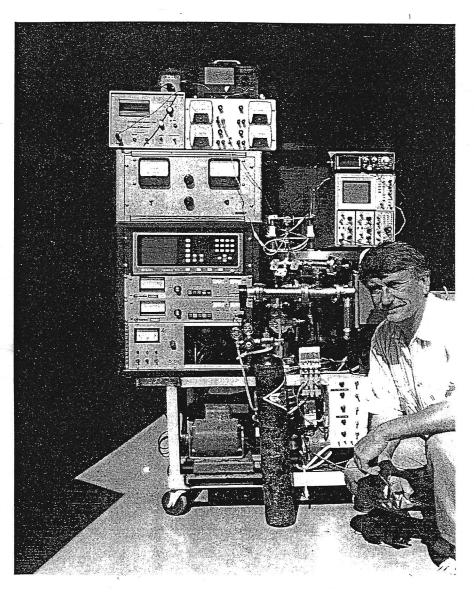
FULCRUM®

The Science Journal of The University of Science and Philosophy

In This Issue:

A Report on the Russell Science Research: Transmutation of Nitrogen to Lithium and Helium



Ron Kovac Russell Science Research Team's 2nd Generation Transmutor w/Residual Gas Analyzer

FULCRUM®

December, 1994

Editors:

Chester A. Hatstat, Jr., B.S., Metallurgical Engineering Dr. Timothy A. Binder, D.C., N.D., U. of S. & P. President

GREETINGS!! This a quarterly journal focusing on the science of creation revealed to Walter Russell. Dr. Russell, artist/philosopher/illuminate, spent 35 years and several different written editions describing to scientists and lay persons God's multidimensional creation processes. Known as the Russell Cosmogony, the concepts revealed to Dr. Russell during his 39 day illumination in 1921 show our three dimensional world of light and matter to be an extension of the One substance of God. Matter is light (patterned thoughts) spirally wound into vortices of motion, a recording of God's one idea of creation, and is motion sustained by God's rhythmic Thinking.

FULCRUM is a forum in which scholars and students can interact to exchange insights and perspectives on interpretation and application of the vortexian principles of the Russell Cosmogony. We seek to fan the flames of creative thinking and to stimulate discussion, awareness, and understanding of God's two-way, creating/ decreating electric universe. Without such knowledge, humankind will be forever in the entropy loop, in a scientific and philosophic paradigm of a Universe dying a heat death, where energy runs only down hill and everything is going into greater disorder. Our present economic, social, psychological, medical, philosophical, political, and religious systems are patterned on entropic thinking and beliefs.

Our intent is to publish:

- 1. Questions we, as students, have concerning the Russell Cosmogony and the Russell literature.
- 2. Answers from students. Answers may or may not be definitive. Clarity may take time to *unfold*. Sharing insights may or may not lead us to the

same conclusions. The idea is to share different perspectives and stimulate/inspire thought on the subject. I expect our thinking and understanding to evolve.

- 3. Research and articles relevant to the Russell Cosmogony. What insights do you have concerning this Cosmogony? Have any of you puzzled over, played with, built, modeled, or written about your studies of a two-way, invisible/visible physical Universe? What have other scientists or lay persons done in past or present studies? How are chemical, physical, medical, agricultural, biological, economic, etc. systems viewed from this enlightened perspective? We are eager to review for possible publication your treatment of the Russell concepts. I have a special interest in mathematical treatments of the Russell concepts and would love to see some!
- 4. Current experiments utilizing vortexian principles and mechanics: transmutation, *energy* production, gravity simulation, etc..
- 5. Applications of spiral/vortexian/motion-in-opposition mechanics, science, and philosophy.

We are eager for your input and feedback. Our vision of *Vortexian* science curricula, texts, data banks, and applications in every field of human endeavor is dependent upon the continued *desire* and action of all of us, *desire* taken into meditation and *action* inspired from the point of Stillness within each of us.

Chester A. Hatstat, Jr. editor

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QUESTIONS FOR NEXT ISSUE

Given that: A compressed condition turns inside-out to become an evacuated condition and vice-versa. Motion in a centripetal direction occurs as centrifugal motion is resisted. Motion in a centrifugal direction is resisted and becomes centripetally directed. Motion in a centrifugal direction occurs as centripetal direction and motion is resisted. Motion in a centripetal direction is resisted and becomes centrifugal.

(1) What do these two directions of motion exhibit?

(2) How do we explain heat, optical light, gravity, electricity and magnetism in terms of the Russell Cosmogony and in terms of radiative and gravitative cones?

QUESTIONS FROM PREVIOUS ISSUE

- (1) My reading of the Russell material, particularly pages 164-166 of Atomic Suicide? suggests (perhaps incorrectly) that all motion goes from the base of a cone to the cone apex whether the cone is generative or radiative. Is this concordant with the Russell Cosmogony? I was confused by what I perceived in the June 1994 issue of Fulcrum (V. 2,#4), page 7, column 2 where the motion of radiation is described.
- (2) In what written material are the angles and pressures for each element provided?

ANSWERS

From Larry Tiegs:

Qt. 1

Does motion go from conal bases to conal apexes in both generative and radiative cones?

Yes, for half the cycle. All motion is two way. Motion also moves from conal apexes to conal bases in both generative and radiative cones.

Picture a series of ice cream cones, if you will, in a long line, bases to bases, points to points. If you would now tap the end cone, the motion would travel down the long line of cones, bases to point, then point to base in continuous repetition., At the same time, the opposing/voiding wave motion would travel from the other end of the cones toward you. Motion, once started, moves in one continuous direction only, first expanding and then contracting in endless repetition.

It is this repetition from cones to cone that gives the appearance of motion traveling. In reality, motion is contained within the space of each cone only, where it is voided, recorded and repeated by mirror reflection in the next cone, all to give the appearance of motion.

Ot. 2

In what written material are the angles and pressures for each element provided?

Don't we wish the elemental pressures were written someplace. Russell suggested that with computers, which were just being developed in the early 60's, the elemental pressures could be easily calculated. We do now have the computer power. I'm sure the University is open to receiving help in this area.

Comments

In response to the editor's justified puzzlement (Fulcrum, V3,#1, p. 7) over the apparent <u>duality</u> of explosion preceding implosion as cause and effect in a Universe of <u>Oneness</u> where no state of motion ever began or ever ended:

THE RELATIVE

The world, seen thru or more correctly, projected by the human mind, appears in duality, for it is the mind's nature to divide and oppose. Our minds, with the faculty of memory, reason and imagination, create the illusion of cause and effect, the illusion of time itself. Thinking ourselves as bodies, we create the illusion of space. The mind creates concepts as cause and effect, simultaneous and sequential, trying to understand and explain our sensory world. Are these concepts true? From the mind's point of view, of course. relatively speaking. But no matter how great and complete our concept of the world, it is — at best — self-contradictory, transitory and altogether illusionary!

THE ABSOLUTE

The Supreme Reality is beyond the mind, yet makes the mind possible. No words reach there. It can only be known, as from the awareness of having been one with. From this knowingness, there is only Love, Light, Peace and Beauty—the Absolute Truths. From this reality, all things are within all things; there is no separation or distinctions, no individuality; all idea is perfect and complete within itself therefore nothing happens. All is one.

Russell's desire, as all masters and mystics who have realized their Self as one with the Supreme Reality, was to awaken us to the fact that the world is nothing but a motion picture on the screen of space; a projection of light from our own being thru our own film of memories and imagination; creating the illusion of time and space and the individual worlds we perceive ourselves living in as bodies.

Now I ask you, what is true? Is it one or is it two?

From Chester Hatstat:

1) This question continues the discussion concerning the words, charts, and diagrams Walter Russell generated to describe his understanding of how motion creates the illusion of the sensed universe. My choice of words in my response in Fulcrum V2, #4 is misleading. I would have been clearer if I had said: "Spiral centrifugal motion (radiation) starts at anode centers, moves along equatorial planes, and becomes cathode bases."

If a system is mostly contracting, it is generative, and its center is the anode. If a system is mostly expanding, it is degenerative, and its center is the cathode base. I would further state that a discharging system is by definition cathodic, and a charging system is by definition anodic. The journey from anode apex to cathode base and viceversa can be geometrically mapped with different shaped vortices or different shaped cones and donut whirls. At any octave step along the way, a system will have a different vortex shape or different cone or donut shape for each of the centripetal and centrifugal motions which determines its step or appearance to us.

I did not err when I said centripetal motion starts at cathode bases, as it does. Cathode bases are the end result of the destruction of an anode apex as it degenerates through centrifugal motion to become a cathode base. When a wave reaches full expression, it reverses direction and function. The expanding wave (centrifugal motion) originates at compressed anode centers, and when fully expressed as a cathode base, reverses function and direction to become a contracting wave moving towards an anode center. The contracting wave originates at a cathode base, and when fully expressed at an anode center, reverses function and direction to become an expanding wave moving towards a cathode base.

From a cathode base, motion is centripetally compressed along a spiral cone path towards the anode apex and in so doing, in time, becomes the focal point of an ever growing anode apex. An anode apex (sun, planet, or atom) then centrifugally unwinds its mass (compressed motion) along a spiral planar path at an equator at

90° to the gravity shaft which controlled motion's centripetal journey from the cathode base to the anode apex.

The contraction/compression of the low potential motion of what we call the vacuum of space to localized high potential centers can be described as a base contracting to an apex. Walter Russell describes this process as the projection of rings (which we can also describe as donuts or toroids) in 4 octave steps to create a fully formed anode apex — the generative half of the octave cycle. See *Atomic Suicide?*, pp. 163-166.

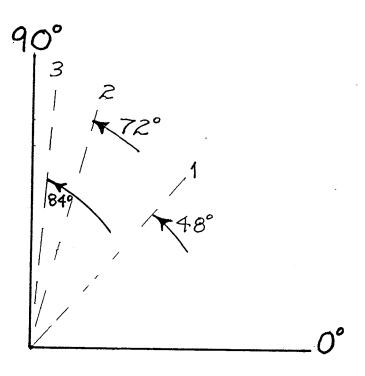
Anode apices reverse polarity to become expanding/discharging cathode bases. Spheres become toroids as centrifugal forces bore holes (create conditions of low potential motion — expand) in compressed motion centers. Again, one perception of this expansion process is as an extension of rings or toroids in 4 octave steps to create a fully formed cathode base — the radiative half of the octave cycle.

The pseudosphere/catenoid geometry and rubber band knot analogy described in Ron Kovac's transmutation article suggests other ways to visualize the cube/sphere geometry. When a contracted anode fully unwinds, it reverses and becomes an expanded cathode base which then proceeds to wind motion up in centripetal direction towards the system's anode center— a still point at the anode. When the forming system has compressed to its maximum, expansion begins to dominate, and its direction is a centrifugal direction from the anode equatorial plane towards the cathode base inertial plane of stillness.

2) In my reading of Walter Russell's books and charts, I have never seen any specific angles or pressures for individual elements. He did give ratios of pressures and left us many charts showing relationships between octave locking positions. There are three different ratios Dr. Russell describes: linear, area and volume.

The linear ratio discussed is 1:2:4:8. This is the ratio I have used to calculate plane of rotation angles. The plane of rotation angles within each octave as an inert gas extends from 0° , minimum motion-in-inertia to the 90° , maximum motion-in-

opposition can be calculated in several different ways. The simplest method would be to divide 90° into 15 parts (1+2+4+8=15) to yield 6° per part. The angle between inert zero plane and locking position #1 would have 8 parts or 48° from zero. Position #2 would be 4 parts or 24° from the 1st position — 72° from zero. Position #3 would be 2 parts or 12° from position #2 — 84° from zero. Position 4 will of course be at 90°.



The reprint of page 167 from Walter Russell's The Universal One on page 7 suggests to this author that the division of 90° into 15 parts to calculate the plane of rotation angles may be an over-simplification. I will present in the next Fulcrum my analysis of the universal mathematics presented on page 7 and calculations of plane of rotation angles based on the planar geometries shown in Dr. Russell's diagram.

I also suggest that the diagram on page 7 does not allow for the twisting three-dimensional conical vortex shape of the evolving n ine octave wave of the elements. To me, this geometric consideration is essential for determining plane of rotation angles and is implied in Dr. Russell's Periodic Chart of the Elements #1, fig. 70 of *The*

Secret of Light, Russell's own admonition that there are only curved lines in Universe, and the vortex patterns evident in Nature.

Please remember, Nature does not always conform to classroom mathematical or geometrical constructs. Any derived plane angle of rotation will need experimental verification, and I would bet there is some sort of bell curve of angles around the optimum angle which would all produce the same resonant, locking point effect or substance.

Pressure ratios from octave to octave can be found in *The Universal One* (U1), pp. 160-172. In *Atomic Suicide?* (AS), p. 39, Walter Russell lists pressure intensity increases of the +2 octave position from beryllium in octave #4 to radium in octave #9 as follows:

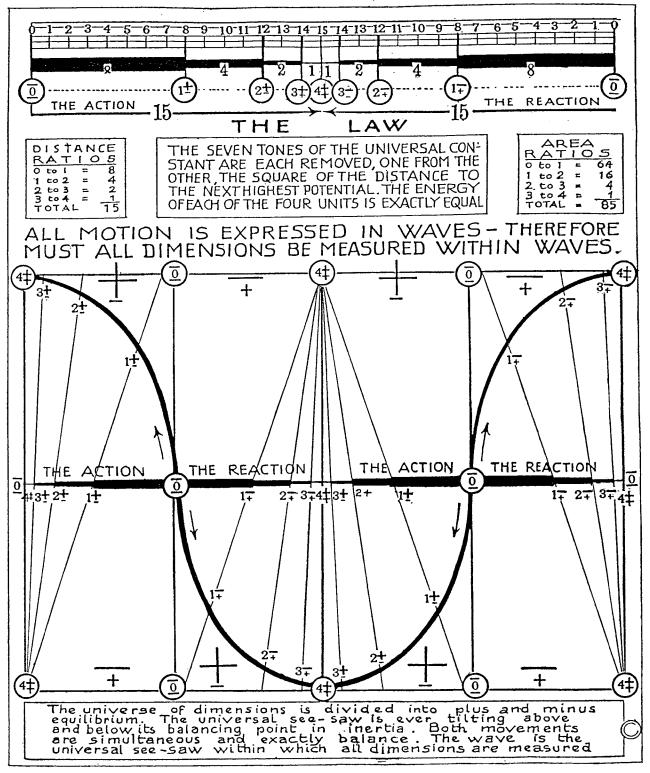
		Pressure
<u>Octave</u>	<u>Element</u>	Intensity
4	beryllium	32,768
5	magnesium	262,144
6	calcium	2,097,152
7	strontium	16,777,216
8	barium	134,217,728
9	radium	1,073741,824

This reveals a multiplication of 8 between each octave. 8 is 2³ and represents, I think, a volumetric or cubic ratio increase for this dimension from one octave to the next. Interpolating these intensity numbers gives:

		Pressure
<u>Octave</u>	Element	Intensity
1	erneston	64
2	penrynium	512
3	ethlogen	4,096

I do not know how Walter Russell arrived at the beginning number of 64 and do not think they have any physical measurement correlation; they simply represent ratio. Much experimental work remains to quantify the effects of compressive and electric potential pressures. And there certainly remains much meditation and observation on our part to further the understanding and utilization of the cosmogony Dr. Russell revealed to us.

