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# PLATONIC COMPUTER—THE UNIVERSAL MACHINE THAT BRIDGES THE "INVERSE EXPLANATORY GAP" IN THE PHILOSOPHY OF MIND

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#### **ABSTRACT**

The scope of Platonism is extended by introducing the concept of a "Platonic computer" which is incorporated in metacomputics. The theoretical framework of metacomputics postulates that a Platonic computer exists in the realm of Forms and is made by, of, with, and from metaconsciousness. Metaconsciousness is defined as the "power to conceive, to perceive, and to be self-aware" and is the formless, contentless infinite potentiality.

Metacomputics models how metaconsciousness generates the perceived actualities including abstract entities and physical and nonphysical realities. It is postulated that this is achieved via digital computation using the Platonic computer. The introduction of a Platonic computer into the realm of Forms thus bridges the "inverse explanatory gap" and therefore solves the "inverse hard problem of consciousness" in the philosophy of mind.

**Keywords**: Platonism, Platonic computer, pancomputationalism, metacomputics, metaconsciousness, metaprocessor, metadata, metaprogram, abstract entities, physical reality, nonphysical reality.

#### 1. INTRODUCTION

In philosophy of mind, the "hard problem of consciousness" was sonamed by David Chalmers (Chalmers, 1995), although the issue has scholarly antecedents from considerably earlier put forward by thinkers including John Locke (Locke, 1772) and Thomas Henry Huxley (Huxley, 1868).

The hard problem of consciousness arises from taking the position of physicalism which holds that material existence is fundamental and everything is physical. From this it is evident that consciousness is a derivative of the physical brain. However, if a physicalist world view is adopted it becomes difficult to explain how neuronal activities in the brain gives rise to the first-person conscious experience of experiences such as red rather than

green, or the sound of a dog barking, the smell of rose, or taste of red wine. There is an explanatory gap (Levine, 1983) between our understanding, no matter how complete, of the neuro correlates of a conscious experiences and our subjective conscious experience.

Having realized that the hard problem of consciousness is unsolvable, the last few decades has seen an increasing number of consciousness researchers turning away from physicalism and adopting alternative philosophical positions. Many made the progressive move to dualism in the 1980's and 1990's, then on to panpsychism in 2000's, and more recently to idealism (Chalmers 2019).

Idealism holds that consciousness is the fundamental nature of reality, that is, everything is mental. From this point of view matter is a derivative of consciousness. However, if an idealistic world view is adopted then it becomes difficult to explain how consciousness gives rise to the apparently independent existence of the material world. This is encapsulated in the phrase the "inverse hard problem of consciousness" that was coined by Max Velmans to highlight this issue (Velmans, 2021).

Various attempts have been made to address the inverse hard problem of consciousness. For example, Bernardo Kastrup put forward the argument that universal consciousness is all there ultimately is, with everything else in nature being reducible to patterns of excitation of this consciousness (Kastrup, 2019). Kastrup did not, however, propose a mechanism that would explain how such patterns of excitation of universal consciousness could give rise to the perceived phenomenal physical world.

Donald Hoffman proposed "the interface theory of perception," which postulates that the objects we perceive in time and space are metaphorical icons that act as our interface to reality (Hoffman, 2010). Hoffman uses the metaphor of a desktop computer and its icons. The icons of such a desktop computer provide a functional interface so that the user does not have to deal with the underlying programming or the electronics in order to use the computer efficiently. The interface theory of perception uses a mathematical model based around conscious agents, within a fundamentally conscious universe, to support conscious realism as a description of nature. However, the causal link between universal consciousness and the icons in the interface is not well established by the proposed mathematical model.

Hence, despite various attempts to deal with this issue there still appears to be an "inverse explanatory gap" between the perceived phenomenal physical world and universal consciousness. As such, this paper attempts to bridge the inverse explanatory gap by incorporating pancomputationalism into the framework of idealism.

#### 2. PANCOMPUTATIONALISM

Human intellect often relies heavily on metaphor to approach the unknown. For example, if we cannot see the elephant, we can use conceptual metaphors such as a pillar, fans, rope, wall, etc. to comprehend and describe it.

