

## The Paradigm Poem

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### Abstract

A work entitled "Newton's Third Law In Karmic Warfare" exemplifies a technique, which I call The Paradigm Poem. I will use it here to help with understanding the use of metaphor in mathematical visual poetry. In addition, I would like to stress some important influences regarding metaphor in my work as well as show an analytical list of metaphor mappings done in a method taught by cognitive scientists George Lakoff and Raphael Nunez.

### Introduction to the Paradigm Poem

In this short paper I would like to analyze the metaphors in the aesthetic work titled, "Newton's Third Law In Karmic Warfare." This piece uses a technique that I call "The Paradigm Poem". The "Paradigm Poem" is a classification for a mathematical poetry method that borrows its structure from an existing equation of scientific or cultural significance and maps metaphoric content into that structure. In general, the "Paradigm Poem" has many sub-categories which are as numerous as there are categories for applied mathematics. Examples that we could consider would be: "Physics Paradigm Poem", "Chemistry Paradigm Poem", "Business Accounting Paradigm Poem", "Psychophysical Paradigm Poem" etc.

### Metaphor

**Joseph Campbell and Metaphor.** I would like to start my little essay with an idea of metaphor that liberated me from some of my paradoxical thinking when I struggled with my understanding of religion. While most people think of metaphor in terms of an analogy, it is the use of metaphor to create a conflation that is of the most importance to me. The 20th century mythologist Joseph Campbell's usage shows how spiritual concepts are mapped across each other in ways to conflate these concepts to point toward an idea that bridges the infinite to the concrete. Campbell has said that God is a metaphor and much of my work uses mytho-spiritual themes that rely on concepts that build off of this insight. Understanding a mythological context for God is crucial to understanding the use of metaphor in my work. Here is a quote from Campbell that I find most influential in my work. "The transcendent transcends all of these categories of thinking. Being and nonbeing — those are categories. The word "God" properly refers to what transcends all thinking, but the word "God" itself is something thought about. Now you can personify God in many, many ways. Is there one god? Are there many gods? Those are merely categories of thought. What you are talking and trying to think about transcends all that [1]."

Poetic metaphor is that is much like dividing by zero — it doesn't make logical sense because it functions to point at things that can not be said directly. I use it to point at the conflicting energies in my psyche where I can go about to personify them using cultural references from other mythologies. In this way I can re-contextualize existing mythological thought and bring it into the contemporary milieu.

**George Lakoff and Metaphor.** While Campbell stirs my poetic spirit, it is the cognitive scientists George Lakoff and Rafael Nunez that have given me the most clarity when pondering the mechanics of metaphor especially when analyzing my mathematical poetry. I think it is important to mention that while Lakoff and Nunez have written extensively showing that pure mathematics is itself based in metaphor, I

am going to avoid that topic and focus on showing how an equation can be used as a vehicle to carry “poetic metaphor” within the variables.

Conceptual metaphor in a nutshell can be seen as viewing one concept or conceptual domain as another. I would like to talk a bit about the mechanics of how conceptual metaphor functions. Lakoff and Nunez explain it well in the following: “Each conceptual metaphor has the same structure. Each is unidirectional mapping from entities in one conceptual domain to corresponding entities in another conceptual domain. As such, conceptual metaphors are part of our system of thought. Their primary function is to allow us to reason about relatively abstract domains using the inferential structure of relatively concrete domains[2].”

To illuminate how the nomenclature works for analyzing conceptual metaphor, Lakoff describes the process as: “Aspects of one concept, the target, are understood in terms of nonmetaphoric aspects of another concept. A metaphor with the name A IS B is a mapping of part of the structure of our knowledge of source domain B onto target domain A [3].” In another words, when we map one domain to the next, we describe it in terms of mapping the ‘target domain’ to the ‘source domain’. Using this nomenclature helps us to see the mechanics of how poems work.

### Example

**Physics Paradigm Poem.** Let me show an example of a “Physics Paradigm Poem” using Newton’s second law of motion. For this example I am going to use an excerpt from my essay on ‘Polyaesthetics and Mathematical Poetry’.[4] “My personal view is that almost all mathematic applications rely on using equations with the intent similar to simile. The variables in the equation are compared explicitly with the result for uses in denotation. For example, in the case of an application of Newton’s second law of motion  $F = ma$ , or Force equals Mass times Acceleration, we are comparing the variables ‘m’ (Mass) and ‘a’ (Acceleration) explicitly to ‘F’ (Force).

