process in living units. To truly know the biological action, we must deal with electrons, protons, photons and other particles in their interactions. We must know and outline procedures of measurement of both healthy and sick photon electromotive radiation, as well as electron EH pH pressures, electron transport chains, and the flow of nutrients as they come in and out of the body.

Thus in describing this process, which we assume to be indeterminate, we must use a complementarity principle, since the energy and momenta of our mechanisms must be quantized. The quantum explanation will then be non-dualistic with respect to the classic mechanism.

Thus classic measurements of time, space, length, width and energy can be used to describe some of these phenomena, as long as we realize the quantic probability through the indeterminacy principle, which allows us to describe them but not totally predict them.

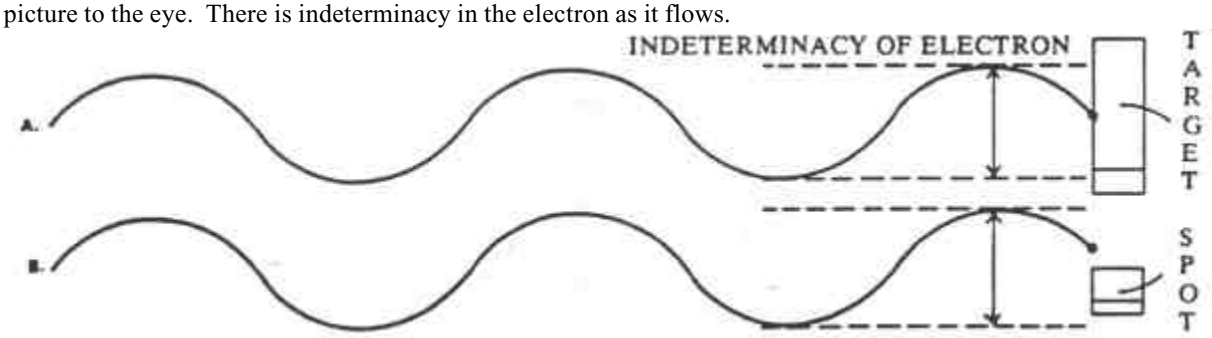
Our new biology, the quantum biology, will be one very similar to the new electronics regarding transistor behavior and other electrical quantic processes and electrical currents. Just as in the development of a transistor, we cannot know exactly what is happening in the transistor, but we can use it in a predictive probability state. We can use our new science of quantum biology to develop and hone the theories of life, medicine and biology, knowing full well that any time we try to measure or interfere with this system, we are dealing with an indeterminate system. This means that there will always be probability. Yet, just as in electrical theory, when we know the rules, we can better play the game. As we learn more about the rules of biology in terms of electronic theory, we will learn more

about medicine. In terms of a quantum theory, we will learn better control and improve the probability of our interaction or medical intervention.

As long as modern medicine mires in the Newtonian dynamics of thermodynamics and entropy, it will be unaware of biology's rules. So-called modern medicine will not know the interaction, and it will be further mired in trying to relate *in vitro* to *in vivo*.

The development of medicine has largely been an observation process where phenomenological observations are made of what happens in a certain event. What a compound does to a certain organism at a certain time is cataloged. It is not from any predictive science, where we try to say that "this will happen", but largely through observational phenomena. Without a true idea of the rules of biology, modern medicine and biology can only catalog observations.

In a television set an electron beam is fired at small dots on the back of the image ortecons tube. When the electron strikes such a spot, it illuminates the phosphorescent spot and provides the pattern of dots that will convey the picture to the eye. There is indeterminacy in the electron as it flows.



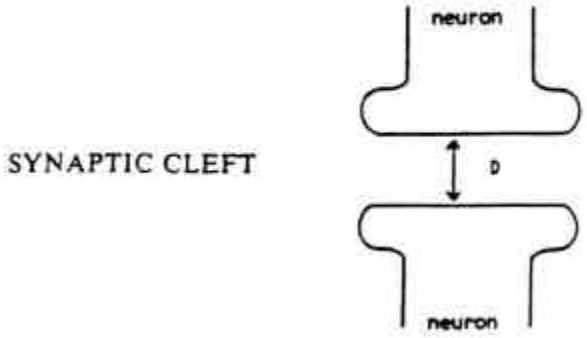
So if the spot at which we are aiming the electron is bigger than the indeterminacy, we can hit it, and thereby the electron is following a principle much akin to statistical mechanics. If, however, the size of the spot gets smaller and smaller, until at one point it is smaller than the indeterminacy of the electron, then it would be indeterminate whether the electron could hit the spot needed, and thus would this be an indeterminate process.