UNIVERSAL MATHEMATICS



DIMENSION CHART No. 5. DISTANCE DIMENSION OF TONAL RELATIONS. ALL MASS HAS A MEASURABLE TONAL RELATION TO ALL OTHER MASS. ALL POTENTIAL OF ENERGY IS ACTIVE, ORDERLY DISPLACEMENT OF INACTIVE INERTIA, THE RATIOS OF WHICH ARE MEASURABLE IN ALL DIMENSIONS

From Dr. Timothy A. Binder

question #1:

This question, as most all questions, contains its answer by virtue of containing an assumption that is incorrect, and when it is seen, the answer becomes more clear.

The assumption that is off the mark is that radiative motion forms a cone. Radiative motion from the anode center of a cone goes in a centrifugal expanding direction and occurs in the equatorial plane in the form of a whirl, a donut ring, with most motion occurring in the equatorial plane in an expanding centrifugal flat spiral. If you want to consider this as a cone, it is a special case cone.

All motion that goes from the cathode, which is the base of the cone, to the anode, which is the apex of the cone, is in a centripetal generative direction. The motion cannot go in a straight line as it is resisted by the wave field inertial inner planes of the cube boundary which is in part the newly forming cathode base and thus is curved inwards in a centripetal spiral towards the anode apex center.

Motion that is radiative proceeds from the anode center at 90° to the generative cone's centripetally directed wave axis in a centrifugal direction that splays out to each side of the equatorial plane which plane is at 90° to the polar axis. This splaying out to each side is the beginning movements of reversal of centrifugal motion to centripetal motion or motion again from a cathode base to an anode apex. The motion cannot go exactly out in a flat spiral because it is also resisted by the cube wave field inertial plane outer walls of the cube boundary and the inward centripetal spirals so it forms a donut whirl.

The anode center as it spins off through centrifugal force creates a hole within the center and expands to become ultimately the cathode base of another generative cone. The cathode is always the base until it reverses to the point we call it an anode. The anode is always the apex until it reverses to the point that we call it a cathode. Cathodes and anodes are continually changing costumes and roles and they vary in their role over time. At times it is hard to say whether they are anode or cathode as they approach the amplitude position and exhibit as close to equal amounts of both characteristics as possible. In their pure form as mostly anode or cathode, they are easiest to think of and that is how they are described in the cosmogony. But remember that they switch roles continuously and vary in their predominance throughout the whole cycle.

So, any motion that is from the base to the apex is generative. Any motion from the apex to the base is radiative. Both motions occur simultaneously in any system and eventually bases become apexes and apexes become bases. They even start to switch roles at the beginning of their strongest point of being their pure type. Even when they lose their characteristic pure type the most and become their opposite, they still retain some of the other polarity. So a cathode base while it mostly as pure type projects rings to an anode center in centripetal ever compressing direction also still retains and exhibits some centrifugally directed motion. An anode apex while it mostly as pure type projects rings outward from its equatorial plane in ever expanding centrifugal direction also retains and exhibits some centripetally directed motion.

A compressed condition turns inside-out to become an evacuated condition and vice-versa. Motion in a centripetal direction occurs as centrifugal motion is resisted. Motion in a centrifugal direction is resisted and becomes centripetally directed. Motion in a centrifugal direction occurs as centripetal direction and motion is resisted. Motion in a centripetal direction is resisted and becomes centrifugal.

Dr. Binder continues:

Further discussion on questions and answers from Fulcrum, Vol. 2, No. 3.

The question as to why Dr. Russell changes from 10 octaves to 9 in his later writings may have several answers, all of them possibly revealing another facet of the truth.

Maybe it was "right" the first time or maybe neither one was "wrong" and they both were "right". This may sound paradoxical at first but let's open our minds to considering the possibility. If classification is arbitrary, and I propose that it is, the numbers of octaves is arbitrary. For example, it is valid to classify all the elements into only two octaves, those that predominantly are winding up or are in a structurally prolate form of youth and those that are predominately unwinding or are in a structurally oblate aging geometry.

In changing from 10 to 9 octaves, the numbers of elements decreased from 130 to 121 and there is one less inert gas. This is not just an arbitrary change of classification. We do not have Dr. Russell here to ask him why he later changed his mind, so we can only speculate at this point about the numbers of elements.

It appears that he was given an understanding of the <u>basic</u> universal polarization process in his early illumination, but it did not necessarily include all the infinite and complex details of creation. He spent the next six years learning the "language" of science so that he might present what he received "wordlessly" in words that might be comprehended.

It is my opinion that there is no "perfect expression" of knowledge no matter how much time, trial and error is involved. Or, it can be considered that everything is perfect from the viewpoint of the "whole" universe. The nearest we can approach perfection in our "part" of the universe is by as close an approximation to balance that we can achieve, while realizing that absolute balance does not exist in a part, but only in the whole. When anything is seen in whole perspective, it is seen as perfect balance. It is our limited vision of things and ourselves as separate

that makes us judge things as more or less imperfect or out of balance

This view of things as wholly perfect does not let us off the hook from being discriminating, nor perfecting our skill nor in insuring that our actions are modeled on the law of balance. It simply means that once a thing is done it is done perfectly as seen from the whole, and we have to live with it and go on to the next thing. Same thing with The Universal One. It is perfect as seen in the whole, while we can see imperfections in it when viewed with scrutiny and greater understanding. The same thing applies to anyone's work and also to Dr. Russell's later works and expressions. We all are fully human, even those who have full cosmic knowledge. Jesus on the cross said, "my father why hast thou foresaken me" when he showed us the truth of his being fully human while having full cosmic knowledge. And, that too was perfect from whole perspective and imperfect from the fully human and limited perspective.

It appears or it is my best guess that Dr. Russell decided that there had to be 10 and then later 9 octaves, not based upon those known inert gases and elements at the time, but as a consequence of the decimal system we commonly use, his knowledge of the inert gases and elements then known and his "knowing" that there had to be a balance in windup and unwind octaves. In this way, he had to work with 9 and 10 octaves in some way to have a system that conformed to balance and what science had observed and what he knew of the universal polarization process.

So while classification is arbitrary and the change from 9 to 10 octaves is not necessarily an essential error that would invalidate his basic thinking, the number of elements and octaves is either as he said in his earlier understanding or his later; or some other totally different number.

It would also appear that he made such a change only after he met Lao. I have heard that Lao convinced him that nature could not and did not go beyond nine (efforts), and this is why he made the change from 9 to 10 octaves. The reason for that, if it is the case, is not clear to me.

The only way we can know for sure is to meditate and observe. It would be helpful to design and initiate an experiment or experiments that would answer this question. I do not think we can assume that he was "wrong" the first time and "right" the second. It is interesting that the Vedic tradition has 121 basic elements in its cosmogony, so I have been told, and this corresponds to his second opinion.

The second question involving gravity needs to be considered in a similar way. We need to open our minds to other viewpoints and, I think, to the possibility that he was more or less "right" both times. I will present an argument that gravity is both a push and a pull depending on your point of view. I will use some of Dr. Russell's own statements and the essence of his cosmogony to support this view. Also since Larry Tiegs' comments on this question support Dr. Russell's later statements and the view of gravity as a push only, I will use his comments as a point of reference and comparison.

Dr. Russell spoke of gravity in two different senses. In one way, he spoke of it as only the thrusting inward from without to form mass. The other way he spoke of it was as the entire process of thrusting inward from without and the thrusting outward from within.

In the first sense, he could say gravity is only a push and not a pull. But then to say, "there is no pull in nature" is a whole other thing, and there I do not think he was correct. Even if he wants to say only the thrusting inward to form compressed mass is gravity and that process is not a pull, it is impossible to have that and then no pull in nature. I think he meant to communicate to us the idea that mass was formed by a compressive action towards the center of a system and not that there was a pulling inward from the center of the system.

In the second sense of considering gravity as the entire polarization process, the winding up and unwinding centripetal-centrifugal pairings, the compression into and expansion out of form and the inward and outward bound electric currents, he describes a two way universe where there is a pull for every push, and by these words contradicts his statement that there is "no pull in nature". In this whole process sense, we can name gravity by a word without an opposite as it then contains all possibility within its One universal process. Then if we want to say gravity is a push only, we can, knowing it means the whole process; or we can say it is only a pull and be just as correct.

Let's further use his cosmogony to prove gravity is either or both of two paired effects. On page 22 of A New Concept Of The Universe Dr. Russell says, "No effect can be produced unless there is an equal opposite effect to work with it. Effect is therefore two-way, just as "work" is performed two ways". Then again from another view on page 719 of The Home Study Course the Russells say, "The word "magnetism" is also unjustifiable. The word GRAVITY should be used instead, for gravity both multiplies and divides by thrusting inward from without to compress and outward from within to expand."

In the first of these two sentences, he states that all effect is two-way. Therefore if there is a push there must be a pull. In the second sentence, he says that "GRAVITY" is both processes or what he calls in other areas the inward thrust of gravity and the outward thrust of radiation. So in both of these cases, he says in effect that gravity is the whole process of compression and expansion. However, when he wants to call it only the compressive case, he says there must still be its opposite equal effect of expansion. And any way you then cut it or whatever words you want to call it by, you still have a vacuum, sucking, expansion or pull in nature.

Again from a slightly different view, if gravity is a push or thrust and it is an effect and it is work, then where is its "equal and opposite effect"? Its equal and opposite effect is radiation, and Dr. Russell also calls it a thrust or a push. He says that gravity and radiation are equal and opposite and with that I see no argument. He describes both of these equal and opposite actions with the same word: thrust. I see that you can describe them both with that same word as long as you see it then is equally valid to describe them with the word pull. Why? Simply because whenever a thrust occurs, there must be an equal and opposite effect that we call pull. If you do one, you do the other. So the

choice of which word you use to describe the whole push-pull process is arbitrary and depends on your point of view. Gravity is both. Gravity is a push and a pull, and as it is, so radiation is both a push and a pull.

On page 23 of A New Concept Of The Universe, he again states, "a one-way universe is as impossible as a one-way pump is impossible", and he also says, "The compressed condition is gravitation. The expanded condition is radiation. Gravitation and radiation are equal opposites."

In these statements, he verbalizes his basic two-way polarization process of balance as the basis of his cosmogony. In this way, he states clearly that there can be no thrust in Universe without its equal and opposite condition that we commonly call a pull or vacuum or other similar words.

When Dr. Russell says there is no pull in nature, that there is no pull to gravity, he can only do so by using the word push or thrust in a way that is not the customary use of the words. He is then using thrust or push as a word with no opposite, as what I call a "One" word. Or in other words, he is using the word thrust as an absolute word that carries the meaning of the entire gravitation-radiation process, which still means there is a push-pull occurring in the whole process.

What was useful in his switch from one point of view to another was to draw our attention to the other side of the coin. Science had considered gravity up to then, and still largely to this day, as a pulling inward from within. We needed to see that there is a thrusting inward from without. We further need to see that in any action of any kind there is its polarized opposite. We need to see that we can look at any phenomena from at least two points of view, inside and outside, left and right, top and bottom and also as the whole process as an absolute or a "One".

So gravity is a push if you look or feel it from the compressive side of the two-way piston pump of gravitation-radiation; and gravity is a pull if you look at or feel it from the evacuated side of the two-way piston pump.

When the Russells spoke of gravity as being both the inward and outward thrust of the electric current on page 719 of *The Home Study Course*, they were speaking of gravity as consistent with what I have described. It would have both a push and a pull point of view and expression implicit in the whole process. Yet even here they chose to describe the whole process in terms that excluded the vacuous terminology they elsewhere said had to coexist with the compressed and were thus somewhat inconsistent and incorrect.

Larry Tiegs in his answer says that this question is about cause, the primary motion and then says that because it is about the primary motion and the cause of gravity, that gravity must be only a push and not a pull. I do not understand how a primary motion or cause changes things. Even a first (primary) motion must be in two ways or two directions. At the same time that push happens, so does pull happen. Any motion in an equilibrium condition creates both push and pull. If you are compressing in a vacuum as Dr. Russell says on page 135 of Atomic Suicide?, it is because you took that first two way motion and created a vacuous and a compressed condition.

The cause of gravity is desire in Mind to create form. The effect of this is a two way motion. Clearly matter is motion in a compressed tightly wound condition we call substance and solidity, and it is also motion in an expanded loosely wound condition we call tenuity or space. Neither condition is absolutely solid nor absolutely vacuous. Dense solid matter is the effect of compressive vortices and tenuous space is the effect of expansive vortices.

Matter-motion is not cause of itself. Mind is the cause of motion-matter. Mind concentrates and decentrates, and both gravity and radiation can be experienced, described and understood as either a push or a pull or as a push-pull depending on which end (or both simultaneously) of the piston pump you are in, talk about and understand.

For a more concrete visualization of what gravity is, let's look at Bernoulli's theorem as a model for gravity mechanics and see how it is both a push and a pull. In the diagram on page 12, we have a pipe outlined in dotted lines and two bulges in the pipe, one marked Sun and the other comet. The flow of water in the pipe corresponds to the

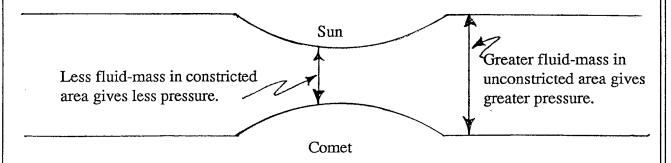
flow of tenuous substance we call space that used to be called the ether that flows between comet and sun. If you do not like the words tenuous substance or ether, then call it whatever you want that must exist between them that allows us to perceive both, or whatever it is that establishes continuity.

As water flows through the pipe, just as ether

or space flows between the comet and sun moving relative to each other, it must speed up its velocity to pass through the constriction. To increase velocity through the constriction in the pipe, there must be greater pressure on the sides without the bulge which allows or causes the increased velocity and decreased pressure inside the pipe.

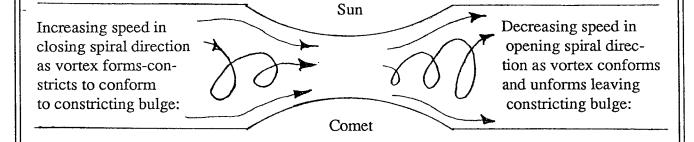
Sealed pipe with water inside and a constriction in the center seen in side or plane view.