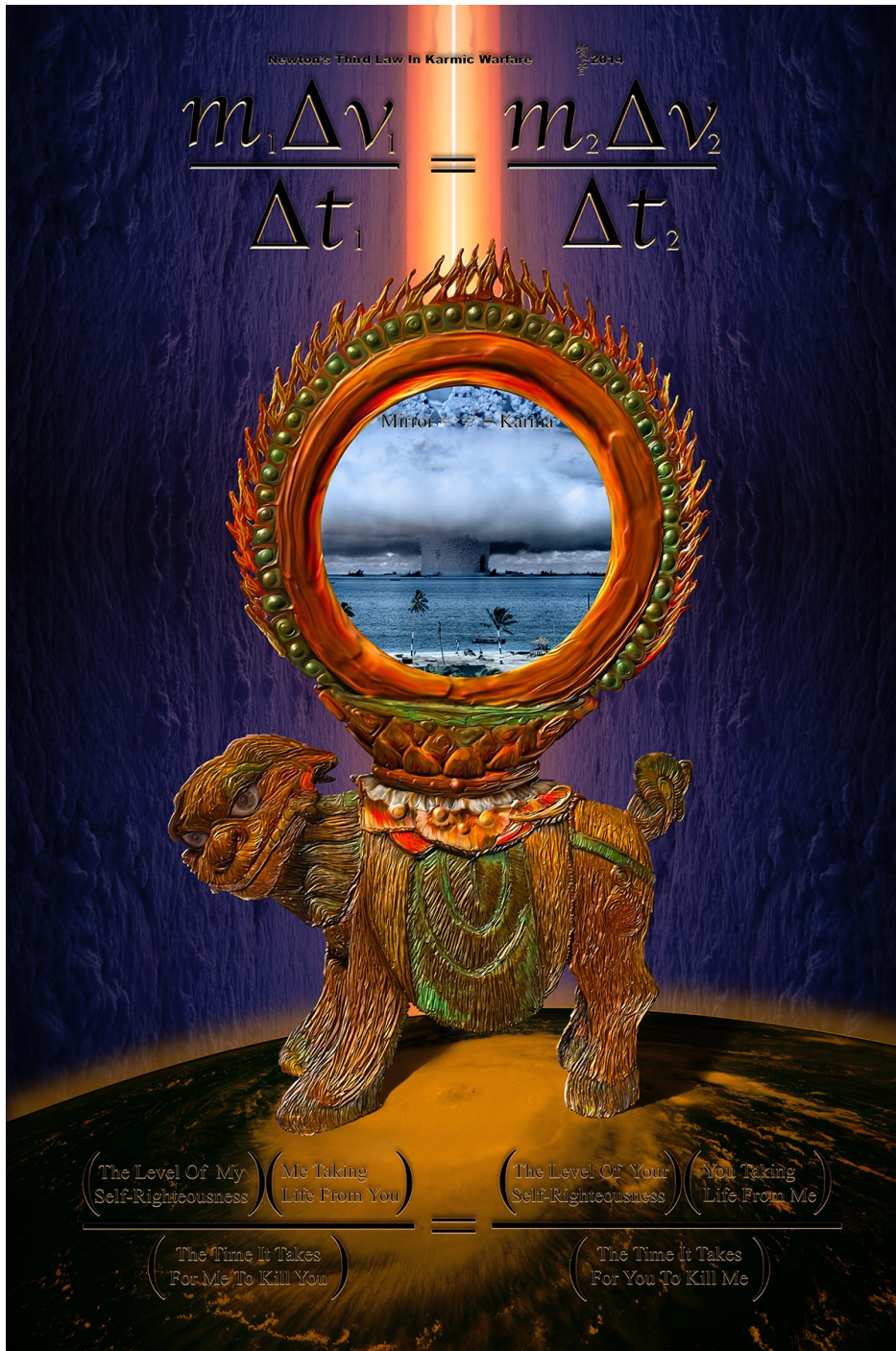
**Example of the Paradigm Poem.** I can now make a mathematical poem based on the previous example by expressing the Force of ‘yesterday’s freedom’ as being equal to ‘a lush clover patch’ multiplied by ‘the swelling sweet summer breeze traversing the morning’. We can then put this in the form of a mathematical equation as; Yesterday’s freedom = (a lush clover patch) (the swelling sweet summer breeze traversing the morning). In other words, I set the Force to ‘Yesterday’s freedom’, the mass to ‘a lush clover patch’, and I accelerated the mass by ‘the swelling sweet summer breeze traversing the morning’. All of these phrases relate back to the ‘source domain’ or the original equation from physics  $F = ma$ . I want to emphasize that I was very careful when I made my choice for acceleration so that the phrase is evocative of the mathematical description of acceleration as defined by physics. Acceleration is the change in velocity of an object per unit of elapsed time during that acceleration. Here, the change in velocity is implied by ‘swelling’ and the change in time is implied by ‘traversing’.”

