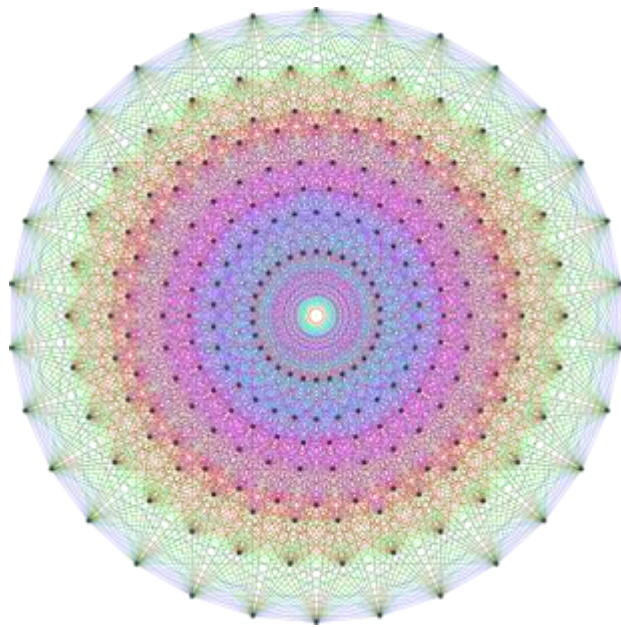


# The Real Four Position Foundation as Discovered in Theoretical Particle Physics

James M. Powell  
April 3, 2017



After escaping concentration camp in Hungnam, North Korea in 1950, Dr. Sun Myung Moon wrote the book, *Ideal of the Circular Garden of Harmony*. This text, lost during the Korean War (1950-53), was re-written as *Original Text of the Divine Principle* and eventually translated into English as *Exposition of the Divine Principle (EDP)* in 1996.

As you will see, the “Circular Garden of Harmony” refers to the underlying harmonious circular structure of the cosmos, the “garden,” at the elementary level.

In my previous AU Blog article in November 2016, “The Science of Spiritual Life and Death,” I stated there exist in the Principle theory unsubstantiated, or at least unverified, claims. In this article, I state this in relation to the Four Position Foundation

specifically as the so-called *foundation of the life of all beings*.

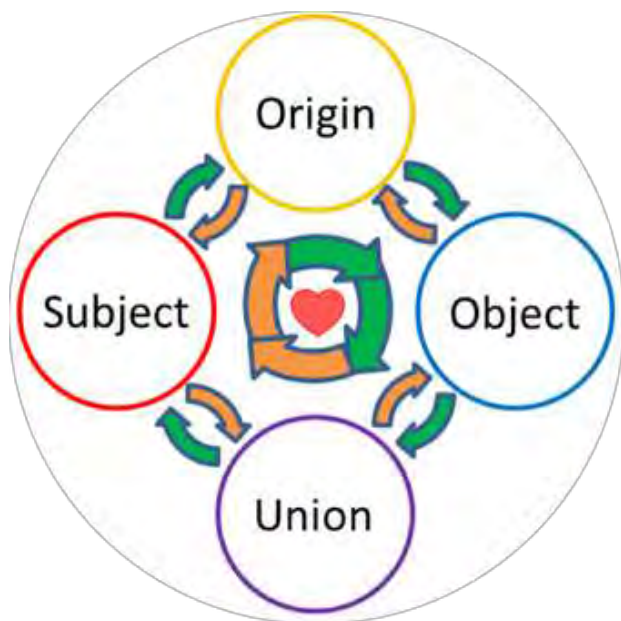
What is the foundation of the life of all beings? What proof do we have that the Four Position Foundation is the fundamental foundation of all physical beings, all spiritual beings, and even God?



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For example, theoretical and experimental particle physicists might ask to show how the Four Position Foundation applies to the plentiful assortment of elementary particles that make up the cosmos at the smallest scales. But do we have a model for that? We do. It’s the Four Position Foundation.

I’m not referring to a vague model into which we roughly fit some broad concepts like only plus and minus, but discovered forces and particles and their interactions in a mathematical structure that works. It must be a mathematical structure because, according to the Principle, one aspect of God’s nature, the Logos, the blueprint of the cosmos according to the theory of the Principle, is mathematical.



## The Four Position Foundation

In *Exposition of the Divine Principle*, the fundamental structure of the cosmos, or garden, is called the *Four Position Foundation (4PF)*.

