

## Philosophical Inquiry of Mathematics

### The Concept of “The Blue Print” and the Relationship Between Mathematics and Goodness

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I propose the concept of “The Blue Print” as the ultimate reality and declare its existence. “The Blue Print” means God’s blueprint. Once we accept the existence of “The Blue Print”, the world will be truly recognized as mathematics. Through this lens, this essay explores the relationship between life, ethics, and mathematics, ultimately arguing that living well is deeply connected to living mathematically.

For thousands of years, humanity has strived to understand the meaning of existence. From myths and religion to philosophy and science, all human intellectual endeavors have ultimately aimed at this quest for being. This essay sheds light on two questions humanity has continuously asked: “What is the world?” and “What does it mean to live well?”

#### **The World as Mathematics**

Mathematics has always been at the heart of humanity’s understanding of the world. The Great Pyramid of Giza hides the mystery of the golden number, Pythagoras claimed that the truth of the world could be explained by numbers, and Plato gave

mystical significance to regular polyhedra. Since ancient times, people have closely linked numbers with faith. In the 17th century, Galileo Galilei stated that the universe is a “grand book” written in the language of mathematics.

These facts indicate that humanity has recognized the importance of mathematics since ancient times. Over time, human understanding deepened, and recently, renowned physicist Dr. Max Tegmark proposed the mathematical universe hypothesis, further advancing this idea. He states, “Our universe is not just described by mathematics—it is mathematics.” (Tegmark, 2007, p.1 ) Dr. Tegmark classifies parallel universes into four levels, presenting parallel universes with different mathematical structures as Level 4.

Here, I develop this idea further, arguing that the true nature of the world is like a matryoshka doll or a mirror, and mathematical multiverses are similarly layered. Even if there are Level 5, Level 6, or even Level  $\infty$  parallel universes, there is “The Blue Print” that encompasses them. I define “The Blue Print” as follows: “The Blue Print” is the root of mathematics, the blueprint of the universe, or the divine equation. “The Blue Print” exists in the realm of ideas far beyond our perception. It contains great harmony, which I call “Blue.”

If this series of assertions (the “Hajime Hypothesis”) is correct, humanity will one day understand that the theory of everything is “ultimately blue.”

### **The Unification of Truth, Goodness, and Beauty**

As mentioned above, according to my hypothesis, “The Blue Print” contains a crystal of harmony that I call “Blue.” I assert that this harmony is the only entity that unifies truth, goodness, and beauty. Thus, truth, goodness, and beauty can all be perceived as a single reality, “Blue,” under the realm of mathematics. In other words, truth = goodness = beauty = “Blue.” These principles are not separate entities but a singular mathematical truth embedded within “The Blue Print.”

### **The Relationship Between Mathematics and Goodness**

If the world is fundamentally mathematical, then human actions and desires can also be understood mathematically. Each individual experiences competing desires, and how we prioritize these desires determines the course of our actions. For example, a student may desire to study for entrance exams while also wanting to play video games. Their decision reflects an internal ranking of these desires, yet humans often act in contradiction to their greatest desires. Generally, each person’s desires can be evaluated (if considered calmly). When all desires are correctly evaluated, the greatest desire of each person should be found. Speaking personally, my greatest desire is to discover “The Blue Print” and contribute to world peace. In this way, each person should have one greatest desire.

Here, from the “Hajime Hypothesis” (or the mathematical universe hypothesis), our existence is truly mathematical, so we can attach the adjective “mathematical” to any statement we make (for example, “live (mathematically),” “eat (mathematically),” “sleep (mathematically),” etc.).

Therefore, “living well” is nothing other than “living well mathematically,” which is also “living mathematically well.”

Here, correctly evaluating the magnitude of desires is nothing other than doing

mathematics correctly in life. Hence, “living mathematically” means “correctly evaluating the magnitude of desires,” which ultimately means “living faithfully to the greatest desire.”

### Goodness as a Mathematical Principle

Now, I propose the following assumptions:

1. God exists.
2. God created and determines everything.
3. God is good.
4. All existence is equal.

From assumption 4, the greatest desire that each person inherently possesses, or is destined to possess in life is either equally good or equally bad. Given assumptions 1, 2, and 3, a good God who guarantees existence would not allow the greatest inherent desire of any individual to be bad (since a good God would find it absurd and change it to good). Therefore, the greatest desire each person has is good.

Therefore, “living faithfully to the greatest desire” is “living faithfully to the good,” and is naturally good. Hence, in conjunction with the previous discussion, the following can be said: namely, “to live well” is “to live faithfully to the greatest desire.”

Alternatively, it can also be expressed as follows: “To live well” means “to (always) correctly evaluate the magnitude of desires.”

In other words, life is nothing but the continuous accumulation of good (since correctly evaluated desires are good). The merit of a person’s life can be expressed mathematically as follows:

$$\text{人生} = \int_{\text{生}}^{\text{死}} \text{善} dt$$

This is the “Merit Integral.” In summary, the discussion can be encapsulated in one phrase: “To live is to do mathematics.”

### Conclusion: To Live Is to Do Mathematics

In conclusion, this essay has proposed that mathematics is not only the structure of the universe but also the foundation of ethics. To live well is to understand and follow our greatest mathematical desires, which align with the good. Therefore, to live is to do mathematics.

Furthermore, since truth, goodness, and beauty are unified under the concept of “Blue,” “to do mathematics in life” means “to live truly,” “to live well,” and “to live beautifully.” Additionally, it means “to live in blue.”

### References

Tegmark, M. (2007). Shut up and calculate. *arXiv:0709.4024v1 [physics.pop-ph]*