

On Understanding

# Consciousness



## Introduction

In this essay I shall be evaluating the following statement:

*'The challenge to understand the nature of consciousness requires the discipline of science together with a willingness to accept the contribution of other, diverse approaches.'*

The first thing to note is that if we recognise we do not understand consciousness, then we must acknowledge we are not in a position to state what coming to an understanding of it might require. In making selections we will, at best, be engaging in educated guesswork.

We must then decide what would constitute a 'diverse approach'. Given that science is specifically mentioned, a diverse approach would be any approach that is distinctly *not-science*.

Here we are in danger of smacking into the demarcation problem<sup>1</sup>—what exactly are the boundaries that separate science from other areas of human knowledge? This is a question which has produced much philosophical debate,

including the possibility that there is no identifiable method which constitutes science.<sup>2</sup> For practical purposes, I'm going to avoid the question and artificially adopt a deliberately narrow definition, in order that we will be left with plenty of *not-science* examples to discuss.

A narrow definition of science may include forming hypotheses, making testable predictions and running experiments to gain knowledge about our world. We might add that the predictions must be, at least in principle, falsifiable.

It's worth stating that *not-science* would not include things such as psychic or near death experience (NDE) research, *when that research is carried out in a scientific manner*. To say such research is not scientific would be to conflate the scientific approach to knowledge with belief in a certain world-view. *Not-science* may, however, include listening to the anecdotes of experiencers and drawing insight into the nature of consciousness from them.

*Not-science* could also include philosophical inquiry that does not seek empirical verification. This could be in assessing how we are asking questions about consciousness, or in the form of directly inquiring into consciousness itself. *The Austrian School of Economics* has, for example, made great use of an *a priori* methodology that rejects empiricism—and by extension most common conceptions of science—as being the correct tool for study in that field.<sup>3</sup>

Before getting into approaches other than science, we will take a look at what science itself has to say about consciousness.

## Science

The antecedence of a scientific approach can be found as far back as the 17th century BCE in the *Edwin Smith Surgical Papyrus*; the Egyptian text which contains the first account of the anatomy of the brain.<sup>4</sup> Fast-forwarding to today, functional neuroimaging techniques (FNT) allow scientists to peer into the brain and observe the neural correlates of consciousness.<sup>5</sup> The results are nothing short of science-fiction. FNT grants a level of observation sufficiently detailed to witness the same individual neurons activated when a visual image is both viewed and imagined.<sup>6</sup> It allows for accurate predictions to be made of the contents of people's dreams,<sup>7</sup> for technology that permits the control of machines through thought alone.<sup>8</sup> Perhaps most magically of all, it has granted people with *locked in syndrome* the ability to reconnect with the world, sometimes after decades of isolation, by bypassing the body and permitting the brain to speak directly.<sup>9</sup>

It is, therefore, no surprise that most neuroscientists believe the secrets of consciousness are contained within the physical brain and that science is the key to unlocking them. Given their dazzling success, should the rest of us simply step back and leave them to crack on with it? Can we conclude, as Francis Crick does, that; 'A person's mental activities are entirely due to the behaviour of nerve cells, glial cells, and the atoms, ions and molecules that make them up.'<sup>10</sup>

There are at least two reasons why this is not a foregone conclusion.

Firstly, science itself does not pull entirely in one direction. Anecdotes of patients reporting out of body experiences during operations gained greater weight when Dr. Penny Sartori documented they were able to describe the procedures they underwent with greater accuracy than a control group.<sup>11</sup> Research into psi phenomenon, whilst not impossible to contrive a materialist explanation for,<sup>12</sup> does not sit well within that paradigm and perhaps points to a non-material basis for consciousness.<sup>13</sup>

This indicates that materialism might not hold all the answers, yet we are still talking about employing a scientific approach. For the second reason, we must go beyond scientific thinking altogether.

### **The Limits of Science**

Departing the domain of science, we find philosophy can inform us as to whether observing correlates of consciousness proves that matter *creates* consciousness, or whether this conclusion arises out of an often unconscious assumption as to the primacy of matter. Correlates are also what we might expect to find if consciousness is primary.

I'll illustrate with a personal example.

During a period when I was contemplating this very question, I had an experience of taking a drug which caused me to pass out for several hours. When I came round, I was overwhelmed by a powerful sense of consciousness being subject to matter. Chemicals had been able to eliminate my conscious experience altogether.

Then I woke up and realised I'd been dreaming.

In truth there had been no chemicals and no brain for them to affect, only consciousness affecting itself. It is entirely possible to imagine my *dream brain* being observed through *dream FNT* and *dream brain waves* being displayed on a *dream screen*. I will grant that the level of complexity of neuroscience would not likely be replicated in a dream, but there is no obvious cut-off point for

complexity. If this world is a different kind of dream, it could allow for a much higher level of complexity to be dreamt.

Whilst it is conceivable that science could falsify materialism (documenting out of body experiences, for example), it is not conceivable that any demonstration of neural correlates will ever prove that matter gives rise to mind. As no empirical observations can answer the question of what reality fundamentally is, it is a question science is fundamentally locked out of.

Can we perhaps turn to philosophy for further answers?

## Philosophy

Philosophy is like Mark Twain—in that reports of its death have been greatly exaggerated. If science is concerned with asking questions about the properties of this world, one role of philosophy would be to examine how we are asking those questions. I will now propose and run through one example of how such an approach might bear fruit when applied to consciousness studies.

### An A Priori Approach

There are over three-hundred and fifty ways to prove Pythagoras' Theorem.<sup>14</sup> None of them involve the measuring of triangles with a ruler. Geometric proofs differ from proofs in natural sciences in this sense: they can be demonstrated *a priori*—through pure reason—and therefore do not rely on empirical verification.