Diagrammatically, the 4PF is usually expressed two-dimensionally as in the image below. Although — and as can be understood by descriptions of it in the Principle textbook as well as in numerous online presentations such as this lecture by Kevin McCarthy and video by Michael Callaghan — the Four Position Foundation is highly multi-dimensional.

The Four Position Foundation is so named because it is “*the fundamental foundation for the life of all beings*” and composed of four unique positions: the origin, subject and object partners, and their

union.

As such, we should find the 4PF manifest at the elementary level of the cosmos. The areas of science that deal with this are called theoretical and experimental particle physics. Also, according to the model in the Principle theory, if the 4PF exists it must have four unique and inter-related positions.

As in the previous linked videos and in the following quotes, if the Four Position Foundation exists, it must exhibit circular and spherical motion both in the interactions between its constituents and as a whole.

“Although there are moments when the two levels of circular motion [around each constituent’s own axis

and around other constituents within the 4PF] may happen to have orbits on the same plane, in general, because the angle of revolution [of the object partner] around the subject partner is constantly changing, this circular movement becomes a spherical movement.” (EDP)

“The universe exists in three dimensions as, governed by the same principle, its elements engage in spherical movements.” (EDP)

Furthermore, the 4PF, while being an object of incredible mathematical precision and logic, is perhaps most intriguingly an object of deep and profound beauty.

“When the circular movement of the subject partner and the object partner on a single plane becomes a spherical movement in a three-dimensional orbit, the dynamism and creativity of the universe unfolds. Variations in each orbit’s distance, shape, state, direction, angle, force and velocity are manifest as the beauty of creation in its infinite variety.”

If the 4PF exists as described in the Principle theory, it must be inherently beautiful beyond description.

I have laid out only a few of the conditions available which we can use to help identify if the 4PF is a model in theoretical particle physics. It must:

- be operational at the fundamental, elementary level of the cosmos;
- have four unique and inter-related positions;
- exhibit circular and spherical motion between its constituents and as a whole; and,
- be an object of ultimate mathematical logic and pure beauty.

There are probably more points we could consider, but I’ve included a few I’m aware of which I consider to be most important for the purpose of identifying a candidate among models in theoretical particle physics that fits the model and structure of the 4PF as the fundamental blueprint of the cosmos and of the life of all beings.

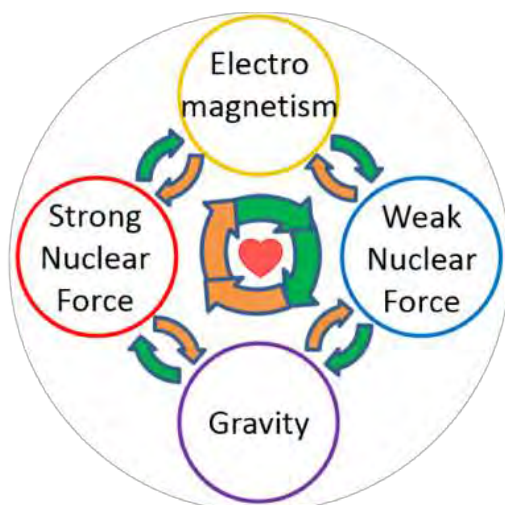
### The E8 Lie Group as the Four Position Foundation

In his physics paper, *An Exceptionally Simple Theory of Everything*, published online in November 2007, theoretical particle physicist Garrett Lisi introduces a mathematical construct known as E8 as the potential unifying structure of all known forces and elementary particles in the cosmos. As such, E8 purportedly is:

- operational at the fundamental, elementary level of the cosmos

E8, in its complete form cannot be seen or even drawn. It is the largest and most complex of the five exceptional Lie groups (pronounced “Lee”), containing four subgroups related to the four fundamental forces of nature: the electromagnetic force (mediated by photons); the strong force (which binds quarks); the weak force (which controls radioactive decay); and the gravitational force (enabling attraction between large-scale objects). E8 has:

- four unique and inter-related positions



A Lie group, including E8, is a mathematical shape that is a collection of circles that twist around each other in a specific pattern. In Lisi’s E8 theoretical particle physics model, each circle represents the orbit of a unique elementary particle. Each elementary particle revolves on its own axis while rotating in its orbit and also interacting with those of other elementary particles that are represented in E8 by circles. E8:

- exhibits circular and spherical motion between its constituents and as a whole

The largest and most complex exceptional Lie group, E8 is considered by many to be the most beautiful structure in mathematics. *New Scientist* refers to the universally appreciated beauty of E8, in reporting its first discovery in natural physical systems, crystals, in 2010. In his first TED Talk in February 2008, Lisi describes the beauty of particle physics relating to E8 but without using the math, which makes it much easier to understand; I recommend his video, *An 8-Dimensional Model of the Universe*. E8 is:

- an object of ultimate mathematical logic and pure beauty

I find it compelling that first Lisi was independently building an algebraic structure based on known interactions of elementary particles and then later discovered that this same structure already exists in

mathematics and their values match.

It is also compelling that the characteristics of the four positions in the 4PF in relation to a family are similar in nature to the characteristics of the four fundamental forces when applied to the 4PF in relation to a family.

Electromagnetism, in the origin position, is God's position. In the Principle theory, human beings are described as image manifestations of truth (logos) who are composed of the dual characteristics of mind and body. It also describes that this logos is the fundamental blueprint of God's own structure and function. According to this speech by Dr. Moon, the relationship between a person's mind and body is one of 90 degree angles.

God, whose image is the model for our own, likewise is composed of dual characteristics that interact with each other at 90 degree angles, at least as a pre-existent prototype, since God's realm is prior to and independent of time and space. Electromagnetism is a composite body of the dual characteristics of reciprocal electrical and magnetic energy that move together at 90 degree angles to each other. God is often referred to as a being of light and light is electromagnetism.

The strong and weak nuclear forces, in the subject and object partner positions, are also comparable. In fact, *strong* and *weak* are explicitly mentioned in *Exposition of the Divine Principle* as subject and object partners. In relation to the family, these subject and object partner positions correspond to husband and wife, though this is not to say the wife is inherently weak, which we clearly understand from our studies of the Principle.

Lastly, gravity is the force that enables objects with mass to attract one another. The pattern is that objects with less mass tend to be attracted to objects with more mass. If we were to imaginatively compare mass with love, we could say that the union position is the child's position which is attracted to and reciprocates with the parents' positions (subject and object partners) and God's position (origin), which are positions with greater mass or love.

While the above diagram is a broad illustration of how the fundamental forces fit into the 4PF, each position indeed involves a lot of math. For more detail, I encourage you to read Lisi's paper.

Further compelling for me is that Lisi's model correctly predicted the constituents of the Higgs boson particle which, at the time of publication of his original paper, was yet undiscovered.

My purpose is solely to introduce readers to what, in my opinion, is the real Four Position Foundation as discovered in theoretical particle physics. I have other points to introduce regarding the E8-4PF model, including how it intrinsically, mathematically implies the existence and function of spiritual particles, forming the spirit world.

E8 is not only a diagram. Rather, it is an actual phenomenon. For example, E8 has been observed being produced by physical systems, crystals, as stated earlier in this article.

E8 has also been digitally mapped, an incredible feat. To understand the magnitude and complexity of E8, the human genome, containing all genetic information of a cell, is less than a single gigabyte in size. The result of the E8 calculation, however, is sixty gigabytes in size.

I have included numerous links in this article because this is a topic that requires a lot of study in order to begin to understand it. Unificationists, however, in my opinion, through our education of the Four Position Foundation in the Principle theory, are in a better position to more readily understand E8. What do you think of E8?

Lisi has an interactive elementary particle explorer on his website, with which you can explore all known and some unknown elementary particles and their interactions as aspects of the geometry of E8.

In a subsequent article, I hope to introduce my theory on how quantum information, the Logos, gets from the so-called *singularity* (God?) into the cosmos, and directs energy to form all the diverse elementary particles observed in experimental particle physics. Indeed, this is a major missing piece of both cosmology as well as religious theory: how does God actually create the cosmos through the Logos? I believe I have discovered answers and appreciate reader feedback.

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*James M. Powell, from the UK, is co-founder of the research organization S.T.A.R.S. (Sincerity and Truth for the Advancement of Revolutionary Science), which aims to prove through science: that God exists; that the spirit world is real, and; that True Parents' Blessing changes the physical lineage. He has been blessed with Elona (from Albania) since 2009. Read more about James' projects on his website and contact him via his Facebook page.*

Graphic at top: *An E8 Petrie projection*