

### **3. Look softly in at the 'four forces' that together form nuclear energy. Then see how they are here at work within us humans.**

\*\*\*

**Abstract.** This account seeks to outline the metaphysical nature of the "four-interactive forces" that together form 'nuclear energy' and show how these 'four forces' are equally at work here within and between us humans. They are especially evident in our family lives.

It requires an introspective respect for 'experiential information', and/or a 'feminine gaze', to recognise the metaphysical qualities of the 'four forces', which are especially evident in our family lives. Turnbull posits that these "four forces" work instinctively together to form family systems regardless of the magnitude wherein they coalesce. His experience is that three of these forces are forms of Love, while the fourth is a form of Light.

\*\*\*

#### **Introduction and overview:**

The 'four-interactive-forces' were initially identified by astrophysicists in 1920's when they were recognised for the essential role they played in the processes that created the Big Bang, which in turn created this universal system in which we all exist.

Nuclear physicists then determined that these same 'four forces' are within each and every atom. This knowledge would in time allow for the development of the atomic bomb, followed shortly thereafter by the construction of nuclear reactors. These devices work for us when we use a fission process to release the energy locked into a vast number of atoms in the same virtual moment.

My interest in the nuclear subject began when I was working as a geologist in Canada, engaged in a search for uranium. That search made me curious about the nature of the energy in the atom, and moved me to read up on what nuclear physics knows of the ubiquitous "four-forces" that are in each and every atom. This knowledge is well-established amongst the nuclear nations, where there is consensus about naming the 'four forces', on the basis of their objective properties, as:

**Gravity, Electromagnetism, the Strong and the Weak** nuclear forces.

When I learnt that the energy in the atoms had been identified for its objective/physical qualities, I found myself wondering about the subjective nature of these forces. What, for instance, might they feel like. By simply positing this question, it acquired a life of its' own, which in time generated an answer.

#### **The Laboratory of Family Life.**

In the following year or two I was very much house-bound, alongside of my wife, while we were raising our three young children. I was happy in my role and found I could support our life style by working locally as a stonemason. I liked the hurley burley of family life and found myself as a novice parent registering the different kinds of energy that flitted about between us parents on our own, and us parents and the kids, and again between and amongst the kids themselves during the course of a day. There were other occasions, birthdays for instance, when our home overflowed with a good high energy that engaged us all.

Then in the evenings, when the kids slept and my woman rested, I would mull over the activities of the day and examine the idea beginning to take form in the back of my mind, that the four forces which nuclear physics has identified in the atom, were equally here at work amongst and between us all in our family.

**The objective and subjective equivalents of the Four Forces.** Herewith then is a commentary

on the 'field notes', as-it-were, that developed within me as I registered and ruminated about my subjective experience of the energy in our home, and recognised how it matched the descriptions of the four kinds of energy that physics had identified in then atoms.

### The subjective nature of Gravity is ... Masculine Strength.

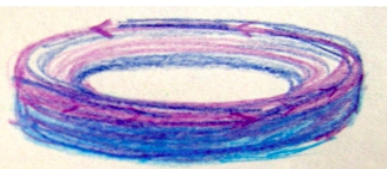
This whole process began when I recognised how I was, I am, as the force of **Gravity** in our home. Me with my seriousness and gravitas and parental authority. The same kind of energy as I felt emanating from my father, I now recognised (sometimes with misgivings) flowing from me to the children. Nevertheless, it was useful to recognise how **Gravity** was a fundamental quality within me. I then wondered how to describe and name the subjective or metaphysical nature of what is normally regarded as a physical force. Here I found it made good sense to identify this perception of Gravity as ... "**Masculine Strength**".

Identifying my Gravity, and its' upgraded quality of Light, was a useful revelation at that time. It satisfied the dualistic intellect of the twin processor brain that I recognised influenced how I saw and responded to the world.

Gravity is a vertical force.



### The subjective nature of Electromagnetism is ... Feminine Power.



**Electromagnetism**  
is a circular horizontal effect.

Recognising my **Gravity** then encouraged me to look sideways and see how my wife's motherly nature and matriarchal qualities worked together to form an '**energetic field**' which emanated from her to fill the whole house. In metaphysical terms, her prescient **electro-magnetic "feeled"** seeped into every room so that she knew instinctively where the kids were and how they were feeling and what their needs might be.

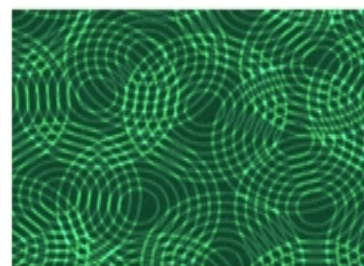
Building on my experience of naming my own subjective/metaphysical nature, I feel the term "**Feminine Power**" was an entirely appropriate term for the combination of social and spiritual and domestic and motherly qualities that represented her presence in the family and the home.

I am, in effect, recognising how the two long range forces in the atom, **Gravity** and **Electromagnetism**, are equally here at work within each and every family's dynamic processes. And the corollary holds true, of how the nucleus at every atom is an amalgam of **Masculine Strength** and **Feminine Power**. I find these insights refreshing, for they feel sensible and immediately begin to flag up a realisation of the "energetic symmetry" that now begins to look ubiquitous and pervades each and every dimension of this multi-tiered universal system we are all within.