Heisenberg laid down an equation for the understanding of this law. Change in mass times change in position is equal to or greater than Planck's constant.

) P @) Q $ h/2B

In our biological process of the synaptic cleft of the neural process, we can see that the distance involved is one angstrom (D). The mass is the molecular weight of the neural transmitter. In this case, let us take acetyl choline, with a molecular weight of 200. Knowing the position and mass of these units, we can see that the function of neuronal transport in the synaptic cleft is indeterminate, and falls under indeterminacy (see *Bio-Quantum Matrix* for full mathematical treatise).

D = 100 Angstrom = 10^{-6} cm
M = Mass of Neurotransmitter
V = Velocity of Neurotransmitter



So if we tried to make a television set with the dots very small, we would be under the laws of indeterminacy, and not statistical mechanics. Thus the same thing is happening at the synaptic cleft. Since this synaptic cleft is an indeterminate process, it would appear to the viewer that synaptic phenomena makes it a random event. It is the theory and the thesis of this book that the human brain, with some type of natural force, a God-consciousness if you would, has control on this indeterminate process and allows for life and biology.(This is reviewed in deeper detail in the chapter on Biology must Walk Plank's Constant), [many of the neurotransmitters are released in amounts that exceed thermodynamics, the best example of our quantic indeterminant transfer is the exchange of GABA. This mollecule covers vast distances guided by an unknown energy.]

MICRO-WORLD OF SUBATOMIC PARTICLES

	Biological Organos of Life	Nonbiological Inorganic of Death
Organization	Guided Indeterminacy	Unguided Indeterminacy
Governed by	Life Principle Organized Indeterminacy	Uncertainty Principle
When Observed	Responds to Observation	Responds to Observation (Mind of Observer)

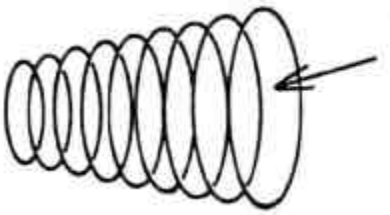
So the process of the synaptic cleft is not a random thermodynamic process, and thus cannot be understood by a strict chemical analysis. Biological photons, long-range forces, vionic energy transfer and other energetic means will be used in the future to interpret the synaptic transfer. This indeterminacy is a *shaped* indeterminacy. So we can agree with Albert Einstein's belief that God does not play dice with the universe.

Some type of vionic energy can shape this indeterminacy. Perhaps even through the endorphin transmitters of the brain, there might be some interdimensional shift, allowing some type of wormhole path photons or electrons to pass through. This type of interdimensional wormhole has been proposed by modern physicists, but the smallness of it would perhaps only allow for the transmission of a photon or electron. As we have presented, photons and electrons can interfere or enhance the process of biology.

It is the viewpoint that such a wormhole in and through subspace might be transferable from the endorphin receptors of the brain, as it seems that the endorphin receptors, if blocked, sorely inhibit the ability of the human to

enhance other subspace dimensions. Radionic phenomena, which can be seen as existing outside the dimensions of time and space, seem to be blocked by the existence of narcan, an endorphin receptor blocker. Thus the placebo response, radionic phenomena, and other psychic events that exceed time and space might perhaps be explained through the function of the endorphin receptors. By blocking these receptors, we find that there is an impingerant on the function. Perhaps the endorphin receptors allow for this other-dimensional transfer of energy through other-dimensional wormholes that can break through time and space.

As we develop these abilities, we might be able to master our influence on indeterminacy.



Minuscule Wormhole Through Subspace

Made in Endorphin Receptor Area of Brain,
Allowing Passage of Single Electron or Photon

Thus one human brain might communicate with another by shaping the indeterminacy, accounting for the probability that psychic phenomena do have some basis in fact.