Throughout the history of science, metaphors have been used to propose and refine scientific theories and models. This has included the metaphors of light as a wave, light as particles, gas as billiard balls, electric current as flow and the atom as a planetary system. All these are examples of metaphor-based hypotheses that have been accepted into mainstream scientific thinking and theories. Nevertheless, other metaphorical models such as the plum pudding model of the atom, were discarded when they failed to explain new experimental results.

Since the second half of the 20th century, inspired by the development of computation and digital communication technologies, some computer scientists and physicists have proposed a range of new ideas of reality that describe the universe as the output of computation. In 1969, Konrad Zuse, one of the earliest pioneers of the modern computer, first suggested the idea that the entire universe was being computed on a computer (Zuse, 1969). Mirroring this idea others, such as John Wheeler, proposed the now famous remark "it-from-bit:"

"'It from bit' symbolizes the idea that every item of the physical world has at bottom—a very deep bottom, in most instances—an immaterial source and explanation; that which we call reality arises in the last analysis from the posing of yes—no questions and the registering of equipment-evoked responses; in short, that all things physical are information-theoretic in origin and that this is a participatory universe." (Wheeler 1990)

Computer scientist Edward Fredkin speculated that such an idea "... only requires one far-fetched assumption: there is this place. Other, that hosts the engine that 'runs' the physics" (Fredkin, 2005). Other scientists, who have modelled the universe as the processing output of a giant computer include Jűrgen Schmidhuber (Schmidhuber, 1997), Stephen Wolfram (Wolfram, 2002), Max Tegmark (Tegmark, 2007), Hector Zenil (Zenil, 2012), and Tommaso Bolognesi (Bolognesi, 2012).

Furthermore, quantum versions of this computational universe hypothesis have been proposed by Nobel laureate Gerard't Hooft (Hooft, 1999), David Deutsch (Deutsch, 1997), Seth Lloyd (Lloyd, 2005), Paola Zizzi (Zizzi, 2005) and Brian Whitworth (Whitworth, 2010).

Similarly, the pancomputationalist world view was popularized in its current form by philosopher Nick Bostrom who uses a type of anthropic reasoning to claim that humans are almost certainly living in a computer simulation (Bostrom, 2003).

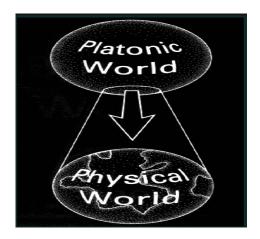
These previous ideas and models however have not considered how such a computer, that might be capable of generating and sustaining the universe, could have come into existence. To refine such computational universe speculations into a more coherent theory the following questions need to be addressed:

- Where is the computer?
- Where does it come from?
- What is it made of?
- How was it built?
- What are its properties?
- Who or what is the programmer?

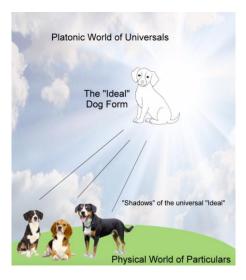
Metacomputics has been proposed by Simon X. Duan (Duan, 2018) as a theoretical framework that is able to address each of these questions.

## 3. THE THEORETICAL FRAMEWORK OF METACOMPUTICS

Metacomputics is a theoretical framework constructed on the basis of Platonism. Platonism holds that abstract entities exist objectively in the realm of Forms, which operates as the fundamental reality, as illustrated in Figure 1. Abstract entities, such as numbers, geometric shapes and abstract objects are real and perfect nonphysical forms. Whereas material objects in the physical realm are only "shadows", or pale approximations of these abstract entities in the realm of Forms. Nevertheless, material objects in the physical reality resemble their perfect abstract forms to varying degrees, as illustrated in Figure 2.



**Figure 1.** Platonic realm of Forms Source: http://www.newforestcentre.info/realm-forms.html



**Figure 2.** Platonic realm of Forms and physical world of particulars. Source: https://paulspassingthoughts.files.wordpress.com/2017/02/plato-dog-form.jpg

Based on such a principle, it is postulated that the everyday material computer made of silicon is only a shadow, or poor imitation, of the perfect abstract metacomputer that exists in the realm of Forms. This abstract metacomputer is called the "Platonic computer" (Duan, 2018). The parallel existence of the physical computer and Platonic computer is illustrated in Figure 3.