As water flows through the pipe, the same volume or quantity of mass must pass through any cross-section we might take. In order for the same quantity of mass to flow through the constricted section as through the unconstricted pipe section, the velocity of the water must increase. A decrease in pressure accompanies the increase in velocity in this constricted area. This phenomenon is utilized on airplane wings to create lift and in carburetors to produce vaporization of fuels.



The larger area has more mass and more pressure on the sides of the pipe. The constricted area has less fluid area-mass and thus less pipe side pressure. Thus the effect is for the constricted area to come together.

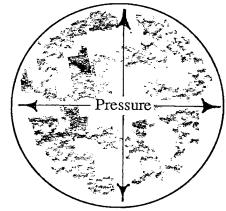
Pipe with water or any fluid moving in one direction and through a constriction.



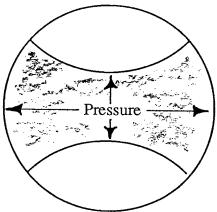
As the fluid approaches the constriction, it must speed up to pass through the constriction. Thus it travels in a centripetal spiraling direction to the constriction maximum and then exits

this constriction maximum in a centrifugal spiraling direction with speed decreasing. The effect of this action is a maximum pressure decrease on the pipe sides at the constriction maximum as the fluid is pushed-pulled into the vortex center at this point. The pressure on the pipe sides increases as the fluid expands in area-mass centrifugally outward from the constricted area.

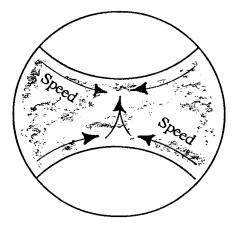
Here is the same process shown in end views of the pipe:



Greater fluid mass and greater pressure on pipe sides in unconstricted pipe section and slower fluid flow speed.



Greater pressure on sides of pipe away from a bulge, more fluid and slower flow.

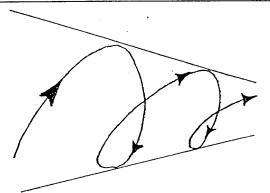


Less pressure between the bulges in the constricted area and greater speed of fluid flow.

The decreased pressure-increased speed in the constricted area is what we experience as gravity between a comet and the sun. A venturi meter is a device that measures these pressures and speeds in liquid mediums flowing in pipes and is a model for a "gravity meter".

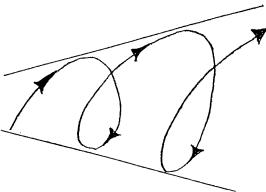
Another way of looking at this same thing is

to recognize there is continuous matter-motion between a comet and the sun, and they move relative to each other. Each drags its matter-motion ether field with it and they hook onto each other where they meet in their common center. Where they meet with greatest push-pull is mostly on the longitudinal line between them. This meeting and



Closing vortex through increasing speed pulls through decreased side pressure on pipe sides.

Direction of increasing speed toward constriction in pipe via centripetal motion.



Expanding vortex through decreasing speed pushes through increased side pressure on pipe sides.

Direction of decreasing speed away from pipe constriction via centrifugal motion.

The effect in the pipe of increasing centripetal spiral motion through the constriction is to pull the bulges of the pipe sides together. The effect of decreasing speed of motion through centrifugal spiraling motion and expansion is to push the pipe sides apart.

This is a model for gravity in terms of certain fixed dimensions such as fluid flow in one direction and in a pipe. I have not described all the smaller motions within the fluid flow that occur as you check speed and resistance to motion at the center and pipe sides periphery. The speed varies from center to periphery and thus there are vortexes within vortexes in the fluid flow. Gravity mechanics as it occurs between a comet and the sun have additional factors such as all planets effect on both comet and Sun, yet this same mechanics does apply, albeit with more detail, just as it applies to fluid flow in a pipe.

You will note that it is consistent with Walter Russell's centripetal-centrifugal spiraling motion gravity mechanics, but it is looking at it from the other side of the coin so to speak in seeing the pull of decreased pressure as motion flows towards the center of a system in increasing speed and vice versa. Is the glass half full, half empty, or is it both?

grabbing a hold of each other's field is the effect we call gravity. It is the same as two men passing each other and grabbing hands. They would be push-pulled together and would rotate around each other if they kept moving and kept hold of each other.

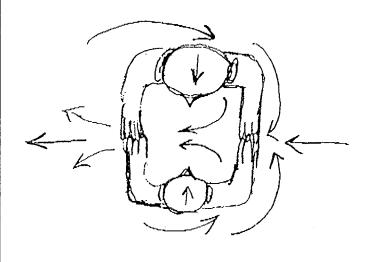
In a universe of three spacial dimensions of length, breadth and width, gravity has three components. There are two others in addition to the one mostly longitudinal component that Newton described. A sound mechanics will have to recognize all three dimensions. In other words, gravity is omnipresent, and to be described in our 3D language, we must at least recognize three directions to the force. There is a force mostly longitudinally in the case of comet and sun (and any two or more bodies) but also much weaker forces in the two other directions. These three directions correspond to, or are, the same three inner reflection planes of the cube that Russell describes.

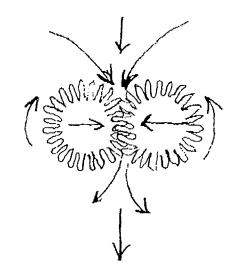
We can consider that the sides of the pipe that represent a comet and the sun are being either pulled together by the decreased pressure inside the pipe, or we can look at it from the outside and perceive and measure it as increased pressure from the outside. The pressure difference then is either a push or a pull and in reality is both. In the same way, Walter Russell could be considered to be right both times when he described gravity as a pull on pages 149, 185, 226, and 227 in The Secret of Light and elsewhere when he spoke of gravity as the inward thrust of gravitation and the outward thrust of radiation. He was incorrect to say there is no pull in nature without being clear that he meant to call the whole process of push-pull by the word push with its meaning to then be as an absolute with no opposite but the meaning still containing the whole push-pull process.

The Earth and the Sun by Russell's Cosmogony are moving away from each other as the Earth is in the equatorial plane of the Sun, the plane of

Further explanatory drawings and discussion of Gravity Mechanics.

Two people or gears revolving around each other in an inward closing centripetal or gear engaging-meshing direction with say the Sun gear rotating clockwise and the comet gear rotating counter-clockwise create a centripetal spiral flow of motion towards a common center which is analogous to a faster flow of fluid between a constriction and decreased pressure causing greater apparent attraction or gravity. This is a "Many" view of gravity contrasted to radiation as it complementary opposite.





greatest discharge, although it has drifted off exact center. Thus the Earth and the Sun appear to be demonstrating the model for radiation as shown in these mechanics and an asteroid or comet returning to the Earth or Sun demonstrates the model for gravitation.

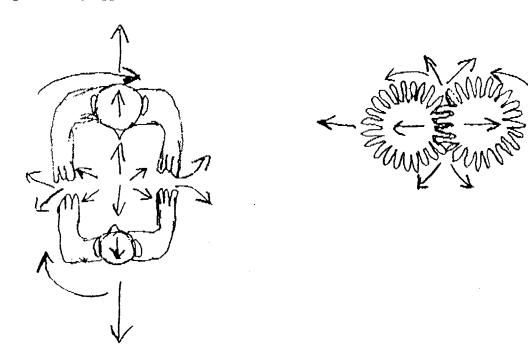
Bernoulli's theorem as presented in this discussion demonstrates the model for an asteroid or comet returning to the Sun. The actual ether or fluid flow between a comet and the Earth or Sun is determined by their motion relative to each other and by the relative orientation of each of their vortex motions or the orientation of their polar and equatorial planes of motion to each other.

So in using Bernoulli's theorem as a simple model for gravity mechanics, we can see that it does show the gravity part of the whole gravity-radiation process well, while the radiation part was more implicit in my discussion of the model.

Bernoulli's theorem is a good general model for gravitation and attraction. To relate the bulges to a comet and the Sun is a useful analogy. To use the Sun and a comet in the model is consistent with the Russell Cosmogony as the comet demonstrates gravity in relation to the Sun. I will have to bring more detail in to show how Bernoulli's theorem can be used as a mechanical model to relate Gravity mechanics between the Earth and the Sun, but the excess of discharge between the two will have to be explicitly revealed as the Earth is not traveling into the sun but rather spiraling away from it.

In the next issue, we will expand on these models using the fluid flow mechanics of Bernoulli's theorem and the mechanics of paired gears to relate in more detail and thus more accurately to the whole gravitation-radiation cycle. By including the fluid flow between two bodies and the fluid flow in and out of these bodies or the orientation of their respective vortexes and the viewpoint from the Russell Cosmogony, we can get deeper insight into a mechanics of gravity.

Two people or gears revolving around each other in an outward opening centrifugal or gear disengaging-unmeshing direction with say the Sun and the comet gears both rotating counterclockwise create a clashing spiral flow of motion away from a common center which is analogous to a slower flow of fluid between an expansion and increased pressure causing greater apparent repulsion or radiation. This is a "Many" view of radiation contrasted to gravity as its complementary opposite mate.



This mechanical model for gravity can be used to describe all of the eighteen dimensions of matter. In this case, it was used to describe gravity in terms of pressure. All other dimensions exhibit an apparent ability to attract and repel and therefore are related to gravity. If that is the case, then this model can be used to describe all other dimensions. In future issues, I will also explore that possibility.

With a deeper understanding of gravity mechanics, we have a greater chance to control it by working with it. As Russell said, "the control of gravity will do more to change our world technologically than any other advancement". The work that Russell students are doing to control gravity holds great promise. The work that the Russell Science Research Team has been doing in transmutation is a form of gravity control and is bearing some early fruit even if it is yet very young. Robert Cafarelli's New World Gravity Generator outlined in our last edition of Fulcrum (V3,#1) appears to be an invention based on sound gravity mechanics that promises great benefit for humanity.

I have examined Mr. Cafarelli's idea and have found it to be astoundingly simple and astoundingly promising. I can see how it works. I can't see how it fails unless the angle of momentum and/or the center of gravity shifts and shifts enough with the weights shifting to cancel out exactly the weight increase gained through forcing excess liquid to one-half side of the wheel. We are awaiting an actual demonstration of the wheel in 3D form and will give a further report pending its manifestation. In essence, his invention is like a water wheel with gravity furnishing the pump to keep the water dropping on the wheel.

I intend to write a series of articles on gravity mechanics and its possible application to technology in future issues of *Fulcrum* that you won't want to miss.

Faithfully,

Dr. Timothy A. Binder

A REPORT ON THE RUSSELL SCIENCE RESEARCH TEAM'S TRANSMUTATION OF NITROGEN INTO

LITHIUM AND HELIUM

The following article, written by Ron Kovac, reports on the results of what the Russell Science Research (RSR) Colorado team of Ron Kovac, Toby Grotz, and Dr. Timothy Binder refer to as the ⁵Li experiment. The ⁵Li experiment is the second generation transmutation research experiment conducted by the RSR Colorado team. Ordinary nitrogen (¹⁴N: nitrogen with atomic #7 and atomic mass 14) was successfully transformed into ⁵Li (lithium with atomic #3 and atomic mass 5) and ⁴He (helium with atomic #4 and atomic mass 4)!

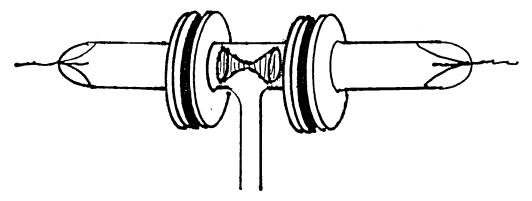
In 1927, Dr. Walter Russell successfully converted water to 14.9% hydrogen, 16.0% oxygen, and 69.1% nitrogen (see A New Concept of the Universe, p. 130 and Fulcrum V1, #2). In 1992-1993, the RSR Colorado team verified Dr. Walter Russell's transmutation concepts when they produced fluorine from water vapor. The results of the RSR Colorado team's 1992/1993 first generation transmutation experiments were published in Fulcrum, Vol. 1, #2.

The first generation experiment utilized water injected evacuated quartz tubes which were subsequently heated, placed in magnetic fields, allowed to cool while in the magnetic field, and then qualitatively analyzed with an emission spectroscope. The externally applied magnetic

fields established shaped potential gradients within the quartz tubes that, according to Russell Cosmogony—dual-polarity control—gyroscopic plane of rotation concepts, would reshape/ reconfigure the atoms centripetal/centrifugal vortices to produce the appearance of a different atom—transmutation!

The second generation experiments utilized nitrogen injected evacuated quartz tubes. These tubes are internally fit with electrodes to produce an internal electric field and with a perforated glass partition (frit) to introduce a vortexian shape to the electric field. External magnetic fields were also used to further define and shape the internal nitrogen plasma vortex fields.

In an addendum to Ron Kovac's report, Dr. Binder elaborates on the concepts and principles from the Russell Cosmogony that are evidenced in the ⁵Li experiment. Fulcrum has the honor of being the first to publish the results of these revelatory experiments which were first announced at this past September's USP Homecoming. We can now expect the scientific community to finally recognize the Russell Cosmogony and pray for the peaceful and immediate application of Dr. Russell's concepts into business, industry, and our everyday lives. Our civilization now has the tools to live peaceably and sustainably!



MAGNETIC COILS AROUND RARE NITROGEN GAS YEILD ⁵LI AND ⁴HE

PLASMA SHAPING REVEALS NEW ATOMIC TRANSFORMATION TECHNIQUE AND COLD FUSION AT CHEMICAL — MOLECULAR LEVELS

by Ron J. Kovac, M.S. Chemistry, B.A. Business Mngmt.

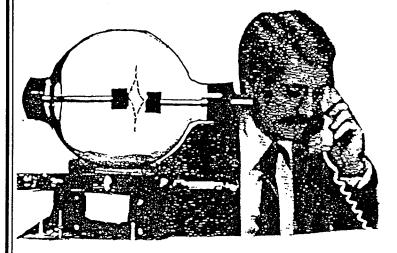
To establish reader interest, the author announces the following conclusion of this paper: ⁴He (the commonly accepted ashes of cold fusion) was obtained at 3.75% concentration of the parent gas, nitrogen (¹⁴N). Even more profound: THE "MISSING LINK" element, ⁵Li was created in the same apparatus. Standard literature (see p. 23) proclaims that there is no element of atomic weight 5. The cold fusion process that gave these results uses only plasma of N₂ and magnetic shaping. The plasma tube has no constrictions or capillary fusion facility. The plasma tube has only two needle point stainless steel electrodes, no platinum, nickel or palladium cathodes. The ⁵Li was obtained at 2.50% level of the parent gas ¹⁴N.

The creation of this never before found element (the long sought missing element of the periodic or nucleonic tables) is offered by the author as a strong support for the notion that cold fusion, ultra sub-atomic particles, gravity, electricity, and magnetism are each only a consequence of space moving in special interrelated geometric formations. If glass, rarefied nitrogen and electricity or magnetism can cause cold fusion (⁴He "ashes" — see p. 21) and transmute or create the new missing element ⁵Li (see pp. 21-22), then only geometry of motion of space is involved.