The field of psychic interaction has been shown to go beyond statistics and have some degree of probable certainty; not enough for reliability, but enough to disprove a simple Gaussian relationship. So psychic transmission is present, but just enough to tantalize, not enough to rely on. This accounts for the indeterminacy process and the share of morphic resonance.

Scale of Known Distances

10^{27}	Distance to Pulsar Q. 172
10^{24}	
10^{20}	Distance to the Andromeda Galaxy
10^{18}	Distance to Crab Pulsar
10^{12}	
10^{10}	Radius of the Sun
10^{8}	
10^{6}	Radius of Earth
10^{4}	
10^{3}	
10^{2}	
1	
1 Meter	Height of Normal Man 1.8 meters
10^{-5}	Wavelength of Visible Light
10^{-10}	Bohr Radius
10^{-15}	Charge Radius of Proton
10^{-20}	Old Proposed
10^{-23}	Quantum Theory
10^{-27}	New Quantum Action
10^{-42}	Quantum of Magnetic Action

Perhaps the virtual photon effect will explain how this is still a possible but not extremely probable event.

To further analyze the application of quantum theory in biology, we will need to look at complementarity through three different principles: one, the principle of indeterminacy or uncertainty via Heisenberg; two, the principle of anomaly laid out by Reichenbach; and three, the Bohr correspondence rule.

Complementarity implies that if a dynamic variable of action is known, its partner or conjugate kinetic variable is reciprocally imprecisely known, and vice versa; and that the product of those variables is equal to or greater than the universal law of quantum action, which is Planck's constant, or *h*. This is a statement of Heisenberg's uncertainty principle, which is not due to a lack of our ability to formulate knowledge or to know, but due to an actual physical boundary, limiting the knowledge we can attain.

h = Planck's Constant = 6.60×10^{-27} erg sec = 6.6×10^{-22} MeVs
c = Speed of Light = 2.998×10^{10} cm/sec = 2.99×10^{23} fm/sec
h x c = 197.3 MeVfm = .1973 GeVfm

Planck's constant was derived from the speed of light.

Reichenbach has pointed out in the principle of anomaly that such a supplementation in the world of phenomena cannot be constructed free from anomalies. As we quote from Reichenbach, "The causal anomalies cannot be removed, because they are inherent in the nature of the physical world. The principle of indeterminacy formulates only one part of this nature. It states that it is impossible to verify certain statements about inner phenomena. To this is added, by the system of quantum theory, another principle we have called the principle of anomaly. It states that no definition of inner phenomena can be given which satisfies the requirement of a normal causality. It therefore maintains the impossibility of a normal supplementation of the world of phenomena by interpolation."

The correspondence rule of Bohr expresses the fact that as the physical process becomes sufficiently large, a limit is reached at which simultaneous measurement of the conjugate variables can be made with sufficient accuracy for the components to be described by classical mechanics. Thus, the flow of larger quantities of material can fall under macro or Newtonian dynamics, but (as pointed out before) within the vion and the synaptic cleft; and much of the process of biology is happening via quantic or indeterminate action. It satisfies our criteria for indeterminacy. This is definitely happening in the world of RNA and DNA, where the micro-sized material is in the realm of indeterminacy.

Bohr developed the principle of complementarity, which states that our knowledge of a physical system or process is always complementary to the measurement of its state. Bohr said that the word "experiment" refers to a situation in which what has been done and learned can be told to others. He stressed that the account of an experimental arrangement, and the results of the observations, must be expressed in unambiguous language with suitable application of the terminology of classical physics. In classical physics, space-time concepts and the conservation laws of momentum and energy must be utilized simultaneously to make a complete predictive or postdictive description of the course of the physical system.

Many would say that a process which is indeterminate is random, and thus cannot be accountable in biology. This is a grave error. It shows an incomplete appreciation or understanding of quantic philosophy. It is the treatise of this discussion (as we will point out in every chapter) that this indeterminacy seems to obey some type of force, some God-consciousness, some natural process, some inherent wisdom in its own ability to control and regulate the process of biology. The randomness of entropy and thermodynamics is the law of death. There seems to be some misunderstood, not fully recognized force of life that has not been accounted for in physics to date. It is the treatise of this discussion to open the door for a possible understanding of this phenomenon. Subspace transfer of universal consciousness can explain the control life has on its elements. Again, God does not play dice with the universe.