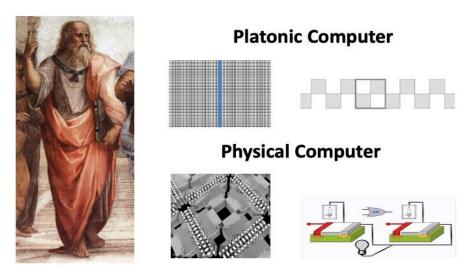


Figure 3. Physical computer as "shadow" or poor imitation of platonic computer

The theoretical framework of metacomputics (Duan, 2018) can be summarised by the following key points:

- The presumed existence of an operating metacomputer (i.e., Platonic computer) in the realm of Forms.
- This Platonic computer is an universal machine that is made by, of, with, and from metaconsciousness.
- Metaconsciousness is defined as the "power to conceive, to perceive, and to be self-aware" and is the formless, contentless infinite potentiality.
- Actualities arise from metaconsciousness via metacomputation of the Platonic computer.

According to metacomputics, the construction of the Platonic computer involves the following three steps (Duan, 2018), as illustrated in Figure 4:

- 1. Metaconsciousness manifests itself into existence.
- 2. Binary metaphysical switches are made with two opposing states (unmanifested metaconsciousness and manifested metaconsciousness).
- 3. The metacomputation system is constructed using the binary metaphysical switches to form the following three faculties: a metaprocessor, metadata, and a metaprogram.

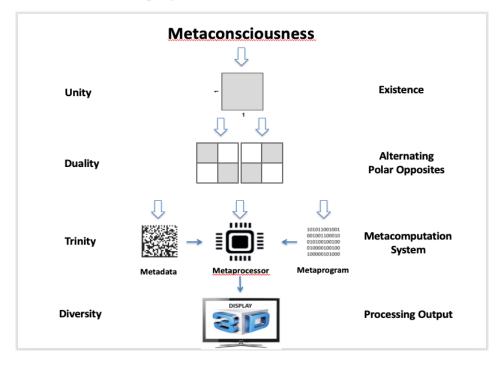
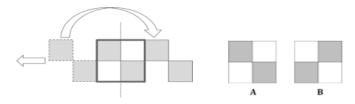


Figure 4. Construction of Platonic computer in the realm of Forms

The processing output of the metacomputation system gives rise to a diverse range of actualities, including abstract entities as well as physical and nonphysical realities.

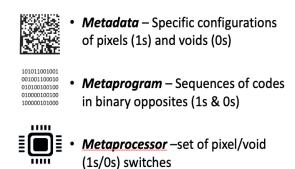
## 4. COMPARISON BETWEEN PLATONIC COMPUTER AND PHYSICAL COMPUTER

Both the Platonic computer and the physical computer operate on binary opposing states. However, there are fundamental differences between the make-up of the binary states in the Platonic computer compared to the physical computer. For example, within the Platonic computer the metaprocessor is made of metaconsiousness, and the output is generated by manipulating the two binary opposing states, i.e., manifested metaconsciousness and unmanifested metaconsciousness (Duan, 2018), as illustrated in Figure 5.



**Figure 5.** Switching of binary opposing states—Pixel (shaded square) and Void (blank square)—by alternating image A and B (Duan 2018). Pixels denote manifested metaconsciousness, voids denote unmanifested metaconsciousness

Similar to the metaprocessor, the other two faculties in the metacomputation system, i.e., metadata and metaprogram are also composed of manifested metaconsciousness (i.e., pixels or 1s) and unmanifested metaconsciousness (i.e., voids or os), as shown in Figure 6.



**Figure 6**. Three faculties of Platonic computer (metacomputation system) are all composed of binary opposing metaphysical states

The processing outputs of the Platonic computer are specific configurations of the binary states (i.e., manifested metaconsciousness and unmanifested metaconsciousness). Furthermore, a specific configuration of these binary states defines the conscious state of being a specific actuality, such as redness, twoness.