In the above example we are using the words “Yesterday’s freedom; a lush clover patch; the swelling sweet summer breeze traversing the morning” as the verbiage in the variables of the equations which supply us with the target domain - and then we are using the equation from physics  $F = ma$ , its scientific meaning and historical significance as the source domain.

**Figure 1:** Equation from Newton’s Third Law In Karmic Warfare.

$$\frac{\left( \begin{array}{l} \text{The Level Of My} \\ \text{Self-Righteousness} \end{array} \right) \left( \begin{array}{l} \text{Me Taking} \\ \text{Life From You} \end{array} \right)}{\left( \begin{array}{l} \text{The Time It Takes} \\ \text{For Me To Kill You} \end{array} \right)} = \frac{\left( \begin{array}{l} \text{The Level Of Your} \\ \text{Self-Righteousness} \end{array} \right) \left( \begin{array}{l} \text{You Taking} \\ \text{Life From Me} \end{array} \right)}{\left( \begin{array}{l} \text{The Time It Takes} \\ \text{For You To Kill Me} \end{array} \right)}$$

**Figure 2:** *Newton's Third Law In Karmic Warfare.*



The bottom line concerning the ‘paradigm poem’ is that we borrow an equation from the past which inherently contains historical significance and serves as an paradigm or mathematical model that seems almost “a vessel” to carry the mathematical poem. The paradigm poem always borrows an existing mathematical structure to serve as a source domain in our metaphor.”[4]

## Newton's Third Law in Karmic Warfare

In the poem “Newtons Third Law In Karmic Warfare” (Fig. 1,2) we map two dynamic forces against each other that always remain equal. Karma is a spiritual law that states that the current and future situation of a person is influenced by their actions of the past. So we are reminded of the vernacular version of Karma in the sense that “what goes around comes around”. I see Karma as the same archetypal concept as the conservation of momentum and energy. So in my expression we map the mass of the forces as egos. When we map our ego across the idea of mass we may get an idea of something that has inertia when moving or an entity that carries weight in certain situations. Some people are thought to have ‘massive egos’. We are also mapping the idea of acceleration across the idea removing or taking life — I am reminded that if I don't take care of my health I accelerate my own death. So acceleration is moving something through space and time. In physics it is a physical object however, in poetics It can be any object that makes sense to us. In this case we are objectifying life. So can I accelerate death in my enemies? What would be the mechanics of doing this? So can I view life as an object moving through time? These are questions that I would hope someone would ask themselves when looking at this poem. When looking at the visual metaphors in this piece one must notice that I am borrowing a mythological expression from Korean culture called a Karma Mirror. The creature stands upon a world of hellish judgment where we find upon its back a mirror that reflects our Karma back at us so that we may see it. I would hope you would ask what Kind of Karma has been created by the creation of nuclear weapons?

**Mappings.** The following section of this paper is a list of metaphorical mappings that I have perceived by analyzing the aesthetic work titled “Newton's Third Law in Karmic Warfare” (Figs. 1,2) The metaphor mapping nomenclature of Layoff and Nunez are used for this list.

Metaphor from Physics:

The Equation from Physics that describes equivalent forces IS Observations of equivalent forces

Poetic Metaphors:

Mirror IS Conservation of Momentum and Energy; Mirror IS Equivalence; Karma IS Equivalence; Karma IS Mirror

Mathematical Poetic metaphors

$M_1$  or Mass (subscript 1) IS The Level Of My Self Righteousness;  $\Delta v_1$  or The change in velocity (subscript 1) IS Me Taking Life From You;  $\Delta t_1$  or The change in time (subscript 1) IS The Time It Takes For Me To Kill You;  $M_2$  or Mass (subscript 2) IS The Level Of Your Self Righteousness;  $\Delta v_2$  or The change in velocity (subscript 2) IS Me Taking Life From You;  $\Delta t_2$  or The change in time (subscript 2) IS The Time It Takes For You To Kill Me;

Visual (image) Metaphors:

Nuclear Proliferation IS Karmic Force; Karma IS Hell; Korean Karma Mirror IS a vehicle

## References

- [1] Joseph Campbell; Bill Moyers, *The Power of Myth*, Kindle Edition Knopf Doubleday Publishing Group. 2011-05-18.
- [2] George Lakoff;Rafael Nunez, *Where mathematics comes from*. Basic Books 2000.
- [3] George Lakoff; Mark Turner, *More than cool reason A Field Guide To Poetic Metaphor*. University of Chicago press 1989.
- [4] Kazmier Maslanka, *Polyaesthetics and mathematical poetry*, Journal of Mathematics and the Arts Taylor and Francis Vol 1 Issue 1 March 2007