God could best be described as this universal consciousness that shares its' consciousness with all things. This universal consciousness expresses itself in many different shapes of its' field. The overall factors of its' shape require a multitude of shapes. The Morphic capacities of these shapes are entertwined through the overal subspace and morphic subspace of the universe.

The overall effect of this field is felt by all an interpreted in a host of different ways.

God does not play dice with the universe, God is the dice.

Time is just one expression of the nature of this field, and its relative nature is expansive.

Scale of Known Time Measurement

	Life of Hindu Universe
10^{23}	1 day of Brahman
10^{20}	
10^{18}	
10^{12}	
10^{10}	
10^{8}	1 Century
10^{7}	1 Year
10^{6}	
10^{5}	
10^{4}	1 Day
10^{2}	
10^{1}	1 Hour
1	
10^{-3}	
10^{-6}	
10^{-9}	
10^{-12}	
10^{-15}	Time of 1 Beat of Visible Light
10^{-18}	
10^{-20}	
10^{-23}	Proposed Quanta of Time
10^{-27}	Quanta of Consciousness
10^{-42}	Quanta of Magnetic Action
10^{-61}	Quanta of Time Vibrational Construct of Photon

The field intervenes constantly at quantic levels to affect change through indeterminacy and impose order on the shapes of its members. Much of this shape restriction is thru the Trivector principle. This is an imposition of an electrical field of varying resistance, votage, and amperage.
More on this in the International Journal of the Medical Science of Homeopathy, issue 4.

As Isaacs points out, it cannot be over-stressed that this indeterminacy involves the trajectory of large molecules, whereas indeterminacy then involves phenomenological conditions under which statistically adequate ensembles of particles may be assumed and are usually restricted to the trajectory of electrons and atoms. Bohr's correspondence rule can be stretched under certain circumstances within a quantic system such as biology, which depends on the photodynamics of the electron interchanges.

In nonliving systems, which are not capable of metabolizing or reproducing, the criteria for Newtonian dynamics is fulfilled, because one may measure the conjugate variables of their mechanical action. There are a sufficient number of particles to warrant the Gaussian or statistical dynamics, and there is sufficient or closed transport of mass energy in space and time with respect to the environment.

Predictive perfection was originally expected from statistical dynamics. Fractal dynamics now shows us that nature follows a different set of laws. There is an inborn tendency in matter to follow certain fractal or chaos dynamics. This tendency of matter to follow the fractal patterns then becomes exaggerated, and under quantic conditions life ensues with the ability to metabolize and reproduce.

So we can make a Gaussian statistical distribution from the unequivicable assignability of the events to disjoint classes of equi-probable events. If there is a sufficient number of events to allow for the calculation, there is sufficiency of the independence of the events relating to the central limit theorem. So if there are a lot of molecules (independent but mutually interactive), and if the system is thermodynamic and follows continuous mathematical relations, these phenomena can be reduced to equation form.

$$\text{Probability} = \frac{1}{\sqrt{2\pi}}\, e^{-x^2/2}$$

X is measured in standard deviations from the mean.

The indeterminacy equation of) position @) momentum = Planck's constant (*h*) over 4 @B. *h* is 6.6 @10^{-27} ergs per second. This expression is an inequality, meaning that it is greater than or equal to. The uncertainty product must be multiplied by a factor, F, that would depend on the decision-making process; in nonliving systems F will approximate 1; in living systems, because of the quantum dynamics, F will be greater.

$$P = \frac{1}{\sqrt{2\pi}}\, e^{-x^2/2} \qquad \text{Log both sides}$$

$$1 \qquad x^2$$

$$L_nP = L_n \frac{}{\sqrt{2\pi}} - \frac{}{2}$$

$$L_nP$$

$$L_n \frac{1}{\sqrt{2\pi}}$$

$$2L_n \frac{1}{\sqrt{2\pi}} x^2$$

$$\frac{1}{n} \qquad \text{Standard Deviation} = B = a/n$$

$$\Delta(1/n) = \frac{1}{n_2} - \frac{1}{n_1} = \frac{n_1 - n_2}{n_2 n_1} = \frac{\Delta n}{n_2 n_1}$$