In comparison, a physical computer processor is made of binary ON/OFF switches made of silicon, and its output is generated by manipulating these physical switches. Hence, the processing outputs of the physical computer are specific configurations of binary states, i.e., ON (1) and OFF (0). A specific configuration of these 1s and 0s defines a symbol which can be displayed on the computer screen. For example, according to the American Standard Code for Information Interchange (ASCII), the digits 1010 defines the symbol "10," whereas the binary digits 01000001 defines the letter "A," all of which can be displayed on the computer screen.

Representing a shadow of Platonic computation, physical computation using a material computer can only simulate certain aspects of it. For instance, a physical computer can simulate the dynamic changes of the weather so that a weather forecast can be made with a reasonable level of accuracy, but it doesn't get wet and windy inside the computer screen that displays this simulation. That is, simulation of the weather in a physical computer will not produce the conscious experience of wet and windy.

Despite the limitations of physical computation, the physical computer still represents a useful tool to simulate some aspects of Platonic computation. The following section discusses how the generation of abstract entities by the Platonic computer can be simulated using a physical computer.

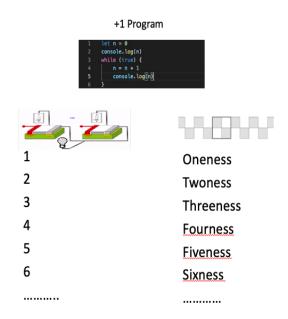
## 5. GENERATION OF ABSTRACT ENTITIES

#### 1) Natural numbers

According to Platonism, numbers exist beyond space and time in the realm of Forms. That is, they are neither the cause nor the result of anything physical. Mathematicians typically describe numbers by their effects or properties (e.g., set theory). They take natural numbers as a given and accept their origin and ontology as a mystery. For instance, the German mathematician and logician Leopold Kronecker (1823–1891) is reported to have said, "God created the natural numbers; all the rest is the work of man" (Gray, 2008).

The creation of natural numbers can be simulated on a physical computer by running a +1 program, as shown in Figure 7. Running this program on a physical computer produces the output: 1, 2, 3, 4, 5, 6...... and so on as a sequence of digits on the physical computer screen. Based on the assump-

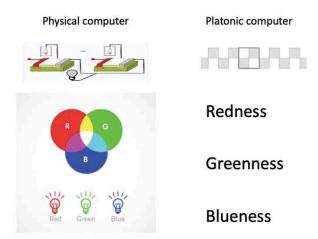
tion that the physical computer is but an imitation of the Platonic computer, it is postulated that, in parallel to the physical computer, the Platonic computer running the + 1 program generates oneness, twoness, threeness, fourness, fiveness, sixness ... and so on in the realm of Forms as specific conscious states.



**Figure 7.** Output of a physical computer (left) and the Platonic computer (right) from running a +1 program

## 2) Colours

According to Platonism, colours are Universals existing beyond time and space in the realm of Forms. For example, an apple and ruby may both be red and the redness they share is a Universal and exists independently of any red "physical thing." Nevertheless, a physical computer can be programmed to produce phenomenal colours as a simulation of how the Platonic computer would produce abstract colours as Universals. As shown in Figure 8, the physical computer (on the left) generates the phenomenal colours red, green, blue. It is postulated that, in parallel to the physical computer, the Platonic computer (on the right) generates Redness, Greenness, Blueness as specific conscious states.



**Figure 8.** Phenomenal colours as output of a physical computer (left) and abstract colours as output of the Platonic computer (right)

## 6. GENERATION OF PARALLEL UNIVERSES

According to metacomputics, 3D space is not a given, instead, it is a processing output of metacomputation (Duan, 2018). Three-dimensional space functions as a 3D display made of voxels, as illustrated in Figure 9.

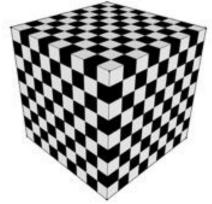


Figure 9. 3D space functions as a 3D display made of voxels

The contents of 3D space arise from metaconsciousness via computational processing of the Platonic computer. The Platonic computer can be configured to run at different clock speeds. At each clock speed, a universe with a specific refresh rate is displayed in the 3D space. Thus, a set of multiple parallel universes, the multiverse, is produced and sustained by metacomputation.

