

# The Philosophers Dream

How art and language can rigorously unify science, religion, and politics.

## Abstract

We postulate that the universe is comprised of consciousness and language at the personal, universal, and subatomic levels of our experience. Evidence supporting this hypothesis is presented by considering a hypothetical universal language which is symmetrical to our current natural languages, and also to art, music, dance, poetry, etc. This generates a quaternion mathematics that combines with the Maximum Entropy Principle to explain conscious behavior at the subatomic (electrons and protons are conscious), personal, and universal (religious) levels. A language derived mathematical structure is presented that supports this argument.

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The essence of this thesis is that at its most foundational level, the universe is comprised of consciousness. This is based on an initial foundational presumption that our understanding of consciousness and language stems from who we are. Thus I am a conscious entity and this interaction with you comprises a language that we both use. Therefore you are also a conscious entity and you are interacting with me by reading the language in this document. Thus consciousness and language precede definition. We will talk about our personal experiences in terms of consciousness and language, not the other way around. This avoids the issue of having to define consciousness and how it might have emerged from a perceived independent and nonliving physical reality. The procedure is symmetrical with how the concepts of point and line are used in geometry in that they are undefined foundational presumptions from which geometry is constructed.

So the first evidence of our consciousness hypothesis that is immediately recognizable and experienceable by all of us, occurs at the level of our own human activity. You and I can directly interact and communicate with each other, and with many others similar to ourselves. This is a part of our own personal experience as conscious entities.

For many of us this recognition of external entities that are conscious extends to animals; our pets, farm animals, even small animals such as insects. It may include organizations of conscious entities such as families, communities, or governments, or organizations of animals such as flocks of birds. Such organizations often behave as if they were themselves conscious.

We also recognize that there are many other components of our personal experiences that do not appear to involve consciousness or conscious entities. To explain the existence of this perceived external reality we have frequently and historically posited the existence of a supreme being, a universal consciousness, that has created us and all of the external non conscious environment that we can detect and experience. Our existence, and the existence of our environment, is then interpreted as evidence supporting a belief in the existence of a creative universal consciousness.

Many people define this universal consciousness as God and they have created various religions which describe God and how God interacts with them and their universe. This often includes the belief that they can communicate with God through prayer, that God can “hear” their prayers, and that God will often answer

them. Although God's answers may often be in ways that are not immediately understandable, there is still a belief that prayers often are, or will be, answered.

However, over the last 500 years or so science has emerged as a powerful alternative explanation for our personal experiences. This alternative does not involve religion or our direct interaction with other external conscious entities. This science posits that the universe exists as an external physical reality that is independent of consciousness, and that it functions in accordance with certain immutable natural laws. Consciousness may have emerged from this reality but the universe would still exist even if this never had happened.

While the origins of modern science go back for thousands of years, the relatively recent integration and evolution of these ideas, and their support by experiment and technological development, has led to a very successful explanation of, and control over, our external reality. This explanation extends far beyond what is attainable with the various religious explanations. Called the reductionist paradigm it is now the dominant worldview underlying modern society.

Unfortunately, it may also be the source of some of our most serious problems. Problems which we haven't been able to successfully resolve. These include Extreme Wealth Inequality, Increasing Autocratic Governance, Environmental Pollution, and Climate Change. While the reductionist paradigm did not directly cause all of these problems it has enabled them to an extent that they now threaten the very existence of our society or the habitability of the planet upon which we live.

This document proposes to resolve these issues by reintroducing consciousness back into science. This will be accomplished by presuming that electrons and protons are conscious, that organizations of conscious entities also exhibit conscious behavior, and that there is a universal consciousness that comprises all of the other conscious entities in the universe. We believe that this will still preserve all of the accomplishments that modern science has achieved. It will also eliminate the source of the current schism between science and religion.

The following will describe evidence that supports this hypothesis, and will propose additional experiments to further test its validity. These will include potential solutions and resolutions of the critical problems identified above.

The argument is that conscious entities can communicate with each other via language, which is broadly defined as including our natural languages as well as

the emotional languages of art, music, dance, poetry, etc. So a first step will be to formalize a simple language structure that includes the essence of all of these other languages.

Since we are proposing the existence of a universal consciousness comprising all of the other conscious entities in the universe, let us also propose the existence of a Hypothetical Universal Language (HUL) that also comprises the essence of all the other languages that conscious entities use to communicate with each other. We want our simple language structure to approximate this HUL as much as possible. To this end we have created a candidate for this simple language structure which we call Ododu.