CATENOID solenoids quartz tube stainless steel electrode 4He and 5Li were obtained using only

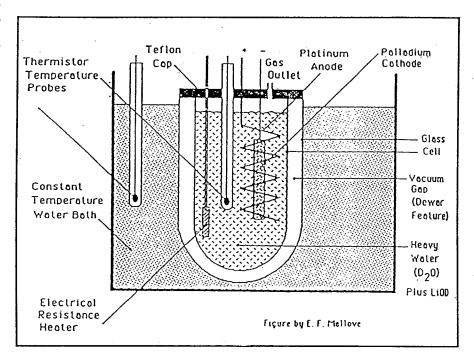
nitrogen and magnetics on the plasma

DEMONSTRATES PLASMA SHAPE IS KEY TO UNDERSTANDING EFFECTS



The history began with the Fleischman-Pons type cell drawn below. The construction and components of this cell inspire fusion thinking

because of the heavy water (D_2O) and metal exotic elements. But later work shown at the end of this report indicates almost any materials can be used to cause "cold fusion". Randell Mills Stephen and Kniezys noticed you do not need heavy water, ordinary water would do with



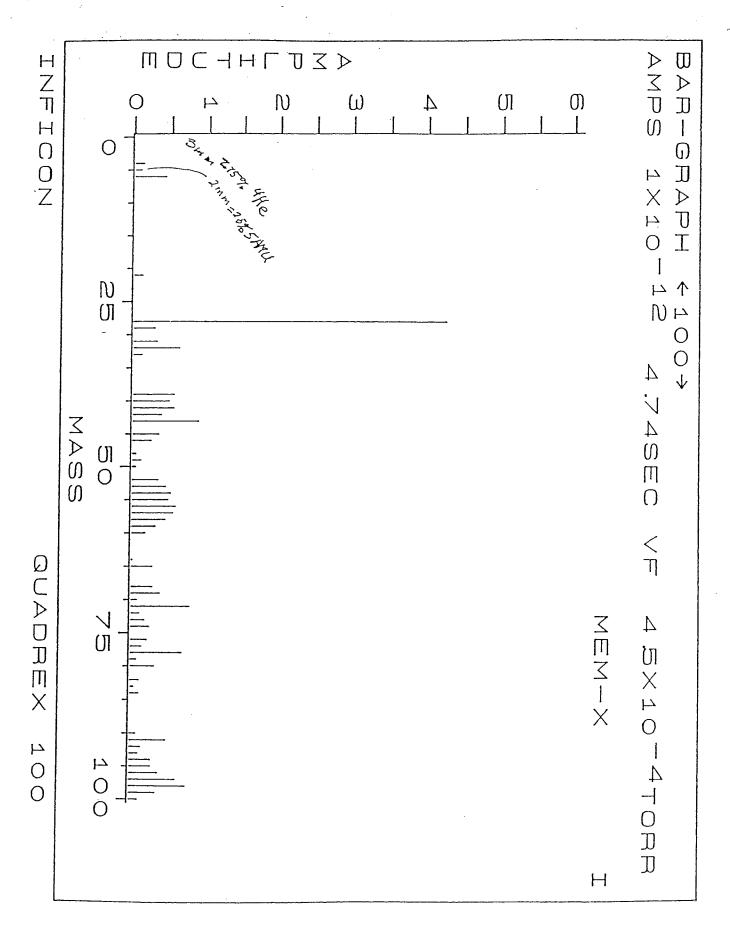
the addition of potassium salts. Dutch Shell discovered you don't need water or palladium, and that stainless steel and regular hydrogen would even work in a spark chamber arrangement. Here we see a clue that maybe this effect is much broader in scope than a simple nuclear explanation. After all, the more information we get the more classical fusion seems to fail as an explanation. Perhaps our perception of classical fusion theory was too narrow in scope. Maybe this was a consequence of the fact that our test instruments were based on detecting fast moving particles more than particles at rest. (Geiger counters, scintillation counters, etc. require the particle move through the medium of the detector leaving a trail of ionization. Likewise, cloud chamber, bubble chamber, etc.) What about the particles that might have a very slow velocity, kind of floating around, not causing any disturbance, but available for molecular or atomic interaction?

"To catch a polar bear you must go north and cut a hole in the ice. Then you must put little green peas around the hole. When you see the polar bear come up to the location and bend over to take a pea, you rush up behind him (or her) and kick him (or her) in the ice hole." Don't try this since it is not true! The truth is a polar bear can smell a

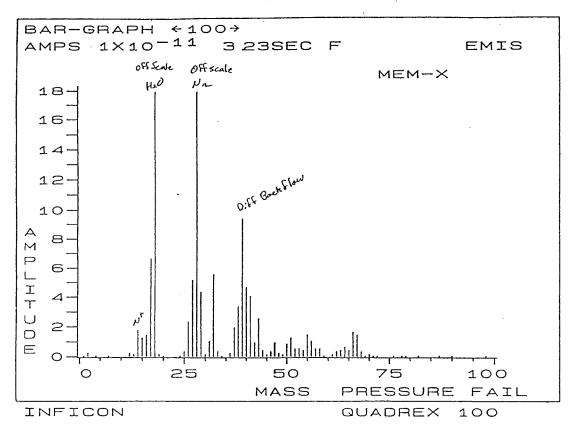
human 20 miles away. There will be no sneaking up on a polar bear until its time! (source: Hal and Charlie Show, "Fun Facts", 630 on your AM radio dial, July '94, Boulder CO.) On this cold fusion. what need is a

polar bear nose that can smell the slow moving particles. In this way, we can get the whole picture, not just special cases. GOOD NEWS: we have one! It is a machine like a bookkeeper with a third eye! It is called a QUADRAPOLE MASS SPECTROMETER, A.K.A...... a residual gas analyzer (RGA). Unfortunately, again, only the wealthy can afford the device. Fortunately, a person is only limited by their creative ability. In this manner, I was able to pull in favors, extort people, recycle parts, and otherwise behave in such a manner too despicable and incriminating to mention here until I had created the mechanical atrocity pictured on the cover of this issue of Fulcrum. In spite of its appearance and the age of some of its components, the Mass Spec or RGA works well

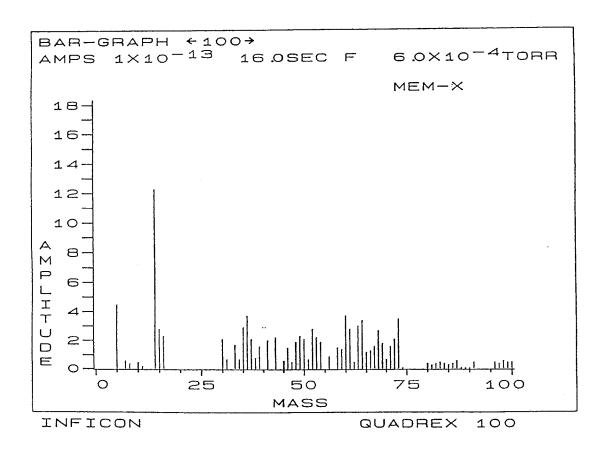
Computer printouts of the RGA appear on pages 21 & 22. Page 21 shows the first experiment and the appearance of ⁴He and ⁵Li. The top of page 22 shows an analysis of the N₂ bottled gas verifying the absence of any ⁵Li, and the bottom of page 22 shows the result after processing a sample through the fields twice, note the lines at



First experiment: demonstrates creation of ${}^4\text{He}$ and ${}^5\text{Li}$ with N_2 line as most prominent!!!



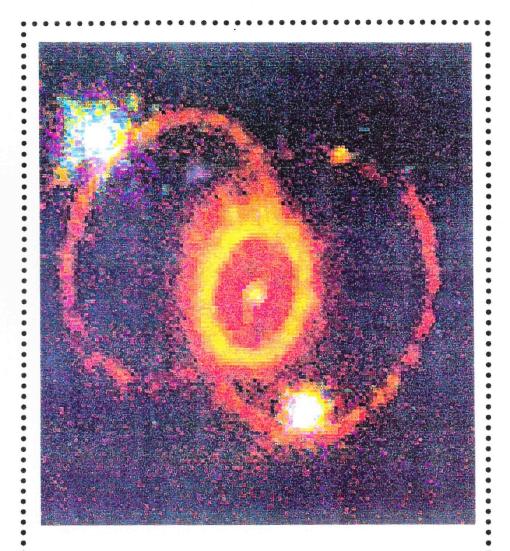
Nitrogen tank sample: demonstrates the nitrogen gas supply is free of ⁵Li!



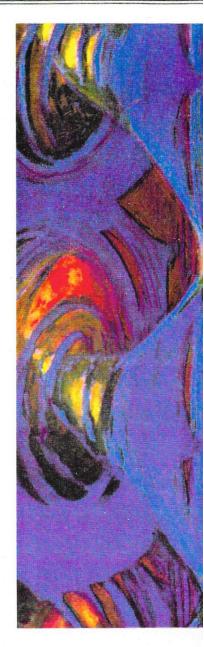
Reprocess of first experiment tube: demonstrates greater quantity of ⁵Li!! note nitrogen shows as monatomic ¹⁴N

	Table 4-3 Spectra Interpretation Guide						
AMU NO.	CHEMICAL	SOURCES P DI	Fragment Parent fon Doubly fonzed				
1 11		Water F or Hydrogen	I	NOTE			
2 115.	D	Hydrogen, Deuterium	(11^2)	Fragments of several hydrocarbons, such			
3 HD.	. 113	Hydrogen-Deuterium,		as mechanical pump oil, diffusion pump			
4 He		Helium		oil, vacuum grease, cutting oil, and			
7 5		No known elements		organic solvents.			
6 C'	•	Doubly Ionized C ¹²	Rare				
7 N+	4	DI M ₁₄	Rare				
8 O 1	+	DI O ₁₆	Raic	NOTE 2			
9		No known elements		Fragments of several chlorinated			
10 Nc +		DI Nc ²⁰	Rare	hydrocarbons, such as carbon			
II Ne 1	+	DI Nc ²²	Rare	fetrachloride, trichloroethylene and many			
12 G		Carbon, Carbon Mone	rxide F,	Freons.			
		Carbon Dioxide F					
13 CH,		Methane F, Carbon Iso	otope				
14 N. C	CH ₂	Nitrogen, Methane F o	or Note I	NOTE 3			
15 CH ₃	•	Methane F or Note 1		Fragments from both straight chain			
	.H4, NH2	Oxygen or Carbon Mo Methane P, Ammonia		hydrocarbons and benzene ring hydrocarbons.			
	NH ₃	Water F, Ammonia P					
18 H ₂ C)	Water P					
19 F		Fluorine or Freon 1		*See Isotopic Ratio Chart on back			
20 Ar+	+, Nc, HF	Dl Argon, Neon Hydro	ofluoric acid				
21	_						
22 Ne ²²	2	Neon isotope					
23							
24 C ₂		Sec Note 1					
25 C ₂ H	1	See Note I					
26 C ₂ H	12, CN	See Note 1, Hydrogen	Cyanide F				
27 C ₂ H ₃ , Al. HCN		See Note 1, Aluminum	•				
		Hydrogen Cyanide					
28 N2,CO, C2H4, Si	CO, C ₂ H ₄ , Si	Nitrogen, Carbon Mon	oxide.				
		Ethylene P, Silicon					
29 CH ₃ CH ₂	CH ₂	Ethane F or Ethanol F	or				
		Isopropyl alcohol F					
	6. NO	Ethane P. Nitric Oxide					
	H₂OH, CF	Phosphorus, Methanol Freon F	F, Ethanol F,				
	СН3ОН, S	Oxygen, Methanol P, S	Sulfur				
33 HS		Hydrogen Sulfide I					
	s, s ³⁴	Hydrogen Sulfide P. St					
35 •C1	37	Chlorine isotope, See N					
_	Ί, Λτ ³⁶	Hydrochloric acid, Arg					
37 •C1 ³		Chlorine isotope, See N					
38 HCI		Hydrochloric acid or Se	ee Note 2				
39 C ₃ H		See Note 3					
40 Ar, 0	C3H4	Argon, See Note 1					
41 C3 F	15	Sec Note 1					
42 C ₃ I		See Note I					
43 C ₃ H	7. CH3CO	Note 1, Acetone I: or					

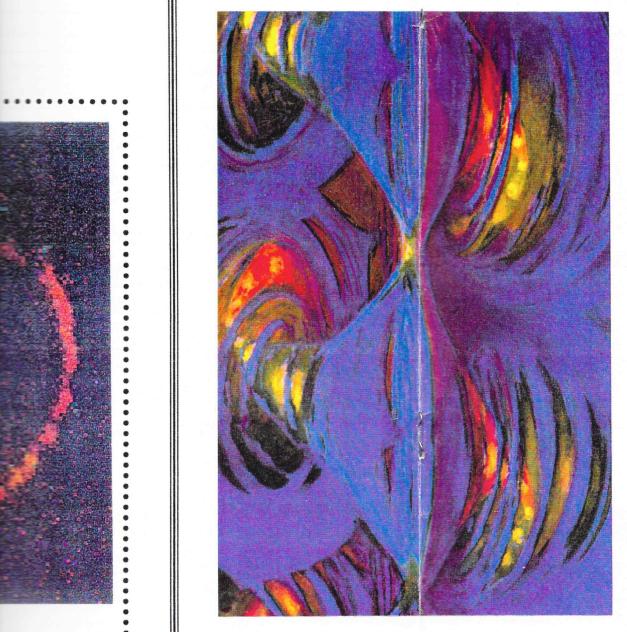
Page from mass spectra tables showing no known element at atomic mass 5



OBJECT 1987-A super nova



Note the similarities between photos on these pages, the case of Karl Gauss, and The Wa



THE WAVE OF CREATION

Note the similarities between the two Hubble telescope photos on these pages, the catenoid/pseudosphere geometry of Karl Gauss, and The Wave painting of Walter Russell.

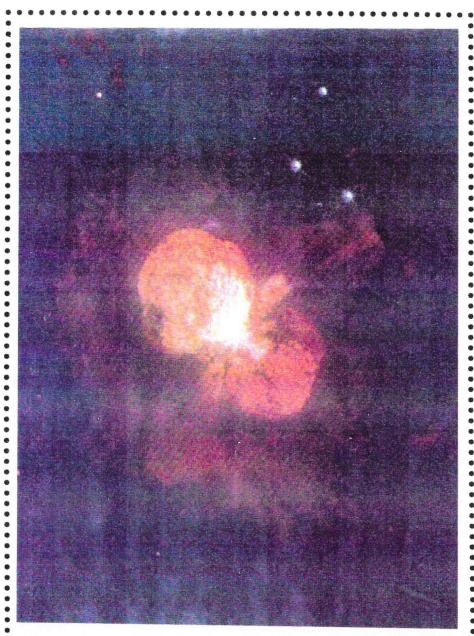
HU Exp



creation

he two Hubble telescope

id/pseudosphere geometry
ainting of Walter Russell.