The rewards of this largely introspective inquiry and modelling prompted me to then consider the subjective nature of the two short-range forces, **the Strong** and **the Weak Nuclear** Forces, which are an integral part of each and every atom.

### The subjective quality of The Strong Force is ... the binding energy within the family: the collective love of the group.

Nuclear physics, in my reading, is uncommonly respectful of the 'Strong force'. Without this force, the physicists commonly say, matter could not exist. There would be no planets, no stars, No Universe. Physics describes the 'Strong force' as the "binding energy" whose very existence maintains the stability of every atom. Physics explains how there are situations when protons in the nucleus repel each other, a process that could easily cause an atom to self-destruct. In this situation, the short range **Strong Force** emerges out of the background and counteracts, as-it-were, the repellent forces at work in the nucleus.



The Strong Nuclear Force

My personal experience is of the **Strong force** emerging when the family/atomic systems are stressed,

typically at times of illness and death. Conversely, the **Strong force** often manifests itself at celebrations, at births and weddings. Here it draws strength and support from the neighbourhood. Physicists have postulated the existence of the Strong Force in large part because of the need for this force to exist, rather than it being identified in a laboratory setting as a particular particle.

**The subjective equivalent of the Weak Nuclear Force is ... sexual energy.**

In the early days, when atoms were being split so that the energy in these microscopic systems could be identified and measured, what we now know as the **Weak Force** was regarded as experimental error, because in the general scale of things it was a miniscule and hard-to-detect force.

Then, as the measuring instruments improved, physicists were able to recognise that the **Weak force** is real and its' primary characteristics are that it functions across a very short distance, and only exists for a brief moment of time. But in that moment, it can be more powerful and influential than the three other forces. Now, doesn't this sound and feel like **sexual energy** ? As present and necessary at the atomic level as it is here in us and indeed in every species of life on this planet. This tiny force works as a catalyst for the forces of **Gravity** and **Electromagnetism**, helps activate their relationship and fecundity.



**This table of "The Four-interactive-Forces" displays the different nomenclature we use to describe the individual forces, according to our particular field of interest.**

The scientific method, with its' physics-only view of the four forces, names them for their objective properties.	Homely experience of these 'four energetic qualities' sees how they work together to create family systems. This recipe names them for their social and domestic qualities.	Religious acumen uses synonyms to identify the spiritual qualities of these four forces.
<b>Gravity</b>	<b>Masculine strength (one cup)</b>	<b>The Light of God</b>
<b>Electromagnetism</b>	<b>Feminine power (one cup)</b>	<b>Amos</b>
<b>The Strong Nuclear Force</b>	<b>Family group energy (one cup)</b>	<b>Agape</b>
<b>The Weak Nuclear Force</b>	<b>Sexual energy (1/4 teaspoon)</b>	<b>Eros</b>

**The band-width of our knowledge of the 'four forces' indicates they are universal forces.**

To my mind, this means that however we might come to study them, we will mainly recognise the qualities that match our particular interest. Physics knows them for their physical properties. The religious for their spiritual qualities. In the home, we know the 'four forces' for their homely and domestic and social nature. There is a chameleon quality to them, which feels like another way of recognising their universal nature.

I would round off this overview of the universal forces that make up family systems virtually everywhere, by saying that my experience of the 'four forces' is how three of them are forms of **Love**, while the fourth is a form of **Light**. I fully expect these qualities to be equally at home and at work in the Atomic World, and indeed, throughout this system of family systems that we generally know as our "uni-verse".

The insight of the same energy in the atoms as is here in our family lives, then indicates that the atomic particles are social and sentient, the same as ourselves. This understanding then flags up how atoms are the family systems of the particle population. Now I am moved to see and say that the Atomic World is as a dimension of life unto itself. In geographical terms, it is as a sub-continent to the dimension that we humans consider our own, and at the centre of everything.

In our modern era, nuclear physics talks as though the 'four forces' are theirs alone. This is not so. They

live in all of us, and all of the time. Civil society and the religions dearly needs to recognise the ubiquitous nature of the 'four forces', and exercise ownership and responsibility for their sensible use.

### **The larger deeper sweeter view.**

I like to think that the slow-moving inquiries begun by physicists and chemists in the 1800's, as to the existence of atoms, followed by a recognition of the atomic particles, that this piece-meal approach would have eventually turned up evidence that the atomic particles are social and sentient, more than we have so far cared or dared to consider. But before this could happen, the needs of war directed men's minds to attend to the idea of making a bomb: a device that releases a vast quantity of nuclear energy out of a parcel of fissile matter, all in the same moment. Once this process was deployed, there was no turning back. Nuclear fission has become the only "game in town". Indeed, in the world. We are stuck at present with a Western-minded, physics-only, patriarchal protestant view of the next-floor-down dimension of this multi-tiered Universe ... which a combination of catholic and protestant perceptions sees as a realm brimful with family life, a civilisation in its own right.

In this mood, I would posit that 'nuclear energy', being formed of the "four universal forces" that work together to form and maintain family systems, is as "**The Holy Spirit**", in effect for us humans as much as it is for the particle population. Here is common ground for Science and the Religions to meet.

\*\*\*