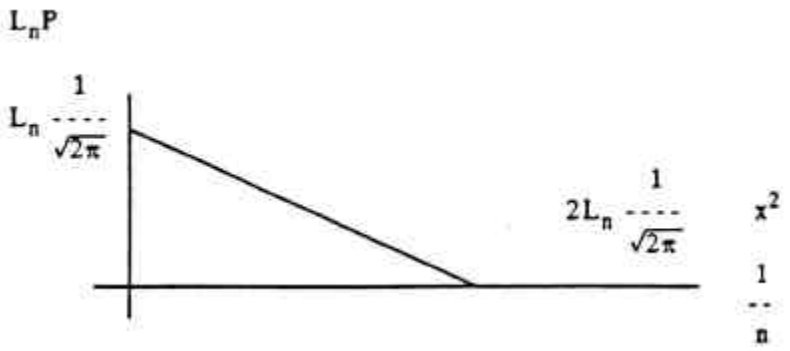
$$\Delta(1/n) = \tau \Delta n$$

Processes in which the physical conditions force values of F greater than 1 in our formula have actions approximately equal to F times *h* over 4B. These will have indeterminate bases of operation. The processes that have indeterminate bases must have a quantic feature of their description. This is based on the principle of anomaly developed by Reichenbach. If conditions are right, indeterminacy (thus quantic dynamics) will come into effect. Because of fractal dynamics and chaos theory, we will find that indeterminacy can be satisfied by a number of conditions.

The indeterminacy can be enlarged by virtue of three different phenomenological processes:

A, the number of the molecules can be smaller
B, the size of the molecules can be larger
C, the motion of the molecules can be slower

In C, with the motion of the molecules at living temperatures of 98.6E, we find that the molecules are slow enough to be under quantic action, remaining with the temperature of living processes. Room temperature offers a photon (infrared radiation) bath which allows for the virtual photon cascade.



Imposed Limitations on Vion Size

1. Interaction of thermal vibrations of external environment vs. the pull of long-range forces.

2. Reception effect for mitogenic radiation of 2×10^{15} Hz sets low end of size.

3. Limitation of causality vs. indeterminacy by keeping low number of molecules.

4. Interference of multiple systems sets limits for systems that become too complicated.

This photon bath makes life possible. If there are too many or too few photons, as when the temperature is too high or too low, then life cannot continue. There are either too many photons, such as high temperatures (110 degrees F. and beyond) or too little (0 degrees Celsius and below). Biology has developed many large molecules to perform its action, and thereby satisfy B. A is satisfied at the cell level by limiting the amount of material that it takes to make a living cell. There is a limit to vion size.

$$3x > 10^{-5} \text{ cm}$$

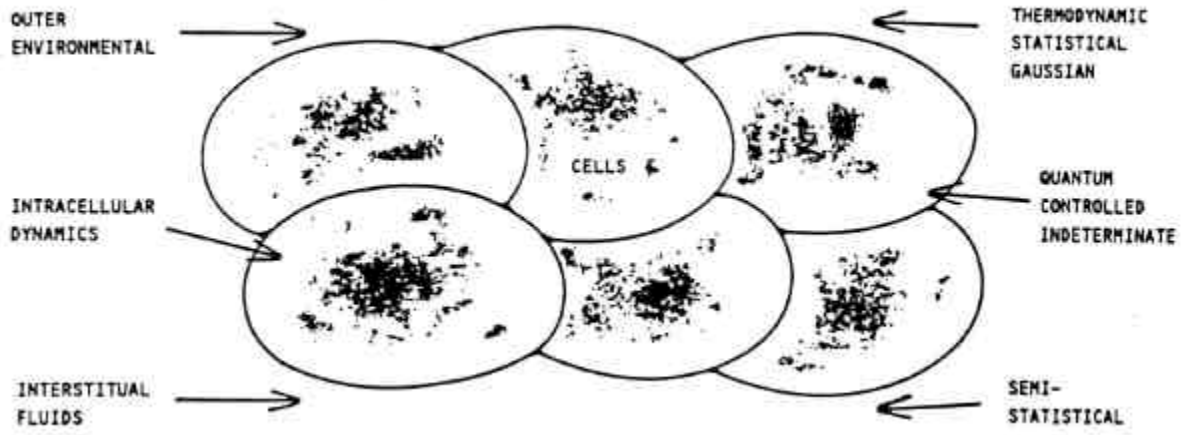
It must be pointed out that there are may processes within the body that fall under statistical mechanics and not quantic action. As Isaacs points out, the quantic action takes place within the cell walls. External to the cell walls and the interstitial fluids, as well as the interchanges of gasses and liquids through the body, there are more statistical dynamics following the Henderson-Hasselbach formula, which dictates the pH condition of the body (see Chapter 12).