HUBBLE PHOTO OF ETA CARINAE Exploding star shows 2 nitrogen plumes

atomic mass 5 (⁵Li) and at atomic mass 14 (¹⁴N). The relative heights of the lines represent relative quantities.

In addition, two types of emission spectrometers were employed. The first was a Varian 175 atomic absorption spectrophotometer with custom parts added to facilitate its use as an emission spec. The second is an energy inventory

device for 360 lambda to 800 lambda wavelength. The second might lead to photovoltaic interfacing info. Transmutation indication was evident from earlier experiments with Toby Grotz and Dr. Tim Binder using these devices (see Fulcrum V1, #2).

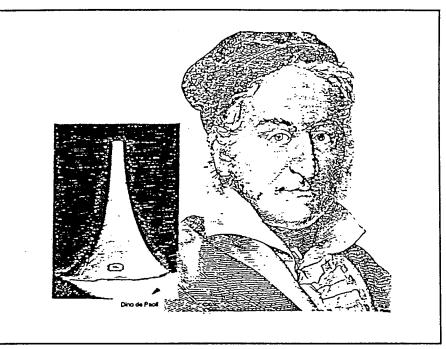
The late physics nobel Laureate Julian Schwinger of UCLA predicted the creation of ⁵Li from cold fusion.

Ironically, in 182, Karl Gauss postulated a simple geometry which explains gravity, electricity, magnetism, sub-atomic structure (from which the Sommerfield fine

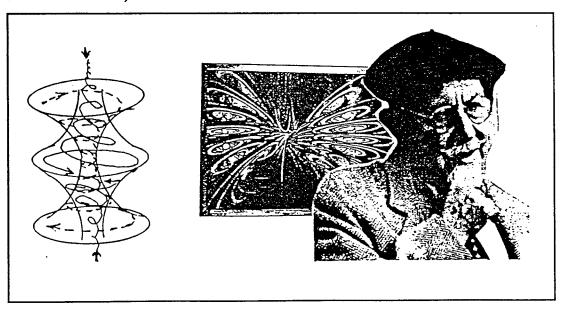
structure constant can be derived) and which

explains the catenoid and pseudosphere geometry involved in matter formation.

Walter Russell from 1926 to 1960 was describing the same geometry of motion and, as a world class architect, sculptor and I presented a paper reporting on the success of emission spectroscopy plasma experiments which supported the ideas of Gauss and Russell at the 1994 International Symposium on New Energy, Denver, CO. At that time, I promised to follow up the work with a mass spec. or RGA which gives more definitive data. This paper reports on the follow up (i.e., the application of Gauss and Russell



Karl Gauss



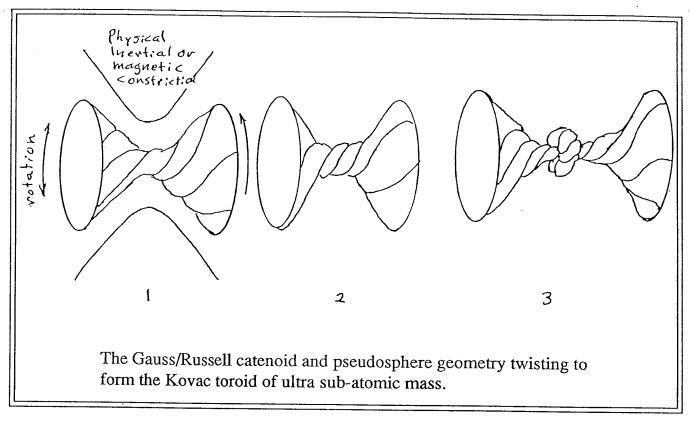
painter, left a very clear record of what he called The Wave of Creation.

ideas to gravity and cold fusion, with the addition of TOROID KNOT IDEA which is my own).

It is this author's opinion that plasma shaping simulates the space bending described by Gauss and Russell as it applies to cold fusion and assume the plasma rotates and compresses like the rubber band of a toy airplane as you continue to wind the propeller. At first you get only a spiral catenoid shaped rubber band. If you continue to put motion into the system by continuing to wind the rubber band, the wound rubber band starts to form "knots"

flow of space rushes past nearby mass, it pushes that center of mass towards the first center of mass.

In this way, the flow of space to the centers of mass becomes gravity between the centers of mass. The weight of any atom group per unit volume then would be related to what rate that group creates space bending (or consumption of space motion). Two flexible rubber hoses submerged in the water of a fish aquarium, each having a separate



in the windings. The author claims that this knot is like a toroid at the center of the rubber band (catenoid), and that this knot, by analogy, represents the formation of ultra sub-atomic particles which radiate their energy as electromagnetic force or coalesce into the sub-atomic particles of today's classical atomic physics. The toroids of fast moving, tightly compressed or wound space have the option of axially radiating energy or continuing the toroid motion (as mass). Either way, more space is consumed by compression at that location (the center of mass). As more space rushes in to fill the void left by the winding/compression, a flow of space to the center of mass is created. As this

pump at the other end of the hose, would pump water out of the tank at different rates depending on how fast each pump was running and the diameter of each hose. Both hose ends (ideally) would end up sucking the other end into itself (like gravity attraction) which is really the water flow pushing the hose ends together. The hose with the faster pump would be causing faster flow, have more pull, and by analogy would have more weight per unit volume (assuming the hoses were the same diameter).

With regard to cold fusion, the author simply put the toroid complexes back into the hostile space bending location where they could unravel (radiate energy) into their neighbor or borrow energy from

their neighbor unraveling to cause whatever net energy consumption or radiation transformations. This changing is only possible at low net energy levels of cold fusion if the proper space bending (squeezing together of the toroids - torquing the toroids with space motion nearby) is present. The space bending can be accomplished by the physical boundary imposition of the inside walls of a microscopic cavity on the surface of a catalytic metal like Ni, Fe, Pd, Pt, etc.. This space bending can be accomplished any number of ways yet to be discovered, like the magnetic fields of the author's device or the capillary walls of the author's glass frit fusion cell (of the May '94 New Energy Symposium) or the ceramic sintered frit of the Japan device. Remember, a sintered frit might be a proton conductor but it also has a capillary hole surface.

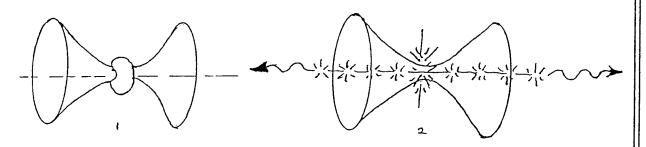
The MAIN POINT IS THAT EACH DESIRED CHANGE HAS A SPECIFIC GEOMETRY OF SPACE BENDING TO ACHIEVE THAT CHANGE. The math

associated with the Karl Gauss geometry is presented in Winter '94, 21st Century by Lawrence Hecht. The geometry envisioned by Walter Russell is available through the University of Science and Philosophy, Swannanoa, Virginia.

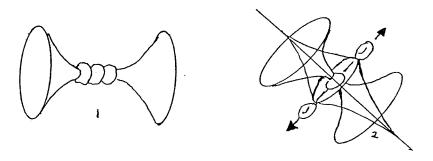
A spark hitting a stainless target like the Shell device can create a capillary dent and the required magnetic field to initiate the space flow of the proper geometry to cause available hydrogen to undergo cold fusion. The number of dents would be easy to regulate as would the cold fusion as would the life and output of the cell.

In all this, the unique contribution of the author is the toroidal knot idea added to Russell/Gauss geometry along with experimental evidence, which until now was not available. The author's experiments show a cold fusion cell does not need water, metal, or even electricity for ion transport. The author's cold fusion cell used only a gas and magnetism to create ⁵Li. This does not mean a plasma or electricity wouldn't help. It simply means the geometry of space bending is the

Once the mass (toroid) is formed, it can radiate energy out the central axis by unraveling,



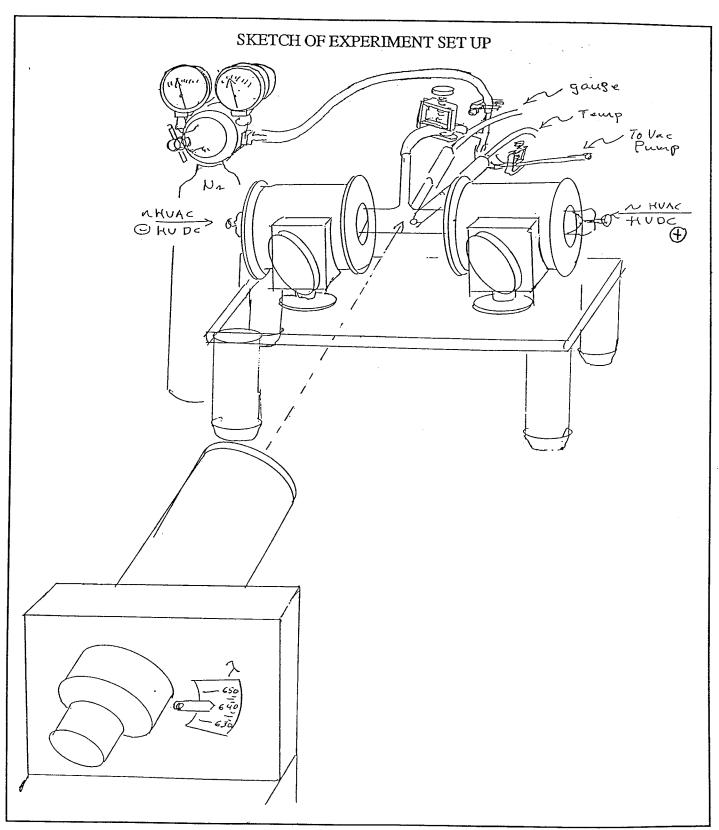
or it can leave the system at 90° to the central axis as mass.



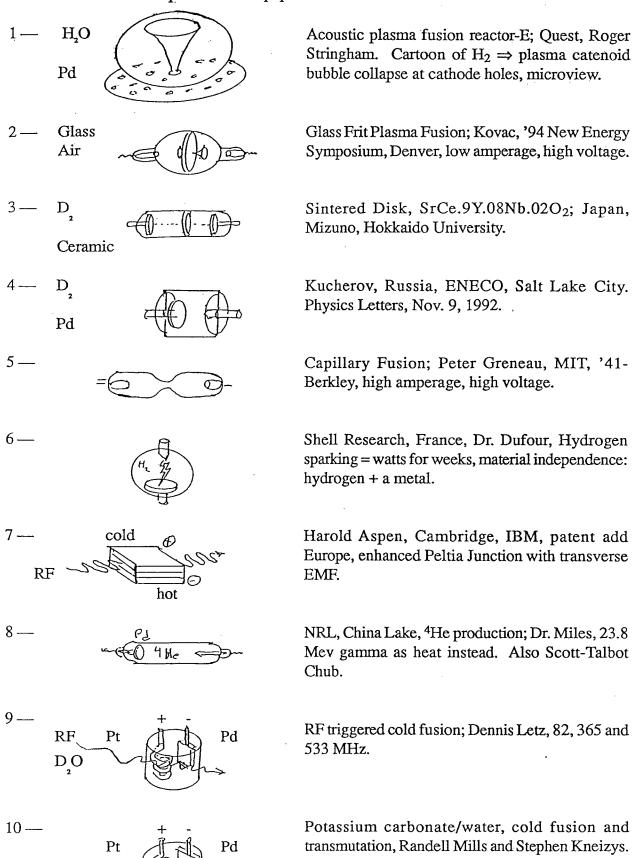
Notice the simularity to page 24 (1987-A super nova). The question might be asked how such order comes out of the disorder of space.

fundamental mechanism. It is fascinating to think the latest photos from the Hubble telescope (called a new mystery) of object 1987-A could be explained in the same way. This is also true of the new laser star telescope photos of the ORION

nebula. Both of these objects show proper geometry as well as proper toroid location, as well as proper energy radiation direction to agree with this theory. See pp. 24-25.

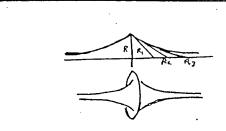


Recent cold fusion experiments, as drawn below, can be explained by space moving in special interrelated geometric formations as explained in this paper.



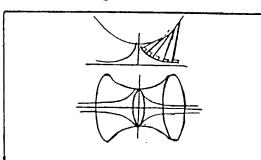
HO

The charts on this page are from Ron Kovac's May 1994 New Energy Symposium paper and are included herein to give you a visual representation of the catenoid and pseudosphere geometry.



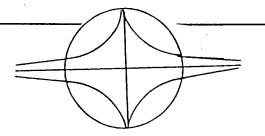
pseudosphere from rotated tractrix: (length of curve tangents to x-axis all equal, $R=R_1=R_2=R_3$) fig. 1.

A catenoid results when all the perpendiculars to the tractrix are likewise rotated 360 degrees about the x-axis.

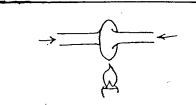


Normals to tractrix describe catenary which rotated becomes catenoid. fig 2.

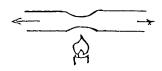
When the two shapes (catenoid and pseudo-sphere) are superimposed, you get a geometry which was intuitively painted and explained as the creative and destructive process of nature



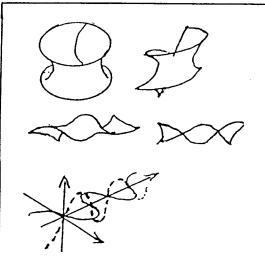
Newtonian (pulling) gravity equivalent potential is a sphere. Pushing in from all directions equivalent to potential gravity is a pseudosphere. the area of the pseudosphere of radius R approaches that of a sphere of the same radius, yet pseudosphere's area is infinite. fig 8.



The pseudosphere results from heated glass tube pushed inward. fig 4.



Catenoid results from heated glass tube pulled outward. fig 4b.



Slit and extended catenoid describe electromagnetic F field and B field by projection. fig 6.

A Further Report on the Russell Science Research — The World Balance Through Free Energy Project.

by Dr. Timothy A. Binder

Readers of *Fulcrum* are already familiar with the past demonstrations of transmutation that Ron Kovac, Toby Grotz and myself have achieved and here is a brief summary of that work:

Working with one possible geometrical shape of the magnetic fields that Walter Russell described in A New Concept of the Universe, we were able to apparently demonstrate the transmutation of water vapor into fluorine and nitrogen as reported in Fulcrum, Vol. 1, #2. In further unreported experiments, we succeeded in transmuting nitrogen into hydrogen and several other elements.

