

The Gift of Entropy

Kazmier Maslanka

Film and Video Poetry Society, Los Angeles, California, USA; kaz@kazmaslanka.com

Abstract

This paper addresses the concepts and ideas that inspired the mathematical visual poem, “The Gift Of Entropy”. It also encourages the reader to study the mechanics of language found in cognitive linguistics for doing so adds a richer depth to experiencing mathematical visual poetry. I feel the best works of artistic expression always evoke questions, often more provocative ones than anticipated. By doing so the artwork seems to take on a life of its own. This paper recognizes the tumultuous history of mixing mythology and science and is interested in the aesthetics of that conflation. To have a deeper understanding of the mechanics of this poem, one should be familiar with the concept of ‘Similar Triangles Poems’ and understand the mechanics of how conceptual metaphors are mapped in this structure.

The Gift

A concise, yet limited, definition for entropy is: “the degradation of the matter and energy in the universe to an ultimate state of inert uniformity. Entropy is the general trend of the universe toward death and disorder [5].

The work’s main image (see Figure 1) refers to the Biblical narrative in Genesis 2:17, in which the snake presents an apple from the tree of knowledge of good and evil. Furthermore, we understand that eating the apple is punishable by death. According to this text, this death resulted in the loss of Adam and Eve’s as well as humanity’s immortality and promulgated sin for the world.

It can be argued that St. Augustine invented ‘free will’ to shift the blame of evil from the creator to the created [6]. This paper asks the question: If the creator embedded entropy into the world, and it is arguable that entropy is the death sentence for the universe, then what exactly is this apple? And who is responsible for giving it to us? (God, Nature, or Satan) By titling this piece, “The Gift of Entropy” we question the arguments of theodicy resulting from a cognitive blend in the relationship between entropy and universal death as ascribed by the Bible. The ramifications of this may move St. Augustine’s advocacy of free will from a theological epistemology to a theory in science or maybe a failed theological theory because of science. This mathematical visual poem is intended to pose questions and this paper is to illuminate the concepts around some of those questions. For instance, there is the question: Can one have life without entropy? I would like to remind one that this mathematical visual poem is not science it is strictly poetic and philosophical yet, points to science

More on Entropy

While entropy is as mysterious as it is pervasive, it is fundamental to the very nature of the universe. It flows from the same mystery that makes a coin flip on its head 50% of the time or the uniform mixing of hot coffee and cold cream. It begs the mysterious question of what is the source of probability.

Vaclav Havel is quoted as saying, “Just as the constant increase of entropy is the basic law of the universe, so it is the basic law of life to be ever more highly structured and to struggle against entropy” [2]. The latter statement is profound for we have no choice but to struggle with entropy every second of our life. Are we not fighting against entropy and always ending with the same result as us trying to make our entropic state lower at the expense of our neighbor? In short, this is not a personal choice, for it is necessary for our survival, and as humans, we have been fighting entropy for millions of years. Humanity has never had unlimited access to energy though it is abundant. I believe we may not be pathologically selfish in our personal lives however, as societies I believe we have become solipsistic nations maneuvering to hoard energy, and the oil wars in the Middle East provide an example. Does not entropy