According to metacomputics (Duan, 2018), the memory and processing speed of the metacomputation system increases exponentially as it descends from a higher level to a lower level of parallel universe, as illustrated in Figure 10. The memory and clock speed of the Platonic computer is defined by the following formulas:

Memory = 
$$4^N$$
  
Clock speed =  $2^{(N-1)}$  cycles/unit

Where N is the number of levels descended from the top level of parallel universe.

With increased memory and processing capacity the Platonic computer at a lower level parallel universe would have the capacity to run more complex programs and process more complex data structures.

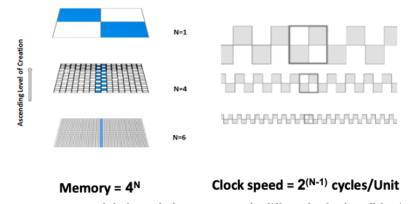


Figure 10. Memory and clock speed of metacomputer for different levels of parallel universes

Metacomputics postulates that each parallel universe is the representation of processing output of metacomputation by a Platonic computer operating at different clock speeds. Hence, the physical universe is only one of many parallel universes in the multiverse.

The physical universe we normally experience in our waking state is governed by a set of rules that gives rise to a set of programs called "physics" that makes the processing output display "physical." Laws of nature expressed by mathematical equations in physics are the approximation of metaprograms that govern the physical universe. For example, a falling apple is programmed to fall with an acceleration of 9.8m/s². Magnets are programmed to attract or repel each other dependent upon their polarity. In quantum mechanics, we can model the entanglement of two particles, but we cannot explain why entanglement occurs. From the point of view of metacomputics, the two particles are essentially two images on a 3D display. As they are the processing output of metacomputation, they can be programmed to entangle.

We experience physical existence such as solidity and stability because physical objects are programmed to exhibit these physical properties. As such, the physical properties of matter are derived from their programming. This can, for example, be simulated by a computer game of pool. The pool balls are images displayed on the screen that are programmed to behave as though they are solid balls.

Other parallel universes constructed by the Platonic computer operating at different clock speeds may have different rules and programs other than "physics," so they do not appear to be physical, but it does not mean they are less real. For example, those who have had a profound nonphysical visual experience during a lucid dream, or during meditation, or when using psychedelics, or when near death, etc., insist that their experience of the nonphysical realm is somehow realer than what they experience in physical realm.

As different parallel universes are processing outputs of metacomputation displayed in 3D space at different refresh rates, a specific refresh rate of the display gives rise to a specific vibration frequency of that universe. Thus, different parallel universes can potentially be experienced by tuning into their specific vibration frequencies. This can be likened to delete spaces tuning into different radio or television channels.

Although all parallel universes superimpose in the same 3D space, most people in a normal waking state tune into only one vibration frequency and perceive only the physical universe. Nevertheless, experiencing nonphysical reality is not as rare as most of us may assume. For instance, everyone experiences nonphysical visions in a dream state, many people also experience nonphysical visions in a psychedelic state, out-of-body state, meditation state and trance state, etc. Furthermore, some skilled meditation practitioners can tune into more than one vibration frequency in a controlled manner; hence they can perceive more than one parallel universe through their mind vision.

# 7. INDIVIDUAL CONSCIOUSNESS AND PERSONAL SUBJECTIVITY

Metaconsciousness is defined as the potential power to conceive, perceive and to be self-aware (Duan, 2018). According to metacomputics, metaconsciousness is the most fundamental aspect of existence that creates the Platonic computer as a universal machine and runs the metacomputation. Metaconsciousness is also the source of subjectivity, the self, the I-ness. As metaconsciousness is the creator of time and space, it transcends both time and space. Thus, metaconsciousness is nonlocal—it has no location in space, it is neither here nor there. It is also timeless—it does not come into existence or go out of existence. In addition, it is formless—it has no boundary, shape or size.