All mathematical systems are defined and constructed in terms of some given language, so we should be able to extract how mathematics can be derived from Ododu. It turns out that the fundamental structure of Ododu itself is symmetrical to that of a specific mathematical object called a quaternion. This is significant because quaternions can be factored into complex numbers and spinors which, combined with quaternions, are the fundamental mathematical objects used to explain quantum mechanics.

We contend that if the mathematics that describes quantum mechanics is symmetrical to the languages that we use to interact with each other, then this mathematics is describing not only the interaction between you and I, but also the interaction between conscious entities at a subatomic level. The logical candidates for conscious entities at the subatomic level will be the electron, proton, and their combination (as an organized pair or marriage) as a neutron. The basis for this is that the half life for electrons and protons is in the millions of years or more. In contrast the half life for almost all of the other subatomic particles in the Standard Model of Quantum Mechanics is less than  $10^{-6}$  seconds. It therefore makes sense to consider these short lived subatomic “particles” as units of the language that the electrons and protons use to communicate with each other. This interaction then leads to what we observe as the behavior of subatomic particles in quantum mechanics.

If electrons and protons are conscious (like you and I) what about consciousness at the universal level. If that comprises all of the other conscious entities wouldn't it also indicate that there could be communications between and among all levels of consciousness? That would then imply the existence of what we have described as a Hypothetical Universal Language.

A second argument for our thesis now emerges from the concept of entropy and how various expressions of entropy unify the decision making processes of conscious entities at each of the three levels discussed in this proposal.

In the early work on thermodynamics it became apparent that there were no perpetual motions in nature. Thus for every chemical or atomic reaction there was a fraction of the total energy of the interaction that would not be available for any future reactions, and this could be described mathematically as entropy.

It was later discovered that, in the development of information theory, an expression that was mathematically identical to the thermodynamic entropy expression could also describe a useful measure of information as used in communication analysis. This could then be used to optimize decision making based on the information that was available at the time of the decision. This procedure was called the Maximum Entropy Principle (MEP) and was recognized as a general procedure of reasoning in which you could mathematically compute an answer, a choice of a “best” decision based on the evidence available and the reliability of that evidence. However, this calculation becomes cumbersome and complex in all but the simplest of situations and this has severely limited its application in much of our everyday experience.

To resolve this we will show that a careful application of artistic and aesthetic judgements can be used to make decisions in a manner that is consistent with the MEP in those cases where a mathematical expression or solution cannot be usefully formulated or solved by the MEP. Call it the Goldilocks Maximum Entropy Procedure (GMEP) because it comprises a decision procedure derived from the 19<sup>th</sup> century English fairy tale of Goldilocks and the three bears, at least the friendly version of it. In this tale Goldilocks made decisions as to whether something was too small, too big, or about right (or too cold, too hot, or about right, etc.) based on how she felt about the situation, what worked for her.

This procedure can also be derived from the Pythagorean and Euclidian interpretations of geometry in which line segments or angles were “measured”, not by using numbers, but by comparing them in terms of bigger, smaller, or equal to other line segments or angles. In either interpretation the GMEP looks at decisions in terms of emotional and aesthetic evaluations viewed in terms of too much, not enough, or about right. These instinctive or reflexive judgements take the place of the expected value functions that are calculated mathematically in the classical Maximum Entropy Procedure.

The GMPE comprises a restatement of the classical ME in terms of a quaternion. Thus it will comprise an entropy term and three expected value functions. This will function in a manner similar to how we judge when something is too big, or too small, or about right (or similar three part formulations) based on our intuitive sense of fitness and aesthetics. This is a capability that we all have to varying extents, and which can be developed through practice and study to be increasingly effective.

We use this quaternion formulation of the GMPE as a part of how we use language to make decisions that lead to our actions. Quantum mechanics also uses a quaternion based mathematical language in conjunction with a law of entropy to describe the actions and interactions of subatomic and atomic behavior. This is consistent with the hypothesis that electrons and protons are conscious and that they make decisions using their “language” which leads to actions that we can observe as subatomic and atomic behavior.

The entropic capability is also reflected in the fact that, at the foundational level, virtually all religions contain moral and ethical standards that believers feel they should follow. These comprise empathy, compassion, forgiveness, the promotion of social justice, and contain principles like the golden rule as to how we should interact with each other. We all recognize that these are innate beliefs that we all should live by, and most of us do. Despite the observations that these fundamental principles are sometimes corrupted by external political or contextual influences, their existence at the foundational level in religion strongly supports the view that they are a fundamental feature of consciousness itself, and thus should exist at all levels of experience, subatomic (chemical), personal, and universal.

Thus we end up with a model that explains; what we observe and can predict scientifically, what we deeply believe religiously, and how we should act relative to each other politically and economically.