These experiments differed from what Russell described in that we were using vacuum tubes and vapor as opposed to tubes with "a few millimeters of water" in them. We reasoned that Russell must have had incredibly strong tubes to be able to withstand the tremendous pressures that water heated to red hot temperatures would produce and that the same phenomena could be produced under vacuum and in a plasma state with lower pressures.

Russell heated the tubes, thrust them into the magnetic field arrangement to cool down and from the evidence of lab results achieved transmutation of water into nitrogen. Russell stated that he achieved the transmutation of water into seventeen different results where, "in every case the resultant gases differed". By these means, he was able to vary the amounts of transmuted hydrogen, oxygen and nitrogen.

Russell stated that by shifting the field arrangement and/or the polarity strengths he was able to prolate or oblate the oxygen nucleus into nitrogen or hydrogen and vice versa. We found by shifting the shapes of the magnetic fields with our "transmutator" after heating our gas samples in the emission photospectrometer by running an electric current through the plasma and then allowing the heated gas to cool down in our magnetic field arrangement, we were able to demonstrate transmutations as identified by photo emission spectroscopy.

In June and July of 1994 with the funds that had been donated to the Russell Science Research by Barbara Edwards and Frances Allison, Ron Kovac was able to assemble and bring on-line a computerized mass spectrometer (CMS — also called a residual gas analyzer). This device gives the most widely accepted irrefutable evidence for the transmutation experiments that we are doing.

In July of 1994 after Ron had assembled the CMS we embarked upon a simple series of experiments designed to show the transmutation of nitrogen gas plasma into hydrogen gas. We were working with a different arrangement than used previously to shape the magnetic fields. We knew that to go from nitrogen to hydrogen required a jump down from the fourth to the third octave, and that this would likely mean a tremendous pressure change would be necessary and/or demonstrated.

As the experiments were being conducted, we had continuous monitoring of what was occurring in the CMS by printed readout as well as a video recording of the sequence. What Ron later observed on study of the data was truly amazing. In our first run, we had transmuted the nitrogen gas plasma (¹⁴N) into helium4 (⁴He) and lithium5 (⁵Li) in the amounts of 3.75% and 2.5%, respectively, from the parent nitrogen gas. The transmutation had occurred not when we expected it to, namely after being heated and then allowed to cool down in the field, but simply as the plasma was sitting in the field before any heating.

This was later repeated with the same results using the CMS and leaving the field arrangements unchanged. This gives us more data to work with to establish the exact conditions necessary to transmute any element into any other element. We will get more as we are able to do more experiments and observe what different field conditions and temperatures produce.

Ron's paper as printed in this issue describes the experiments we have done in terms of cold fusion and in terms of Karl Gauss's geometry. I will now comment on his descriptions and show the relationship between Gauss's and Russell's geometries as I understand them.

First, let's notice that the creation of lithium5 from nitrogen was remarkable from two aspects; number one it was a transmutation of nitrogen into lithium which by conventional science is impossible; the number two point is that ⁵Li is proclaimed by standard literature and science to be non-existent. Before our July experiments, this particular atomic structure and mass of lithium (⁵Li) was one of the missing links in the nucleonic tables; its existence had been predicted but never demonstrated.

Transmutation of ¹⁴N to ⁵Li, a heretofore unseen and unknown isotope of lithium, is significant for this research team in that there is no way the experimenters could have *seeded* or *contaminated* their results. The results are indisputable and can be easily reproduced in any sophisticated laboratory.

Let's also notice that the viewpoint in Ron's article was craftily chosen and put in the language of cold fusion terminology in an attempt to circumvent resistance to the view and language of transmutation; and because cold fusion is where attention is focused in new energy research. Thus, he begins his article saying that "the cold fusion process that gave these results uses only plasma of N₂ and magnetic shaping". He immediately puts the reference box for the article in the cold fusion arena rather than transmutation. He assumes that a cold fusion process occurs as we created ⁴He which are the "common ashes of cold fusion".

Ron cites the many different methods and materials that have been used to demonstrate cold fusion in several very prominent research facilities since Fleischman and Pons did their first cold fusion experiments in 1989 in Utah. He then makes the profound point throughout his article that all of these many different processes are all functioning because of a common fundamental feature: namely the "geometry of space bending".

In Russell's words, all there is to the material universe is motion in two basic directions: into and away from a system center. These basic archetypes of motion create different gyroscopic forms or variations on a vortex creating variations on nature's two basic forms, the cube and the sphere, male and female, respectively.

What Ron is pointing out is that all the various cold fusion processes are in their own fashion working by engineering the bending of space or the formation of vortexual motion focusing heat and light in the center of the system and radiating that intense tightly wound up motion back out as energy (heat of cold fusion) or mass of elemental transmutation via the vortex equatorial plane. This latter manifestation is identical to our sun or any solar system generating heat and baby planets out of itself by way of the equatorial plane. See pp. 223-230 of *The Universal One* for Russell's description of this universal phenomenon.

In Ron's toroid knot analogy, he says that energy is expressed by unraveling the knot back out the central (polar) axis and matter is expressed by leaving the knot system at 90° or right angles to the central axis.

This appears to me to be dissimilar to Russell's cosmogony in that energy and mass increase by way of the polar central axis in centripetal direction and they both decrease by way of the equatorial axis through centrifugal motion. Russell says the knot is wound up by the north-south charging poles and unwinds via the east-west discharging equatorial poles. He does not allow the knot to unwind in the same axis that it winds up in. He says that the direction of winding when it reverses is now not the central axis anymore, but the equatorial axis that is at 90° to the central axis. When this unwinding process reaches its end at cube wave field boundaries it then reverses direction and potential and becomes a polar central winding up axis. Russell says that matter and energy turn inside-out and outside in.

If we understand Ron's unraveling of the knot through the central axis to mean what I have stated as Russell's cosmogony, only then are they congruent. This is why in Russell's diagrams of wave motion he shows both pairs of spirals winding and unwinding within each other, which Ron has shown on page 28 of his article in a similar way where he has a pseudosphere and catenoid

superimposed on each other. Here, I interpret the pseudosphere to be the wind up spiral motion and the catenoid the unwinding spiral motion with the toroid knot representing the mass formation and the spirals of pseudosphere-catenoid geometry representing the space that is becoming matter or matter that is becoming space.

Ron makes the salient point that none of the materials that the various researchers have used are essential. The only essential is what Ron is calling "the bending of space geometry". The "bending of space geometry" is a vortex motion controlled by electric potential fields that science calls magnetic and electric fields that curve low potential motion in a centripetal direction to form density and high potential and curve high potential motion in a centrifugal direction to form tenuity and low potential. This process is a focusing and unfocusing of light-motion. When seen in this light, all the various successful cold fusion experiments can be understood to function on this basis. All the unsuccessful experiments, or those that start and then heretofore inexplicably stop, are now understood in terms of the successful or not successful bending of space geometry or vortex formation. For example, if the surface of a metal used in the experiment is not conditioned properly to maximize the holes in it that guide the vortex, there will be no reaction; or if the intense heat generated in the hole by the vortex melts the metal and fuses the hole shut and so on to fusing all shut, then the reaction will stop. The point is to create a vortex and control it.

With our quartz plasma tube and electrodes at each end and externally focused magnetic fields, we were able to generate this geometry of space bending or vortex formation in such a way that we changed the vortex motion of nitrogen (14N) to the vortex motion of ⁵Li and ⁴He. The final quantitative analysis (performed by measuring and comparing the relative peak heights on the CMS charts) of the first processing showed 2.5% ⁵Li, 3.75% ⁴He and the remaining 93.75% as untransformed nitrogen. When we reprocessed the same tube, the percentage of ⁵Li went to 6.5%. This was done with little temperature change, and if temperatures were modified, we might have

vastly increased the amounts of transmuted lithium and helium.

Ron says that what we had done was a cold fusion process, although we did not measure any excess heat released, even though it may have occurred. At least part of his basis for claiming that it was cold fusion was because of the common hall mark of cold fusion in the appearance of ⁴He. It is worth mentioning that many different transmutations have been observed in cold fusion experiments even though transmutation was not the purpose of the experiment, much as we observed the creation of ⁵Li in an unexpected way from our experiment.

Our future experiments need to quantify any excess heat production (or even possible cooling), pressure changes, mass balances, and beta, alpha and neutron particle emission as vortex motion quantity and quality are changed in direction and degree.

If we did achieve the observed results through a fusion process as conventionally understood, we should be able to show the reactant pathways. For example, 100% ¹⁴N + magnetic fields $\Rightarrow 93.75\%$ ¹⁴N + 3.75% ⁴He + 2.5% ⁵Li by what mechanics and geometrical transformation? Since all we had was nitrogen gas and magnetic field shaping and ended up with two additional elements, we cannot really call it a cold fusion process as there were not two elements that could be fused to form a new one as in conventional thinking. Rather, we had one state of motion identified as nitrogen that was changed to some amount of two new states of motion.

The vortex known as nitrogen was subject to an external magnetic field vortex (what Russell calls an electric field) that changed some of the nitrogen vortexes to other shaped vortexes or from a gyroscope spinning in the plane of nitrogen to those spinning in the planes of ⁵Li and ⁴He.

Ron explains the cold fusion and transmutation processes in terms of Karl Gauss's pseudosphere-catenoid geometry determining the bending of space to form what Ron then calls toroid knots. Let's again look at these ideas and geometries and see further how Russell described all of them in his cosmogony.

To me the pseudosphere appears to correspond to the centripetally winding up male preponderance integrating vortex, and the catenoid corresponds to the centrifugally unwinding female preponderance disintegrating vortex. The toroid knot corresponds to the more or less spherical form at the center of mass formation, the atomic nucleus of modern science that Russell describes as varying forms of prolating and oblating spheres, the true sphere being a special case known as carbon. The prolating spheres are formed from rings winding up by being thrust inward centripetally to eventually close a hole at the center to form a sphere at the carbon element wave amplitude position standing upright gyroscopic plane position. Oblating spheres are formed as rings are centrifugally projected outward from the system center, forming gradually bigger holes in the former spheres center, as the gyroscope spins slower and lies down through the third, second and first locking point potential positions.

In Russell's cosmogony, the two centripetal vortices spin in the same direction if you look at each base to assess the spin direction. In this way, they pull or are thrust into each other or create a high potential gravity center with heat. The centrifugal spirals that exit at 90° to this high potential-heat center spin in the same direction as their parent spirals, one going one way and its pair the other way if you consider their spin direction from their mutual base or the same way if you look at the spin from their apexes.

Fulcrum editor Chester Hatstat has suggested another analogy to explain this motion that further clarifies the toroid knot analogy. He says why not think of the two centripetal vortices as joining apex to apex and heated at that point which will make them more malleable and subject to expansion. If you blow into both or either base end of the vortex spirals, the common heated center will expand in a balloon like, toroid, or spheroid fashion. Why not indeed? This is what happens at the center of the vortex. The center of the cyclone is where things are hot and malleable and cannot stay compressed into form and thus expand centrifugally outward to cool.

Ron gives us an interesting and useful gravity

mechanics in the form of two hoses in an aquarium pumping water out. These two hoses each represent atomic mass systems. The faster the pump works the more mass it will demonstrate. Two such pumps in proximity tend to attract each other if their mutual charging vortexes align. If we go on and notice that instead of aligning charging (sucking or vacuum) vortexes, we align their discharging (pushing or pressure) vortexes, which is where the other end of the hoses are discharging under thrusting pressure rather than intake, vacuum or charging vacuum, they will mutually repel. This is an application of Bernoulli's theorem about water pressure in a pipe used as more than an analogy to describe gravity mechanics as it is a real model of gravity mechanics. See my answers to questions article about gravity mechanics and Bernoulli's theorem for a description of this model. Anything that demonstrates attraction and repulsion demonstrates gravity by the whole of the Russell Cosmogony.

In this way we can see how gravity as a whole process as exhibited in a universal systems model called the vortex demonstrates an inward thrust (or pull depending on point of view) and an outward thrust (or again a pull depending on point of view). Attraction and repulsion between two entities are thus seen to be dependent in part on vortex alignment. Other factors influencing attraction and repulsion include all other seventeen dimensions described in The Universal One. The dimension corresponding to what I am describing as vortex alignment appears to me to be plane of rotation. It is Russell's view that understanding this alignment of vortex gyroscopic planes of motion is crucial to successful demonstration of transmutations and is an essential mechanical explanation for the underlying modus operandi as he stated in A New Concept Of The Universe on pages 90, 91, & 129.

Ron describes toroid knot formation in an easily understandable way for us by the analogy of winding up a rubber band to form knots in the center. This rubber band winding is the space bending of motion in the geometry of the pseudosphere that Karl Gauss described to form mass and is the same centripetally directed motion

to the gravity center of a system and mass formation that Russell described as the appearance of matter in variations of spherical-cubical forms with the true sphere and true cube as special cases.

Ron goes on to describe that this tightly wound toroid (centripetally bound and compressed) mass can then either unwind back through its axis (as it turns inside-out) as energy production (heat, electricity and/or light), or it can unwind equatorially as a catenoid spiral in secondary mass formation to form various elements. Thus we see mass-energy transformations occurring again as in Russell's descriptions of motion to and from wave field cube wall boundaries to and from mass spherical center boundaries.

As motion is progressively wound up along the centripetally directed polar axis, we witness increasing density and potential for mass transformations in the form of heat and light. As motion reverses to centrifugality and is spun out in decreasing speed from wave field-mass centers, we witness matter frozen into form and the ever decreasing potential for mass transformations in the form of heat and light as the mass is released into lower potential and lower potential fields as heat and light along the path of its journey.

Mass transformation are a result of the accumulation and redistribution of mass-energy, or they result from a change in the condition of motion to or away from a system center or change of direction of motion. Any mass as it is centrifugally directed to lower pressure zones expresses and radiates electromagnetic (EM) energy becoming cooler, dimmer and of lower voltage as it expands centrifugally outward from its system center and vice-versa. An atomic system (any system) leaks or sputters out various amounts of EM energy as it converts wound up potential into these expressions of energy-motion. The centripetal winding increases the potential of and for electric pressure, light and heat prior to, during

and after the atom jumps to the next locking point position, and vice-versa as it jumps to the next lower locking point position. It would appear that the same process occurs as motion-matter jumps up or down an octave just as it does jumping up or down from one locking point to the next within the same octave. The time element in going from octave to octave as well as pressures, etc. would be significantly greater than from one locking point to another in the same octave. All expressions of motion exhibit endo- or exo- thermic EM energies.

The various charts in Ron's article show the actual measurements done by the CMS of the experiments. There is a standard specs of the nitrogen gas and then the specs showing the appearance of ⁴He & ⁵Li. The top CMS chart on page 22 shows there was no contamination of the nitrogen with lithium or with helium before subjecting it to the magnetic field vortex shaping experiments.

