Mastery over time

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe Mastery over time.
The paper ends with "The End"

Introduction

Time is the fourth dimension.

While some individuals perceive time as discrete values and intervals, other individuals perceive time as a continuous timeline.

Therefore, Mastery over time requires knowledge that only a Master over time can supply.

In this paper, I describe Mastery over time.

Prerequisites for Mastery over time

The reader must know the real numbers, the calculus of limits, real analysis and complex analysis.

The method of Mastery over time

The method of Mastery over time requires understanding of the following theorems and their implications:

Theorem 1: Time isn't infinite in two directions.

Assume the contrary that time exists from negative infinity to positive infinity.

Then, we obtain two contradictions to this assumption:

Contradiction 1: The limit as time tends to negative infinity of at least one pure function of time is not negative infinity.

Proof: By the use of Bernoulli's rule,

$$\lim_{t\to-\infty} \frac{\log(t)-t}{t-\log(t)} = -1$$

Contradiction 2: The limit as time tends to positive infinity of at least a second pure function of time is not positive infinity.

Proof: By the use of Bernoulli's rule,

$$\lim_{t\to\infty} \frac{t-\log(t)}{t-\log(t)} = 1$$

Since we obtain two contradictions, each with a different pure function of time, contrary to our assumption, our assumption is incorrect.

Implication 1: There are at least $2 = 1 + 1$ discrete values of time: -1 and 1.
Implication 2: Therefore, $0 = \frac{1+(-1)}{2}$ is also a discrete value of time.
Implication 3: Negative time (also called **the past**) is possible but only at -1 unit of time.
Implication 4: Zero time (also called **the present**) is possible but only at 0 unit of time.
Implication 5: Positive time (also called **the future**) is possible only at 1 unit of time.
Implication 6: The real numbers $\mathbb{R}$ are constructed and known.

Theorem 2: Time doesn't have a common present.

Assume the contrary that time has a common zero.

Then, we obtain a contradiction to this assumption:

Contradiction 3: The limit as time tends to zero of at least a third pure function of time is not zero.

Proof: By the use of Bernoulli's rule,

$$\lim_{t \to 0} \frac{1}{t^2} = \infty$$

Since we obtain a contradiction, with a different pure function of time, contrary to our assumption, our assumption is incorrect.

Implication 7: A common zero time (also called **a common present**) is **not** possible.
Implication 8: There **exists** at least another discrete value of time obtained from $\lim_{t \to 0} \frac{-1}{t^2} = -\infty$.
Implication 9: There are at least $5 = 1 + 1 + 1 + 1 + 1$ discrete values of time: $\{-\infty, -1,\ 0,\ 1.\ \infty\}$ called **the primordial**, **the previous**, **the present**, **the next** and **the infinity**.
Implication 10: The extended real numbers $\mathbb{R} \cup \{-\infty, \infty\}$ are constructed and known.

Theorem 3: The timeline is identical to the extended real numbers.

Proof: Since the five discrete values of time include the two infinities and **induce** the definition of $t = \sqrt{2}$, time **is identical** to the extended real numbers.

Implication 11: The timeline is reconstructed **identically** to the extended real number line.
Implication 12: The timeline is **analyzed** via time analysis **identically** to how the extended real number line is **analyzed** by extended real analysis.

Theorem 4: The five discrete values of time can also be described in a different way.

Proof: Redefining

$$t = \frac{t+1}{2}$$

transforms the five discrete values of time to $\{-\infty,\ 0,\ \frac{1}{2},\ 1 \text{ and } \infty\}$.

Implication 13: The five discrete values of time are respectively called **the primordial**, **the present**, **the half**, **the next** and **the infinity**.

Theorem 5: Any finite interval of time can be divided into an arbitrary natural number of divisions.

Proof: For any interval of time $[r, s] \in [-\infty, \infty]$, where $s > r$ and $n > 1$ is an arbitrary natural number of divisions, define

$$\delta = \frac{s-r}{n-1}$$

.

Then

$$d = \{t : t = r + (i-1)\delta\}$$

where

$$i \in \{1, 2, \ldots, n-1, n\}$$

gives the required result.

Implication 14: Since, the number of divisions of **any** interval of time is an **arbitrary** natural number, **all** units of time are **also arbitrary**.

Implication 15: Since all units of time are **also arbitrary**, **any** individual may choose **any** arbitrary unit of time as their own unit of time.

Theorem 6: The concept of time is destroyed.

Following the previous implication, as there exists no **common** unit of time among **all** individuals, the **concept** of time is destroyed.

The End