In order to experience creation in space and in time, metaconsciousness constructs multiple living beings in the multiverse via metacomputation. Metaconsciousness then fragments itself into multiple individual conscious agents and localises each individual consciousness within each living being. This gives rise to the sense of individual subjectivity.

As a living being exists in space and time, each individual conscious agent perceives the universe from the point of view of the individual living being. This allows metaconsciousness to experience the diversity of its creation through all the different first-person perspectives of all living beings in space and time in the multiverse.

The relationship between metaconsciousness and an individual conscious agent can be likened to the television broadcaster in the central control room and multiple cameramen at an event such as a football match. During the match different camera men are positioned at distinct locations around the football pitch and film the game from a particular point of view. Whereas, the broadcaster in the TV station control room has access to all the images gathered from all of the cameras across the multiple points of view around the football pitch.

## 8. COMPARISON BETWEEN PARADIGMS OF PHYSICAL SCIENCE AND METACOMPUTICS

The theoretical framework of metacomputics provides an alternative paradigm to the existing physical science approach. The two paradigms share the same empirical methodology. That is, both paradigms rely on experience to explore phenomenal reality both in the physical universe and in nonphysical parallel universes. The two paradigms differ, however, in ontology, epistemology and use of language.

Ontologically, the existing physical science paradigm assumes that matter is the primary form of existence and the ultimate reality. In contrast, the metacomputics paradigm assumes metaconsciousness is primary and is the ultimate reality. On epistemology, the existing physical science paradigm adopts a reductionist approach. This approach leads to an important consequence: it assumes that consciousness and its rich phenomenology is "nothing but" the set of neuronal interactions within the brain. In contrast, the metacomputics paradigm adopts a more holistic approach. Here, metaconsciousness digitalises itself to construct a universal machine—the Platonic computer. The multiverse is the processing output of such a universal machine.

With regards to language, the existing physical science paradigm uses mathematical equations to express the laws of nature and as such mathematics is the language of physical science. Whereas the metacomputics paradigm uses algorithms and data structures to express the diversity of the multiverse. Hence, metaprogram and metadata are the language of metacomputics.

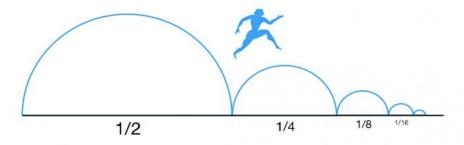
In summary, it has been shown that metacomputics is a new theoretical framework that provides an alternative perspective to reality. It helps to clarify many important concepts that have perplexed humans for millennia, including metaconsciousness, creation, the multiverse, reality, and individual consciousness. In addition, metacomputics has shown to be capable of explaining phenomena and patterns observed in the physical universe. Where, for example, the laws of nature revealed by physics may be viewed as mathematical expressions of metaprograms. Furthermore, metacomputics is also capable of explaining nonphysical reality, as perceived in parallel universes, in dream states, near death states, psychedelic states, and meditation states. Such perceptions are the result of the processing output of metacomputations across parallel universes.

# 9. TESTABLE PREDICATIONS OF METACOMPUTICS

As we have seen the proposed theoretical framework of metacomputics can be used to explain perceived realities, both physical as well as nonphysical. However, to qualify as a scientific theory the explanation of existing phenomena alone is not enough. A candidate scientific theory is required to provide testable predictions so that the validity of the hypotheses can be falsified or verified by experiments.

According to metacomputics, all parallel universes are the processing output of the Platonic computer. From this it is proposed that 3D space is not a given, instead, it is constructed and sustained by metacomputation. It functions as a 3D display made of voxels. This leads to the hypothesis that space itself is discreet, instead of continuous.

Zeno's paradox, commonly referred to as "The Dichotomy," is visually outlined in Figure 11 and used as a thought experiment to test this hypothesis.



**Figure 11**. Zeno's paradox "The Dichotomy" as a thought experiment to prove space is discrete. Source: https://commons.wikimedia.org/wiki/File:Zeno\_Dichotomy\_Paradox.png.