All the research that we have done to date has validated Walter Russell's basic concepts. The University is actively seeking more funding to continue this vital research. With sufficient funding to put Ron, Toby, and other scientists I have in mind to work on this research and development full time, we should be able to produce new non polluting and sustainable energy sources and materials and help provide the physical basis for a peaceful civilization. The attention that should be focused on the Russell cosmogony as a result of continued physical demonstration of the cosmogony in new energy sources, materials and products would also focus more attention on the spiritual nature of the Russell cosmogony and guide us to transforming all of our institutions towards balance, sustainability and peace.

Faithfully yours,

Dr. Timothy A Binder

The following article comes via Toby Grotz, the electrical engineer on the Russell Science Research Team. Paul Raymond Jensen offers his idea free to the world. Thank you Mr. Jensen. We welcome your feedback, comments, or questions regarding this or any other article.

THE UDT

by Paul Raymond Jensen

I have built a transformer which supplies more power to its load than is drawn from its primary source.

I named this device The Unidirectional Transformer (UDT), because the magnetic <u>reaction</u> of the load current does not affect the magnetic <u>action</u> of the primary circuit.

The UDT is composed of a parallel LC resonant primary, a split secondary, a gapped magnetic core, and a "feedback winding." Virtually the only input power needed is that used to magnetize the core.

The magnetic core I used came from a small 60 Hz commercial power transformer made of interleaved silicon steel E and I laminations. I took the core apart, separated the Es and the Is, and made one stacked E core and one stacked I core from the laminations. Then I filed down the center leg of the E core about 15 mils to gap the combined E-I transformer core. The resulting μ of the core at 60 Hz was about 100.

The primary winding is wound on the center leg of the core. The two secondary windings are wound on the two outer legs of the core and are series connected. Both secondary windings have the same number of turns. The "feedback winding" is wound over the primary on the center leg and is connected in series with the secondary.

The free-energy action of the UDT follows directly from the laws of magnetic circuits.

Consider what happens when an AC sine voltage is applied to the UDT primary. A magnetizing current flows, which can become rather high

because of the low μ of the core. Fortunately, gapping the core results in a fairly constant μ through the entire AC cycle, up to a peak H of about 720 A-T/M. This results in a constant primary inductance, which permits parallel LC resonation. Resonating the primary reduces the magnetizing power to that necessary to match I^{2*} R losses in the primary and the hysteresis losses in the core.

Magnetizing the core results in an AC sine voltage being induced across the secondary. The magnetic coupling between the primary and the secondary is very high, but the core area within each secondary winding is only one-half that of the primary. This means that the volts/turn of the secondary will be only one-half that of the primary. For the secondary voltage to equal the primary voltage, the secondary must have two times the number of turns in the primary.

The primary also induces a voltage across the feedback coil, but the purpose and characteristics of the feedback coil will be explained later.

When a current is drawn from the output, the two secondary windings each generate a magnetomotive force (MMF) directed against the MMF of the primary. The MMF of each secondary winding "sees" a series-parallel magnetic circuit through the transformer core. One magnetic circuit, "seen" by each secondary winding, is through the center leg of the core. The other magnetic circuit "seen" by each secondary winding is through the two outer legs of the core.

The resulting magnetic flux generated by the MMFs of the two secondary windings is depen-

dent upon the reluctances of each of the magnetic circuits. Because the center leg is gapped, it has a higher reluctance than do the outer legs. This means that less magnetic flux from the secondary will pass through the center leg than will pass through the outer legs.

In my transformer, the reluctances of the magnetic circuits through the center leg were three times higher than the reluctances of the magnetic circuits through both outer legs. This was difficult to achieve and required hours of filing, polishing and fitting of the E and I cores. The alternative was to increase the gap, which was not acceptable in my particular design because I was driving the transformer at 60 Hz and could not afford any additional loss of μ in the core.

Since the reluctances of the "center leg circuits" were three times higher than the reluctances of the "outer leg circuits," one-quarter of the secondary flux passed through the center leg, while three-quarters of the secondary flux passed through both outer legs.

The magnetic flux from the two secondary windings cancels in the "outer leg circuits," leaving only one-quarter of the total flux generated by the output current to react back upon the primary. This resulted in a <u>current gain</u> in the secondary, relative to the primary. Lenz's law was bypassed, and free-energy resulted.

An alternate explanation for the current gain in the UDT is to consider <u>each</u> secondary winding as acting as the primary winding for the <u>other</u> secondary winding when an output current is drawn because the two secondary windings generate geometrically opposing fields.

Now consider the "feedback winding." It is connected in series with the secondary and is wound over the primary winding on the center leg of the core. When the core is magnetized, an induced voltage will appear across the feedback winding which will subtract from the voltage across the secondary. The purpose of the feedback winding is to cancel the remaining secondary flux passing through the center leg of the core. It effectively isolates the currents in the primary and the secondary at the cost of a reduced output voltage. The feedback winding generates a mag-

netic flux equal and opposite to the residual magnetic flux from the secondary when an output current is drawn.

Given the above example, where three-quarters of the secondary flux self-cancels in the "outer leg circuits," the feedback coil will only have to oppose one-quarter of the total secondary flux. Since the feedback winding has two times the core area of the secondary windings and carries the full output current, it need have only one-quarter the number of turns of <u>each</u> secondary winding. However, this will reduce the output voltage by 25 percent. Therefore, to achieve the originally desired output voltage, the total number of secondary turns must be increased by the factor 4/3; the feedback coil must then have one-quarter of the number of turns of <u>each</u> secondary winding in this <u>new</u> secondary circuit.

Given the condition in which the feedback coil perfectly cancels all the residual secondary flux through the center leg of the core, the power drawn from the output will be nearly independent of the primary input power. The primary input will be the magnetizing power and nothing more. The output power will have a negligible phase angle (due to the leakage inductance) if the μ of the core (as seen by the primary) is at least 100.

In practice, it is best if the feedback winding is short a turn or two, thereby preventing series inductance in the output at the cost of a small increase in the primary input power. A parallel resonant primary circuit allows for great input power reduction while ensuring voltage stability and linear operation under varying output loads.

The UDT can be used without a resonant primary circuit for the amplification of any time-varying signal. The main flaws of the UDT are the (normally) low primary μ and the very long secondary wire required to ensure isolation of the input from the output. A single or double stack of E-I laminations seems to provide the optimum core geometry, all factors considered. At high frequencies it becomes practical to use ferrite cores with "center leg circuit" reluctances less than their "outer leg circuit" reluctances because the volts/turn of each winding can be made very high. Conventional transformer design techniques should be

used once the basic UDT topology has been determined.

I have invented and developed the UDT on my own, without benefit of any knowledge of other free-energy devices, if they exist, which utilize the basic principles of UDT operation.

Please feel free to use this information as you desire. However, I hope that no one will attempt to patent and control this type of transformer. The

time on Planet Earth is 15 minutes before midnight; there is no time left to waste. Free-energy technology is not meant to be controlled by vain and greedy parasites who wish to use a gift from God to exploit their fellow man. Free-energy technology represents a spiritual transition of the human race. Free-energy is not meant to be owned, period!

UDT EQUATIONS

Number of Turns = N

a = V(output)/V(primary)

V(Primary)/N(Primary) = V(feedback)/N(feedback) = V(secondary)/N(secondary)/2

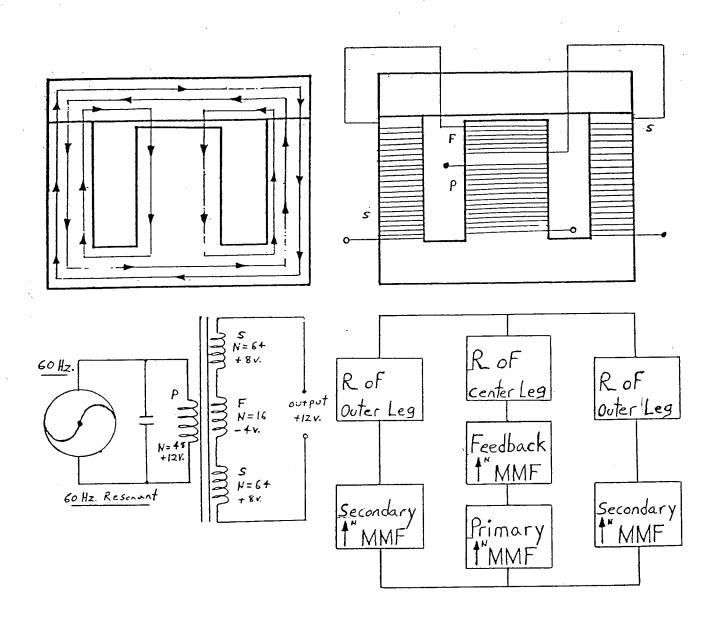
N(feedback) =

[N(secondary)/2] [(R of outer circuit)/(R of outer circuit)+(R of center circuit)]

a[N(Primary)] = [N(secondary)/2)-N(feedback)]

 $R = Reluctance = \Psi/\mu A$

See next page for schematic diagrams of UDT



- Paul Raymond Levsen

Schematic diagrams of UDT

The next article was written by Mrs. Elizabeth Nalls. Ms. Nall did not submit this to Fulcrum, she sent her questions to the University for a response from someone here. Since they raise issues I think need clarification in light of the Russell Cosmogony, I have elected to print her article with my response. I encourage any reader to also write us with their ideas, be they interpretive, inspired, or direct from Walter Russell's treatises on the subjects she addresses.

THE SPACE TIME PARADOX

by Elizabeth Nalls

I want to say in the beginning that I am not a scientist and this is not a scientific treatise. There will be no footnotes and no bibliography! My reason for writing it is to get something out that has been in me for some years and that just has to come out! And in hopes that someone sometime will read it and consider if there might not be something in it worth considering. Though I do not give any references, it is all based on books and articles that I have read.

I would like to start off by defining the terms in my title. My dictionary says a paradox is a statement essentially absurd and false. Not a statement that seems absurd and false but is really absurd and false when you look at it closely.

Space I would define as "that in which we live and move and have our being." But time is another matter. It has never been truly defined. I can say right off what it is not! It is not a fourth dimension of space. To say that it is is like saying that a banana is a variety of apple! A dimension refers to measurable size and shape. Time has no size and shape. Time is related to space because they are both aspects of — motion. Time, space, and motion are the three aspects of the reality that we are able to apprehend. That there may be other realities with other aspects than ours I accept as possible. I believe that both time and space are caused by motion. If motion should cease, then there would be no time nor space. Motion is the ultimate reality! And motion, when it is reduced to its ultimate, is energy or light! So then, what is time? We say, "I don't have time." or, "Give me more time." So is it a commodity? We say, "There is a time for. . ." Is it an abstraction? We say,

"Time and tide wait for no man." Is it a current that flows? We say that there is present time, past time, and future time. Does that mean that the past is back there somewhere waiting for us to get there? Can we travel ahead into the future or back into the past as science fiction has claimed? I say emphatically, "No!" Time is the succession of events, or happenings, and there is only NOW. Once something has happened, it cannot unhappen or happen over again. The past is still with us now, for the present is made up of everything that has ever happened. What is happening now is the cause of what will happen next. So the future is also made up of all that has ever happened plus now. The only place the past still exists is in memory, and nobody knows what memory is. The future only exists in what we call imagination, and nobody knows what that is. So how can prophets predict the future? It can only be because they have a much wider intuitive knowledge of what is happening now, and their subconscious mind puts it together to predict what will happen. It is similar to weather forecasting. The weather bureau receives information about weather from all over the world and from what is happening now forecasts what will happen in the future. The individual who seems to have traveled back in time has somehow made contact with the collective memory of humanity. There is no way his time travel could change history. It might change the way he remembers the past, but it does not change what really happened. Nothing that has ever happened can ever unhappen.

Before I leave the subject of time, I would like to say one more thing. It is absolutely essential for any organized society to have a common

concept of time. Otherwise, it would be chaos. There must be universally accepted divisions of time in order for groups and individuals to coordinate their activities with each other. The most obvious divisions for the earliest man was the alternating of dark and light even though they did not know what caused this. Then there was the changing seasons and the apparent motions of the heavenly bodies. Now each rotation of the earth is a day, and a revolution of the earth around the sun is a year. Man has divided the day into hours, minutes, and seconds. He has invented many ingenious ways to measure these divisions accurately. On sunny days, a sundial can mark the passing of hours. The hour glass measures the passing of time by the dripping of sand from one compartment to another. Now we have highly sophisticated clocks. Note that all of the measurements of time are based on motion, as are the divisions of time.

So then, what is the this space-time paradox? Some ten or fifteen years ago, I was reading a book about the newly invented Hubble telescope and the amazing information it made visible to the human eye for the first time. I can't remember the name of the book or the author, so I cannot find it. But the assumptions I found in it are generally accepted now --- the big bang, the redshift increasing with distance, the expanding Universe that seems to have no limit. At the time this book was written, the farthest objects visible were estimated to be about ten billion light years away. In other words, it was estimated that it took about ten billion years for the light from them to get to the earth! The author said a shift to the red end of the spectrum indicated that the object was moving away from us: the greater the shift, the greater speed at which it seemed to move. Since it took the light ten billion years to get here, that meant that the object was seen where and as it was ten billion years ago! And the farther away the object was, the greater the red shift. Then the author made the statement that the Universe seemed to expanding at an accelerating rate! Something inside my head said, "Whoa!" If it was moving away from us at a faster speed ten billion years ago than it was five billion years ago, it is

not accelerating, it is slowing down! If it is expanding in time, why does the Universe not seem smaller when seen in the past instead of seeming bigger and bigger the farther back in the past it is viewed? Hold on, you say, are you not admitting that it is possible to "go back in time?" No! No more than looking at a picture of my grandmother when she was ten years old is "going back in time." I am not looking at my grandmother, I am looking at a picture of her. When we look through a telescope and see the image of those distant galaxies, we are not seeing them; we are only seeing light that left them ten billion years ago. Would you expect my grandmother to look older in a picture made a hundred years ago than in one made fifty years ago? So why would a galaxy seem farther away ten billion years ago than another one five billion years ago if the Universe is expanding? And NOW where are those galaxies that were so far away ten billion years ago? And what becomes of the light that passes us by? Does it keep on going forever? And what about the light from the side away from the earth, does it continue forever in the opposite direction into infinity?

In the same book in which I read first about the big bang and the expanding Universe, I also read about the discovery of the curvature of light! It said the curvature was caused by gravity — the gravity of the matter of the Universe. If there had been enough time, the author said, light might even go all the way around, and we might see our own back! Was that the answer, I thought? Maybe it has gone all the way around — many times.

What reason is there to think that light has always had the same curvature? In a smaller, denser Universe, wouldn't the curvature be greater? The smaller, denser the Universe, the greater the curvature. This would explain the paradox. The farther away a galaxy seems, the closer to the center it might have been when the light left it. That light may have been traveling in a spiral for billions of years before it reached us. Some of those distant galaxies may be US!