Thus the management of electron and proton pressure can be statistically thermodynamic in its process, although the regulatory hormonal action of the various cells that regulate this process will fall under quantic control. However, the manipulations of the body to regulate the pH through the pH buffers can be of statistical dynamics. At the cell membrane and surface receptor sites the correspondence rule allows for a quantic dynamics. Via Bohr's correspondence rule, when we leave the cell we leave quantum dynamics and go into statistical Newtonian dynamics. The human body contains two sets of laws for existence that must cooperate: statistical for extra-cellular, and quantic for intercellular.

Medicine has developed because of an appreciation for the statistical or mechanical aspects of the body, such as the movement and the mass, momentum and energy. As science developed thermodynamic relationships to explain external phenomena in engineering and chemistry, these relationships were supposed to be true of biology, even though these laws could not account for much of the phenomenology of biology. The problem came when medicine tried to take Newtonian and thermodynamic principles of the macro world and body and apply them to intracellular phenomena. The force of it doesn't work.

In a nutshell, we are saying that we should not throw out the advances of modern medicine in regulation of body functions, but that we need to open a door to a deeper understanding involving quantum physics and electronic dynamics, to understand the intercellular phenomena, and to increase our knowledge.

So we have not come to *change* the laws of medicine, but to *fulfill* them.



SUMMARY

1. THE COMPLEMENTARITY PRINCIPLE STATES THAT BIOLOGICAL LIVING FUNCTIONS FALL UNDER QUANTUM RULE.

2. MASS, MOMENTUM, PHOTONS, VISCOSITY, SUBSPACE MORPHIC TRANSFER, AND CHARGE ARE THE BASIC TRANSFER MEDIA OF FORCES THAT NEED TO BE ACCOUNTED FOR.

3. THESE FORCES ARE ADDITIVE.

4. THESE FORCES CAN TRANSFER INFORMATION, PHYSICAL OR OTHERWISE.

5. THE SYNAPTIC CLEFT IS AN INDETERMINATE PHOTON PROCESS, NOT MERELY A CHEMICAL ONE AND AS SUCH IS EFFECTED BY SUBSPACE MORPHIC TRANSFER.

6. THUS ALL OF SINTHETIC PHARMACOLOGY IS AN UNNATURAL DEMAND OF ACTION BY OVERLOADING THE SYNAPTIC CLEFT.

7. INDETERMINACY IS AFFECTED BY SOME OTHER UNEXPLAINED POWER. THIS POWER SEEMS TO BE CORRELATED WITH PSI, AND EXPLAINS PSYCHIC PHENOMENA. (NELSON EFFECT, AS SUBSPACE TRANSFER OF CONSCIOUSNESS)

8. HUMAN BEINGS MIGHT HAVE POWER BEYOND TIME AND SPACE BY DEVELOPING WORMHOLES IN THE ENDORPHIN AREA OF THE BRAIN. THIS OCCURS THROUGH A SUBSPACE CONNECTIVITY OVER THE SUBTLE QUANTIC NATURE OF ALL THINGS. THERE IS A SHAPE CONSTRICTION OVER THE DEGREES OF FREEDOM OF SYSTEMS, PRODUCING A PATTERN OR SHAPE ENHANCING EFFECT. WE REFER TO THIS AS THE NELSON EFFECT.

9. INDETERMINACY METHODS OF MEDICINE HAVE SOME DEGREE OF EFFICACY ABOVE CHANCE.