



# Letters from Whatcom Lodge No. 151

F. & A.M. of Washington



Volume 4 - Issue 5

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May 2003

## The Master's Trestle-board

Brothers, it is a great day to be a Mason and tomorrow will be an even better day to be a Mason. I know, as you do, that our numbers are growing too slowly to make up for those who are passing on; other lodges are facing the same problem. Whatcom Lodge has a wonderful history and brethren who are second to none. I want to see our lodge move on into its second hundred years. There are signs that the fraternity has awakened to its plight and is moving to meet this membership crisis. As we work to make the benefits of the Masonic Family known to the public, remember that each one of us is a point-man in this effort. Do not hesitate to let your friends, acquaintances and the public know you are a Mason and proud of that fact. We can renew our fraternity, one contact at a time.

At our last Spl. Communication we roughed-out some plans and activities for the future. The Ladies & Awards Night will be on Sat. July 12<sup>th</sup>, 2003. We have one 55 Year pin, five 50 Year pins and one 25 Year pin to award to some very deserving brothers. We plan to attend a Mariner game this Summer and also to host another bowling date. I am sure there are other enjoyable pursuits; what activity would interest you? I would like to hear from you.

Have a Great Spring!

Fraternally,  
WM M. H. Strickland Jr.

## HM Terppening Educational Scholarship

We are extending the date, to June 30<sup>th</sup>, to submit applications for the HM Terppening Ed. Scholarship for 2003. This scholarship is open to District Ten Masonic Family members: Masons, OES (and their family members), Jobs Daughters, DeMolay for boys and Rainbow for girls.

Applications can be obtained by contacting the Whatcom Lodge secretary: John F. Browne 109 S. 43rd Street, Bellingham, WA 98229; 738-1537 or [jbrowne@telcomplus.net](mailto:jbrowne@telcomplus.net). The 2003 scholarships will be announced this Spring and are awarded the following January (2004).

### A poem for May

All things bright and beautiful,  
All creatures great and small,  
All things wise and wonderful  
The Lord God made them all.



Each little flower that opens,  
Each little bird that sings,  
He made their glowing colours,  
He made their shining wings.



The purple-headed mountain,  
The river running by,  
The sunset and the morning  
That brighten up the sky.



The cold wind in the winter,  
The pleasant summer sun,  
The ripe fruit in the garden,  
He made them every one.




He gave us eyes to see them,  
And lips that we might tell  
How great is God Almighty  
Who has made all things well.

Mrs. C. F. Alexander

## Calendar of Events

**May 15<sup>th</sup>** is our Stated Communication, Lodge opens at 6:30 pm. We will be finalizing some plans for future meetings and fun activities.

**May 17<sup>th</sup>** The outdoor Fellowship Degree at Roach Harbor on San Juan Island. The ferry leaves Anacortes at 7:45 am. The salmon barbecue costs \$15 per person 

**June 5<sup>th</sup>** is our Spl. Communication

**June 12<sup>th</sup> - 14<sup>th</sup>** Grand Lodge, Tacoma.

**June 19<sup>th</sup>** is our Stated Communication. Lodge opens at 6:30 pm.

**July 12<sup>th</sup>** We'll have our Ladies and Awards Night this month. We are looking at the second Saturday in July so keep that evening open (7/12/2003). A social half-hour will begin at 6:30 pm., dinner at 7 pm.

**Aug 17<sup>th</sup> - 23<sup>rd</sup>** NW Washington Fair.

**Sept 4<sup>th</sup>** is our Spl. Communication.

**Sept 20<sup>th</sup>** MFLA is hosted by Nooksack Valley Lodge No. 105 - 10 am.

To contribute to this newsletter please send your letter, comment, historical fact, poem or calendar announcement, by the 2<sup>nd</sup> Monday of each month, to:

John F. Browne 109 South 43<sup>rd</sup> Street  
ph. 738 - 1537 Bellingham, WA. 98229  
e-mail [jbrowne@telcomplus.net](mailto:jbrowne@telcomplus.net)