And how many times are we seeing the same objects over and over: from the rear a long time ago, from the sides not so long ago, and from the front more recently? It is like being in a mirror

room in a museum! I have a picture I cut out from the Smithsonian made in the children's museum. There are only three actual children in the picture, but the picture shows a crowd of children extending into infinity! It is all done with mirrors! Looking at the picture, you cannot tell which are the real children and which are the reflected images. IN a sense, they are all images in the eye of the beholder, so none are real, or all are real!

Have you ever noticed that if you look at a rectangular aquarium from a corner angle, you will see twice as many fish. You are seeing the same fish from the side toward you and from the side away from you, due to the bending of the light by the glass side.

My house is round. Instead of a hallway, it has a round room in the center about twelve feet in diameter. I have three mirrors in this room. Depending upon where you stand, you can see several images of yourself: front, back and side. I often wonder what it would look like if it had been built with narrow mirrors all the way around? I try to imagine walking through such a room! It would be a kind of paradigm of the Universe, would it not?

In our present state, we cannot know the size, the shape, or the age of the Universe. It is at the same time finite and infinite, real and unreal, and since time is based on motion — the rotation of the earth and its revolution around the sun, what was a day or a year before the earth was formed?

No matter now complicated scientists try to make reality seem, it is actually very simple and orderly. The fundamental reality is light, and if we understand light, we would understand everything. "And God said, 'Let there be light,' and there was light."

If you have difficulty conceptualizing a real/illusional and finite/infinite Universe, think about this: nothing beyond the earth and its satellite, the moon, is where it seems to be! All the stars, planets, and galaxies are in motion, and because of this and because of the time it takes the light from them to get to us (aside from the curvature of light), they are all more or less displaced. Now add in the curvature of light, and what do you get? Not only vastly displaced objects, but infinitely

multiplied objects!

Consider again a round room paneled with two-feet-wide mirrors. Imagine standing in the center of this room. What would you see? Obviously you would be reflected from all sides, front and back. That would not be all, though. Your primary reflections would also be reflected. The reflection of your back would be reflected in the mirrors in front of you. Your left side would be reflected on your right side, and vice versa. These reflections would be reflected — and so on ad infinitum! Can you visualize this? Now, imagine yourself walking around the room. Then, place a number of people walking around in the room with you. How does it look? Can you imagine it? I cannot!

The people in the round mirror room are multiplied and displaced by the reflection of light in mirrors, whereas the objects in space are multiplied and displaced by the curvature of light and the distance light has traveled.

Astronomers will not want to even consider this theory, I am afraid. If it is true, it will mean that it will never be possible to know what the Universe is really like. I have just finished rereading George Gamow's Matter, Earth and Sky. According to him, astronomers were very loath to accept the Big Bang theory because it meant the Universe must have had a beginning, and if it had a beginning, it must have had a Creator! Apparently, they have finally accepted it, and many of them now do believe in a Creator. But there is also the possibility that it is alternately expanding and contracting. Perhaps it always has been and always will be!

Elizabeth Nalls (Mrs. T.W. Nalls) Rt. 2, Box 2897 Demorest, GA 30535

Response from Chester Hatstat:

My understanding of the word paradox is somewhat different thanthat of Mrs. Nalls. My computer dictionary gives me the following:

par•a•dox (par-a-doks) n.

- 1. A seemingly contradictory statement that may nonetheless be true: the paradox that standing is more tiring than walking.
- 2. One exhibiting inexplicable or contradictory aspects: "You have the paradox of a Celt being the smooth Oxonian" (Anthony Burgess).
- 3. An assertion that is essentially self-contradictory, though based on a valid deduction from acceptable premises.
- 4. A statement contrary to received opinion. [Latin: paradoxum, from Greek paradoxon, from neuter sing. of paradoxos, conflicting with expectation.]

May I also throw some definitions for space, time, and motion, which are quotes from the works of Walter Russell. Much appreciation goes to Laara Lindo's computer generated index of A New Concept of the Universe (NCU) and the latest edition of The Secret of Light (TSOL) which contains a computer generated index!

ON SPACE:

from TSOL, p. 125

"The father principle multiplies light into density and high potential. The mother principle divides it into vapors and gases of lower potential. Light is thus multiplied and divided into suns and planets surrounded by *space*.

The *matter* of earth is the same as the matter of heavens with but one difference; VOLUME. And therein lies the secret of the universal pulse beat. Space is a division of solidity into tenuity. It is also a multiplication of volume at the expense of potential. Interchange between these two unbalanced opposites is the basis of all motion in this rhythmic universe."

from TSOL pp. 161-162:

"Much controversy has arisen as to whether light is corpuscular, as Newton claimed it to be, or a wave. There is much evidence in favor of both theories. It is both. Light is expressed by motion. All motion is wave motion. All waves are expressed by fields of equal and opposite pressures of two way motion. The entire volume within wave fields is filled with the two opposite expressions of motion — the positive expression which compresses light into solids, and the negative expression which expands it into space surrounding solids.

All space within wave fields is curved."

from TSOL, p. 232:

"Matter and space constitute the two conditions necessary for interchange of motion....

.... Each condition gives to the other in installments.... The consequent giving and regiving by the two opposite pressures constitute the oscillations of the electric current. Electric interchange by installments is measured and recorded by waves, and the time element of those recordings of interchange are wave frequencies. They constitute the pulse beat of the electric current."

from NCU, pp. 8-9:

"All matter is electric. Electricity conditions all matter under the measured control of the ONE MAGNETIC LIGHT which forever balances the TWO electrically-divided, conditioned lights of matter and space."

from NCU, p. 16:

"The two opposite pressure conditions which control the life-death cycles of all bodies are:
(a) the negative condition of expansion which thrusts outward, radially and spirally, from a centering zero of rest to form the low potential condition which constitutes "space," and (b) the positive condition of compression which thrusts inward toward a centering zero of rest to form the compressed condition of gravity which generates forming bodies into solids surrounded by space.

Desire of Mind expressed its desire through the electric process of thinking. Thinking divides IDEA into pairs of oppositely-conditioned units of motion which record a simulation of IDEA into thought forms.

• • • •

Thought-waves of expanded and compressed states of motion are fashioned into moving patterns which simulate the forms of the Creator's imaginings. All formed bodies thus created are "made in His image."

This division of the undivided Light and its extension into oppositely-conditioned states of motion is the basis of the universal heartbeat of pulsing thought-waves, which seemingly divide the ONE WHOLE IDEA into the many ones."

ON TIME:

from NCU, p. 84-85:

".... Polarity is expressed in waves. Waves have dimension. Time is a dimension. It takes time to create a wave, for a wave is a cycle which has a seeming beginning and ending. The time cycles for reproduction of electric thought-waves are constant, but the time periods of life-death cycles vary as thought-waves accumulate into cycles upon cycles of formed bodies of sound, or of insects, animals, men, trees, suns or nebulas.

• • • • •

Life and growth are thought-waves multiplied by time — while decay and death are time divided into voidance.

This whole universe is but a projection of Mind-Idea into a three-dimensional universe of thought-wave timed sequences from the universal zero of rest, followed by a voidance of that projection by withdrawal within the universal zero of rest."

from NCU, p. 86:

"...,we should cultivate the realization that we are dealing with thought-wave patterns of idea, and not with substance or matter.

THE MYSTERY OF TIME

47. When we think of matter [ed. note: or space], we should think of the thought-waves which cre-

ated it. Likewise, we must think of time as an accumulation of thought-waves.

Thought-waves accumulate into cycles upon countless cycles in the forming of bodies. As thought-waves add density and other mass dimensions to the bodies they create, they also add time by lengthening the time intervals needed to repeat that body."

from NCU, pp. 94-95:

"We must learn to think of accumulating matter as retarded time which lengthens its intervals in the ratio in which mater appears.

Likewise we must think of time as a rhythmic illusion of motion sequences. Time appears only when motion-in-matter begins. Time disappears when motion sequences end.

Time is but the recorder of change. Remove change and time is likewise removed.

•••

Time sequences are the wave reversals which swing Nature's pendulum between the births and deaths of all appearing-disappearing things.

•••

For time lives with life and dies with death as you and I....

The senses record only the forward flow of time — but there is a backward flow of time which voids time, as there is a backward flow of life toward death which voids life."

from NCU, p. 96:

".... Time is but the pendulum of motion. Its office is to record the heartbeat of two-way motion. Without reversals of motion TIME has no existence..

Time is but one of those many illusions which deceive man *into believing that unreality is reality*."

from TSOL, p. 247:

"... the screen of space ... simulates motion because of the two-way projection of oppositely conditioned lights inward and outward *through* each other to create the illusion of motion, change, sequence and time."

from TSOL, p. 281:

"The idea of continuity or discontinuity is based upon mirrored effect of an initial Cause. Continuity infers time. Time is but one of the effects which constitutes this universe. Time flows two ways, but the senses detect only the forward flow. They cannot detect the backward flow which cancels out the forward flow. Time is as unreal as the wave universe is unreal."

ON THE SHAPE OF THE UNIVERSE

from TSOL, p. 281:

"This ageless universe has no shape. It has a seeming infinite extension, but that extension is a reflected one. This electric universe of two-way extended light is but a series of mirrors which reflect into each other through curved lenses. Its seeming extension might be likened to a light within a mirror-bound room.

One light within such a mirrored enclosure would seemingly extend infinitely, but the light thus mirrored would be the same light. The reflected extension would have no reality."

from NCU, p. 15:

"So long as the Creator's Mind divides His knowing by His thinking just so long will that two-way motion continue its sequences of cycles to record God's imaginings in forms of His imaginings. God is eternal, likewise His universe is eternal.

The belief of science that the universe had a beginning in some past remote period — as the result of some giant cataclysm — and will come to an end in some future remote period is due to not knowing that waves of motion are the thoughtwaves of the Universal Thinker.

Also the belief of science that the universe is dying a heat death by the expansion suns is due to not knowing that there are as many black evacuated holes in space for the reborning of suns as there are compressed suns for the reborning of evacuated black holes."

from NCU, p. 96

"Every point in the universe is an infinite mir-

rored extension from every point. Each point is the center of universal extension into that mirrored infinity which ends at its point of beginning. The universe, therefore, can have no shape."

With these quotes to draw upon, I will attempt to address some of the issues raised in the article.

First, it is important to understand that there is a Creator, the Creator is doing the creating, and the Creator is eternal. The paradoxes become acceptable, if not comprehensible when this understanding remains in our awareness. Walter Russell writes in NCU, p. 3, "The cardinal error of science lies in shutting the Creator out of his Creation." From my reading, even the so-called cutting edge, frontier science publications are still devoid of Cause. They articulate, postulate, theorize, suppose, and prognosticate, yet without fundamental knowledge of Cause, they remain enmeshed in explaining illusion with, by, and through illusion.

Getting back to Ms. Nalls' written piece:

This author concludes that space is a low potential condition of motion; it is a simulation/expression of the ONE IDEA of creation. Space, being motion, is curved and is bounded by planes of zero curvature — planes of Stillness. Both space and matter are a record of God's electric thinking. The wave nature of God's concentrative/decentrative thinking process commands and controls the conditioning of motion into what we perceive as space and matter. Space is eternally interchanging with its opposite expression — matter. Space and matter are the result of a rhythmic, balanced interchange of motion only.

Time, space, and motion are all effects caused by God's rhythmic thinking. Space is a condition of motion; it is an opposite condition of solid matter. Time records the sequences of motion and therefore of space and matter. Motion, however, is not the ultimate reality; God is!

The cause of all motion is God's rhythmic, balanced, and interchanging two-way thinking—two-way pulsing of concentration and decentration, involution and evolution. Time, as a record

of two-way motion, is two-way. Time is voided as it records motion's journey from high potential back to low potential.

How do prophets predict the future? Are they psychically sifting through probabilities, are they intuiting the One Idea for knowledge of what is to be, or are they intuiting the One Idea through the filters of their ego and belief system? To say the future exists only in imagination is, for me, to beg the question. The past and present only exist in God's imagination as does the future!

Walter Russell was emphatic in debunking the big-bang theory of creation. Creation is as eternal as God. There is no beginning point and no ending point. The universe has no shape and is infinite. Further, Walter Russell asserts parts of the universe are expanding and contracting - simultaneously and sequentially. So suns in our spiral arm of the galaxy are moving away from each other as our spiral arm expands in conformance to the centrifugal force of dissolution. What we can see of galaxies and stars is the expansion/radiation of their light. Their high potential condition of motion (matter) is expanding into a lower potential condition of motion (space). We cannot see the opposite and equal contraction of space into matter. We can only see the expansion and therefore conclude the universe is only expanding.

Concerning the red-shift, the "cycle of decay is the same for all processes," thus the expansion journey of light reaching us from distant galaxies is one of decay back to a simulation of stillness. Motion decays into lower and lower potential. The time of reproduction of a light-wave within each wave field (velocity) is constant, yet the potential is lowered. This writer postulates the red-shift is due to the lowering of potential as the condition of light is reproduced further and further from its original source. The frequency is decreasing and the distance between crests (wavelength) is increasing —potential is lowering. Light (motion) is decaying into motion which eventually will simulate stillness.

I would like to digress here for a bit and bring up the question of the so-called *background radiation*. What is this isotropic electromagnetic radiation measured at approximately 4°K in en-

ergy potential? Is this the lowest state of potential that motion can sustain and still have the form of space? Or is the background radiation a measure of the potential of motion in our local (surrounding our galaxy) space; thus implying the possibility of a lower potential space existing within a higher potential galactic system? Scientific theory tells us it is the remnants of the big bang, Walter Russell tells us there never was a big bang.

Walter Russell would delight in Mrs. Nalls' analogy of the universe likened to a mirrored room! That is all the universe is and we can't know what is there from looking at it — from relying on our senses. We can only know what is there by relying on our Mind.

Three paradoxes this article conjures for this writer are:

- 1. Everything the senses inform me about is pure illusion, they sense only the transient records of God's imaginings imaginings set to form by God's rhythmic thinking. The paradox becomes why I would choose to experience illusion rather than reality? Is unreality more enjoyable or more loving or more purposeful than reality? Am I choosing this life as a different way to experience God's Love?
- 2. Time, a sensed perception, appears sequential in one direction only, yet is two-directional and zero! Time involutes and evolves, concentrates and decentrates. Further, our perception determines our sensed experience of it.
- 3. We are on some sort of free-will evolutionary journey, yet all of any experience is somehow part of the One Whole Idea for Creation within God's Mind. God's rhythmic thinking is eternally creating and uncreating, and all of it is God's imaginings. We are individually and collectively manifesting God's imaginings, and past, present, and future all add up to zero in a perfectly balanced universe with its origins in the perfect balance of Oneness. How does free-will enter into an illusion which is unfolding from God's imaginings? Does free-will only reside in our choice of perception to perceive illusion or reality, love/hate or Love?

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