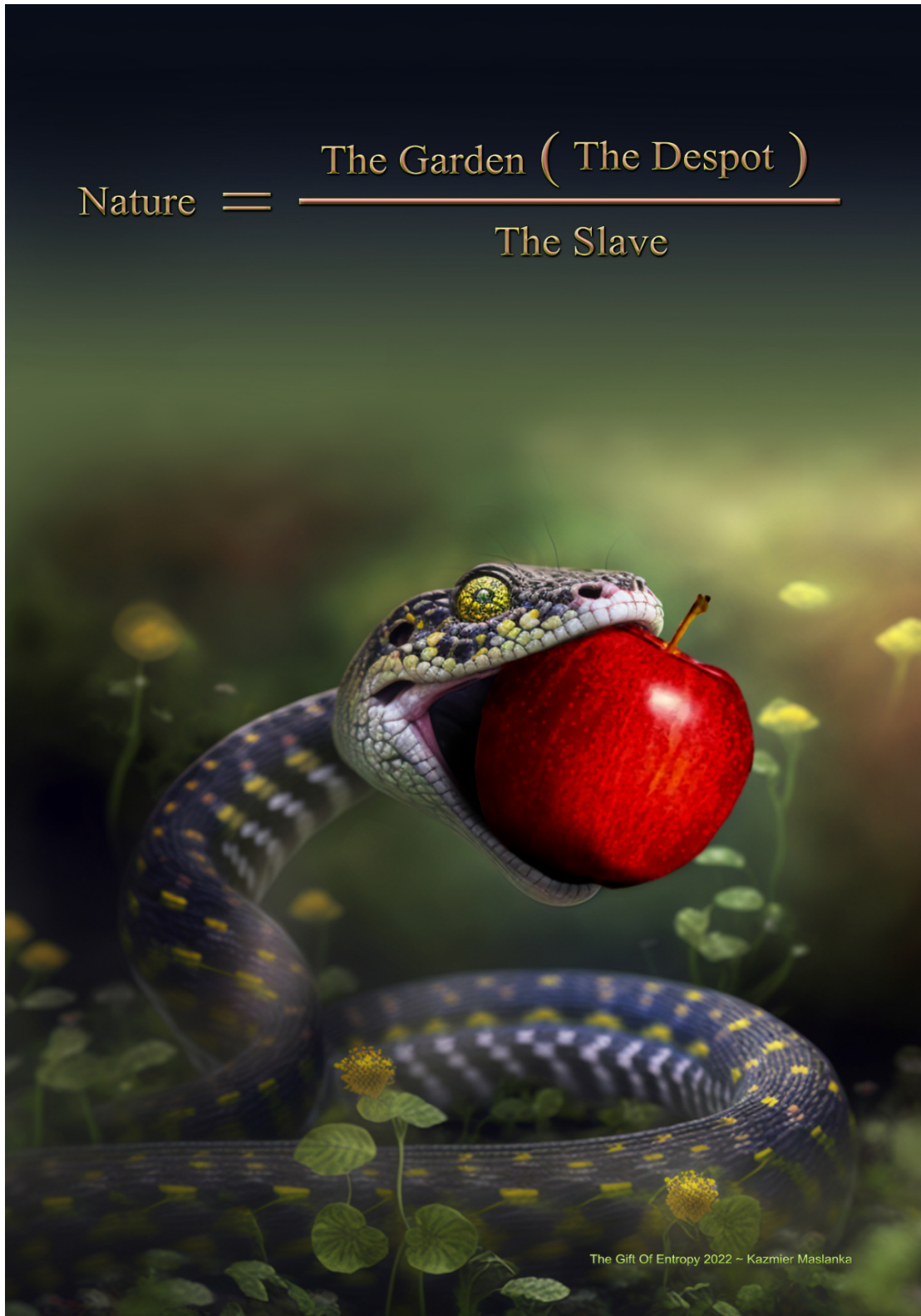


Figure 1: *The Gift of Entropy by Kazmier Maslanka.*

rob us of energy forcing us to compete with others to acquire energy? — Can wars ever cease with us constantly fighting for energy? Have wars always been due to us fighting to save energy in some form or another? If so the utopian ideal can never exist because entropy always holds us in check. Evading the problem is highly problematic if not futile for one cannot change the fabric of the universe. While good and evil are always relative terms, I can argue that all battles of good and evil in the world can eventually be traced back to our selfish nature of manipulating entropic states.

The mathematical visual poem titled, "The Gift Of Entropy" adds a mytho-spiritual dimension to this idea of entropy. It points to the relationship between death and that which is punishable by death and ultimately to the question is the apple (entropy) a gift? who gifted it? and for what purpose? Or is entropy about life as much as it is about death? Are there parallels in other legends such as the story of Prometheus? The reader can create potential answers to these questions in the conceptual blending of the numerous concepts presented as inputs to the blends [1].

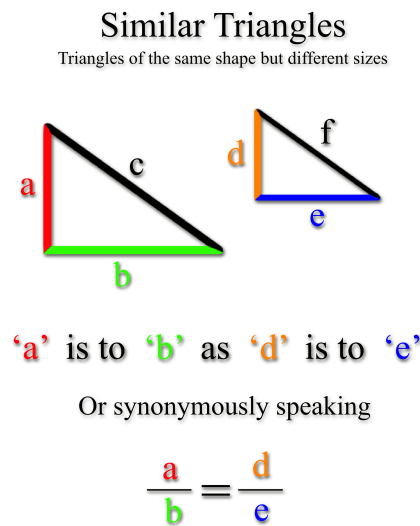


Figure 2: Example of the similar triangles structure which shows the image schema for the poem.