Artist: Martin Grandjean

Suppose you are going towards a point 1 m away at a rate of 1 m/s. If so, with your first step it will take you ½ second to cover half the distance, or ½ m. Let's define each additional "step" as covering half of the remaining distance in half of the remaining time. So, the 2nd step will mean covering ¼ m in ¼ second, and so on. The entire process of reaching your final destination is thus broken into infinitely many steps of ½ m, ¼ m, 1/8 m..... and so on in distance and many steps of ½ s, ¼ s, 1/8 s.....and so on in time.

$$\sum_{n=1}^{\infty} (1/2)^n$$

$$= 1/2 + 1/4 + 1/8 + 1/16 + \dots$$

Although mathematically the sum of all the steps equals 1, the number of steps is still infinity. That is, there is no "last step." So how can a process without a last step be completed?

The fact that you do reach the destination is proof that there is a last step. Therefore, there must be a smallest unit of length in space and time as the last step to reach the final point. According to metacomputics the last step is the size of the smallest voxel in the 3D display, i.e., space (see Figure 9). From the above example it can be seen that metacomputics can provide predictions which can be tested by thought experiment.

# 10. DEVELOPMENT OF PANCOMPUTATIONALISM AND PLATONISM

From the previous discussion, it can be seen that the multiverse can be modelled as the processing output of Platonic computation. Hence, metacomputics has successfully developed a pancomputationalist world view into a theoretical framework by resolving the following questions raised in section 2 of this paper;

# 1. Where is the computer?

The universal machine (i.e., Platonic computer) is in the realm of Forms and is beyond phenomenal space, i.e., it is nonlocal.

## 2. Where does it come from?

The Platonic computer is made from metaconsciousness.

## 3. What is it made of?

The Platonic computer is made of manifested metaconsciousness and unmanifested metaconsciousness.

## 4. How is it built?

The metacomputation system is built by configuring manifested metaconsciousness and unmanifested metaconsciousness into three faculties – metaprocessor, metadata and metaprogram.

# 5. What are its properties?

The Platonic computer operates at a specific clock speed (2<sup>(N-1)</sup> cycles/unit) and memory (4<sup>N</sup>) within each parallel universe, where N denotes the number of levels of the parallel universe.

# 6. Who or what is the programmer?

Metaconsciousness is the ultimate infinite potentiality and creativity. Defragmented metaconsciousness, i.e., individual conscious agents at each level of the parallel universe perform programing for the next level of the parallel universe.

The theoretical framework of metacomputics has also extended the notion of Platonism. In the traditional Platonic realm of Forms, there are only Universals which are timeless, absolute and unchanging. The theoretical framework of metacomputics introduces an operating computer as a universal machine into the realm of Forms. Hence, the new realm of Forms contains a Platonic computer which is dynamic, and its processing output, i.e., abstract entities which are unchanging.

It is not possible to study the Platonic computer empirically as it is not accessible by our normal physical senses or by using current physical instruments. Hence, it may be difficult to accept the validity of the Platonic computer. Nevertheless, if the notion of Platonism is accepted, it can be postulated that such a universal machine exists in the realm of Forms as the archetype of the physical computer. Built on the foundation of Platonism, the theoretical framework of metacomputics can be seen to be internally consistent and coherent.

#### 11. SUMMARY AND CONCLUSIONS

The scope of Platonism is extended by introducing the new concept of a "Platonic computer" which is incorporated in metacomputics. The theoretical framework of metacomputics postulates that a Platonic computer exists in the realm of Forms and is made by, of, with, and from metaconsciousness. Metaconsciousness is defined as the "power to conceive, to perceive, and to be self-aware" and is the formless, contentless infinite potentiality.

According to metacomputics, the physical computer made of silicon is but a shadow or poor imitation of the Platonic computer. Thus, by programing the physical computer it is possible to simulate the operation of the Platonic computer. The processing output of a physical computer includes symbols and virtual reality, whereas the processing output of the Platonic computer includes abstract entities as well as perceived phenomenal physical and nonphysical realities.

Metacomputics models how metaconsciousness generates the perceived actualities including abstract entities and physical and nonphysical realities. It is postulated that this is achieved via digital computation using the Platonic computer. The introduction of the Platonic computer into the realm of Forms thus bridges the "inverse explanatory gap" and therefore solves the "inverse hard problem of consciousness" in the philosophy of mind.

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