# Book Report

## The Elegant Universe

We are now ready to introduce the hallmark feature of quantum mechanics, the *uncertainty principle*, discovered in 1927 by German physicist Werner Heisenberg. When trying to track the ever illusive electron, scientists tried using high-frequency (short wavelength) light, but in doing so the velocity of this energetic particle was disturbed. If low-frequency (long wavelength) light is used, one sacrifices precision. "Heisenberg showed that the trade-off between precision of position and velocity measurements is a fundamental fact that holds true regardless of the equipment used or the procedure employed....at a microscopic level you cannot possibly know both of these features with total precision. Moreover, the more precisely you know one, the less precisely you know the other." Quantum mechanics with its bee-buzzing like particles is a world very hard to pin down: "the microscopic realm is intrinsically turbulent." The smaller the time and distance scales the greater the state of agitation for sub-atomic particles. There is a lot of seemingly wasted activity at the microscopic level, where particles can erupt into being by barrowing energy for that moment. But since the energy has to be paid back the particles annihilate one another almost immediately. What may, to the casual observer, appear to be an area of quiet inactivity, at the microscopic level, is actually very active. The study of this frenzy of sub-atomic particle activity lead to the union of special relativity and quantum concepts of electromagnetic force and its interactions with matter. "Through a series of inspirational developments, they created quantum electrodynamics. This is an example of what has come to be called a relativistic quantum field theory, or a quantum field theory, for short." Using this theory scientist have been able to relate photons, the smallest unit of light, to electrons. This success inspired physicists in the 1960's 1970's to work on the weak, the strong and gravitational forces. Thus, "by the 1970's physicists had developed a sensible and successful quantum-mechanical description of three of the four forces (strong, weak, electromagnetic) and had shown that two of the three (weak and electromagnetic) actually share a common origin (the electroweak force)." We now have the force particles: photons, gluons and bosons which act in the fashion of messenger particles for the forces they represent and can be visualized this way: "An electromagnetic field is composed of a swarm of photons; the interaction between two charged particles actually arises from their "shooting" photons back and forth between themselves." The gluons and weak-gauge-bosons act in a similar way. To do their jobs, as force messengers, force particles are in constant motion. At this ultra-sub-atomic level existence is a roiling sea of activity, something the general relativity theory finds unacceptable to its concept of a smooth spatially

geometric universe. With the theories of General Relativity and Quantum Mechanics at a state of incompatibility, a new theory was badly needed. [See figure 5.1]

In roughly 1770 a renown Swiss mathematician Leonhard Euler concocted an esoteric formula which became known as the Euler beta-function. Two hundred years later, 1968, a physicist named Gabriele Veneziano discovered that this formula "seemed to describe numerous properties of strongly interacting particles in one fell swoop." It was like finding a lost key or a hidden map to treasure. The formula worked but it took a year or so before three physicists (Yoiciro Nambu, Holger Nielsen and Leonard Susskind) were able to reveal the physics of why. "These physicists showed that if one modified elementary particles as little, vibrating, one-dimensional strings, their nuclear interactions could be described exactly by Euler's function." This was bolstered by the find, in 1974, that string theory also accounted for the hypothesized messenger particle of gravitational force, the graviton was confirmed—in theory. Hard times fell on string theory until 1984 when the physicists Green and Schwarz published their landmark paper establishing that previous superstring conflicts could be resolved. Still, superstring theory sat on many a back-burner until at "the Strings 1995 conference...(physicist) Edward Witten announced a plan for taking the next step, thereby igniting the 'second superstring revolution'."