The Poem

In this "Similar Triangle Poems," a conceptual blending is used in the analogy between the variables in the proportional mathematical structure. In addition, the similar triangles poem (see Figure 2) fits within the characterization of a similar triangles "image schema" as defined by cognitive linguistics and its relationship to "embodied cognition"[3]. Again, I want to mention that to understand how similar triangle poems are read, please see "A Cognitive View Of Pandemic Meditation"[4].

$$\frac{\text{Nature}}{\text{The Garden}} = \frac{\text{The Despot}}{\text{The Slave}}$$

Figure 3: Nature is to the garden as the despot is to the slave

This poem makes the analogy, 'Nature is to The Garden as a Despot is to a Slave' or the syntax can be flipped to express 'Nature is to The Despot as The Garden is to The Slave' (see Figure 3). In creating this poem, I chose the neutral word "nature" carefully while also pointing to the concept that a personification of nature (Satan or God) is gifting us entropy as opposed to something based on the probabilities governing states of energy (entropy). Again, we have another conceptual blend to spawn our cognitive creation.

Let us analyze this poem in the context of the questions asked above. This poem incorporates the “similar triangles poem” structure. I map concepts into the values for the legs of the triangle to establish either cognitive domains [3] for a conceptual metaphor or mental spaces for instances of cognitive blending [1]. In the case of “The Gift of Entropy”, the variables of the similar triangles establish mental spaces to which we can create a conceptual blend, to put it briefly, meaning is created in the blend of the two concepts (mental spaces).

We can see that Nature is to The Garden as The Despot is to The Slave. We can solve the equation for any of the four variables yet, for this poem, we will solve it for Nature (see Figure 4).

$$\text{Nature} = \frac{(\text{The Garden})(\text{The Despot})}{\text{The Slave}}$$

Figure 4: *The equation solved for ‘nature’.*

Conceptual Blending

By blending the concepts of “The Garden” in the equation with the graphic image implying the Garden of Eden we are given a situation where we can make an analogy with the concept of “Nature” We then can ask what immanent power is present in the “Nature” of The Garden of Eden? We then blend the latter with the title of the piece to ask who is presenting this gift. Nature? the personification of evil? Or the personification of what created the universe? Furthermore, by blending the relationship of The Despot to The Slave in reference to the relationship of Nature to The Garden we have a new dimension to ponder. Who is the despot and who is the slave? If we substitute the equal sign for the concept of “is” we can view the equation as a conceptual metaphor mapping across the equal sign where the source domain is the concept of the Despot to the Slave and the target domain is the relationship of Nature to The Garden. I would argue that the relationship of the Despot to the Slave is more rigid and concrete relative to the more abstract target domain of the relationship of Nature to The Garden. Therefore it is interesting to note we have multiple conceptual blends in addition to a conceptual metaphor expressed in this poem.

References

- [1] Gilles Fauconnier and Mark Turner. *The Way We Think Conceptual Blending and the Mind’s hidden complexities*. Basic Books – A member of the Perseus Book Group, 2002.
- [2] *Vaclav Havel Quotes*. BrainyQuote.com. BrainyMedia Inc, April 22, 2024. https://www.brainyquote.com/quotes/vaclav_havel_152336
- [3] George Lakoff. “Explaining Embodied Cognition Results.” *Topics in Cognitive Science*, Vol. 4, no. 4, 2012, pp. 773–785.
- [4] K. Maslanka. “A Cognitive View Of Pandemic Meditation.” *Journal of Humanistic Mathematics*, vol. 12, issue 1, 2022, pp. 366.
- [5] Merriam-Webster online dictionary. *Entropy*. <https://www.merriam-webster.com/dictionary/entropy>
- [6] Brandon Peterson. “Augustine: Advocate of Free Will, Defender of Predestination.” *University of Notre Dame Journal of Undergraduate Research*, Vol 1, issue 1, 2005–06, pp. 1. https://sites.nd.edu/ujournal/files/2014/07/Peterson_05-06.pdf