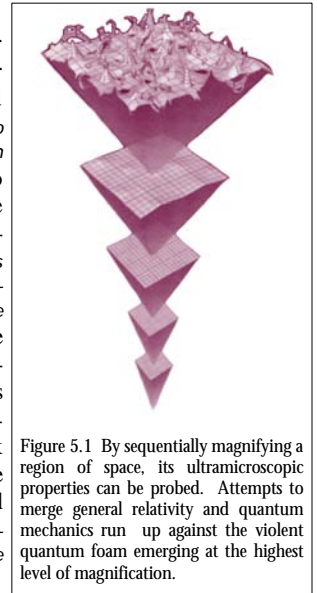


Figure 5.1 By sequentially magnifying a region of space, its ultramicroscopic properties can be probed. Attempts to merge general relativity and quantum mechanics run up against the violent quantum foam emerging at the highest level of magnification.

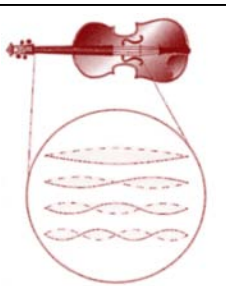


Figure 6.1 Strings on a violin can vibrate in resonant patterns in which a whole number of peaks and troughs exactly fit between the two ends

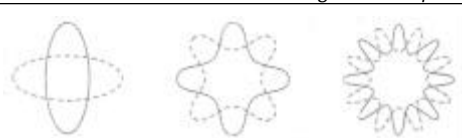


Figure 6.2 The loops in string theory can vibrate in resonance patterns—similar to those of violin strings—in which a whole number of peaks and troughs fit along their spatial extent.

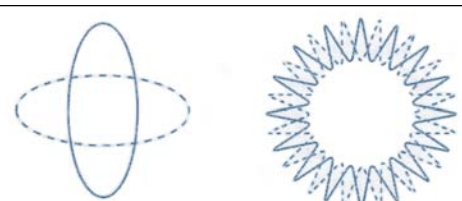


Figure 6.3 More frantic vibration patterns have more energy than less frantic ones.

We have now come full circle from the beginning of this book report. In truth I have not quite covered half the book. The rest of book takes a close look at string theory and its complexity. Professor Greene points out that string theory has a long way to go before it can be considered a more-or-less proven fact. The standard model\* though just won't work because its stuck like a horse a-straddle a fence. One of biggest problems facing the proving of string theory is the small size of the strings, "about the Planck length, which is about a hundred billion billion ( $10^{20}$ ) times smaller than an atomic nucleus." It would take a particle accelerator the size of the galaxy in order to hurl particles with enough energy to get an image of a string. But on the plus side string theory does unify quantum mechanics and general relativity, thus getting our horse off the fence. The standard point-particle model does not explain why nature selected "the particular list of particles and forces outlined in previous chapters and recorded in Tables 1.1 and 1.2? Why do the 19 parameters that describe these ingredients quantitatively have the values that they do? You can't help feeling that their number and detailed properties seem so arbitrary. Is there a deeper understanding behind these seemingly random ingredients, or were the detailed physical properties of the universe 'chosen' by happenstance?" String theory does have an answer to these questions. \*[The non-string theory model in current use]

String theory establishes tiny strings as the basic "uncuttable" building-block units of the universe. "Each elementary particle is composed of a single string—that is, each particle is a single string—all strings are absolutely identical. Differences between the particles arise because their respective strings undergo different resonant vibrational patterns. What appear to be different elementary particles are actually different 'notes' on a fundamental string. The universe—being composed of an enormous number of these vibrating strings—is akin to a cosmic symphony." Superstring theory has some competing versions and it appears that each may have a part of the story, like the many legs of a starfish. The sum of these competing string theories is called "M" theory. Strings may also take the form of a membrane which is wrapped around curled up dimensions. The math indicates that there are 1-time and 3-spatial dimensions, which our senses readily detect, and 7 curled-up spatial dimensions, called Calabi-Yau shapes, for a total of 11 dimensions. Despite our advancements in knowledge, the universe is still a place of mystery and wonder. Could this have happened by chance—well, in Masonry we think not—however, the Grand Master uses some very interesting materials in his construction projects. Under String-Theory his title may be more appropriate as Grand Composer of the Universe, a Grand Symphony indeed.