Is it possible to prove phenomena in the natural sciences this way too? Let us examine this.

Galileo Galilei is perhaps the world's most famous empiricist. As the apocryphal story goes, he dropped balls of varying weights off the Leaning Tower of Pisa to demonstrate that they would land at the same time. Minus the particular tower, it's certainly all true—just not the whole story. In his *Dialogues Concerning Two New Sciences*, Galileo also made an a priori argument for why this *must* be the case. His character Salviati exclaims: 'It is possible to prove clearly, by means of a short and conclusive argument, that a heavier body does not move more rapidly than a lighter one.'<sup>15</sup>

In brief, the argument asks us to imagine two bodies of different weights being joined together as they fall. If gravity accelerates the heavier one faster, a contradiction arises wherein the lighter one acts to slow it down, *but also*, because they are now one object, the addition of the lighter speeds the heavier one up.

It is quite a wonder that such insight into nature could be gained purely through inner reasoning. It seems an open question as to what role this kind of reasoning played for Galileo, with biographer John J. Fahie stating that ‘to satisfy his own mind alone he had never felt it necessary to make many [experiments].’<sup>16</sup>

Are there any other fields of human endeavour that have made great use of an a priori approach?

In the social sciences, we find an example within the Austrian School of Economics. In his 1949 treatise, *Human Action*, Ludwig von Mises rejected empiricism as the appropriate tool with which to study economics. Instead he presented an a priori approach, resting on the central axiom that: *Humans act*. Von Mises considered this to be a solid foundation, as to even think in opposition to it is to act, and thereby engage in a *performative contradiction*.<sup>17</sup>

From this humble beginning, von Mises expanded to create a comprehensive theory of economics. It was for his work on the Austrian Theory of the Business Cycle that von Mises’ student, Frederick Hayek, received the 1974 Nobel Prize.<sup>18</sup>

Let us now examine what adopting an a priori approach would look like if applied to consciousness studies. Would doing such a thing return interesting and novel information, or would we just be spinning our wheels declaring all bachelors to be unmarried?

To start with, we will need an axiom which is self-evidently true. I propose:

### ***Consciousness is***

If *consciousness is not*, that is to say, if we live in a purely material universe with consciousness being an illusion, this experience we are having doesn’t exist. You are not reading this. This statement is not being observed. If unobservable entities are indistinguishable from non-existent ones, then *this statement does not exist*. Given this, it seems that the statement ‘*consciousness is*’ provides a solid foundation upon which to build.

We can then add that:

### ***Consciousness is foundational***

All experience arises within consciousness. It is therefore not just something arising; like clouds, or colour, or telephones—all of which we can conceive of a world without—consciousness is foundational to experience.

And from there:

***Consciousness is foundational and all encompassing***

We cannot conceive of anything outside of consciousness. Existence outside of consciousness is unknowable and therefore indistinguishable from non-existence. In addition to being foundational, consciousness is therefore all encompassing.

It then follows that:

***Matter arises in consciousness***

We have no access to a material world outside of consciousness. It is inconceivable that we ever could have. All we know and can ever know of matter is that which appears in consciousness. Talk of matter outside of consciousness is therefore meaningless.

And:

***The sense of self, the 'I' thought, arises in consciousness***

If consciousness is all encompassing, then it must contain the perception of the self. The most foundational part of our being is then not the sense of an individuated self, but rather the consciousness in which that self is arising.

Therefore:

***Consciousness is one***

There is only ever an experience of one field of consciousness in which everything is perceived. We never experience two consciousnesses. Only one field, but not 'my' field, rather the field in which 'I' and 'other' arise.

And:

***Consciousness is one, experiencing itself separately***

If other entities are conscious, then as consciousness is one it follows that that one consciousness is having multiple experiences of itself.

And:

***Consciousness can become conscious that it is one, experiencing itself separately***

That we are able to process these points indicates this to be true.

We have then employed an a priori method to reach the same conclusion a mystic might through an inner—a posteri—examination of consciousness. The mystic however, may report certain qualities accompanying this perception of oneness, such an overwhelming feeling of love. ‘Love is how Oneness feels’, to quote contemporary mystic Tim Freke.<sup>19</sup> Let’s see if we can take this next step with an a priori method too.

The dictionary defines love as: ‘A strong feeling of affection and concern toward another person’; but this really only tells us what love feels like, not what it is. If, as the mystical experience inclines us to perceive, love is somehow fundamental to the nature of being, can we define it in terms of the *absence* of something? For example:

***Love is the antithesis of strife***

For love to be strife would be a fundamental contradiction.

***Strife arises out of the perception of separation***

If all things are perceived as one, there are no separate parts to hold strife.

***Love is perceived in the absence of separation***

Rather than love being a feeling that arises under certain conditions, it is what is present when other conditions are removed.

And since:

***Conscious is one and therefore absent separation***

Then:

***Consciousness is love***

I am not convinced the logic is as solid with the latter group of statements as with the former, and they would doubtlessly benefit from further reflection and work. Overall however, what this process provides is a rational underpinning for mystical experience. In explaining a *consciousness only* ontology, we are not

limited to referencing the experience of those who claim to have perceived such a thing. We can also make a rational argument for it (this is in addition to other types of argument, such as one from parsimony<sup>20</sup>). Furthermore, just as the experiential informs the rational, I have observed that reasoning through each step shifts experience into a direct perception of oneness.

With this rational underpinning in mind, let's now look at another area falling outside of science: that of individual anecdotal experience.

## Individual Experience

Mystical literature provides rich descriptions from people looking within to study the source of their consciousness directly. Some form of this study is present in spiritual traditions across the world, but finds perhaps its clearest expression in the Vedanta school of Hinduism with the practice of *ātma-vichār*, which we loosely translate as *self-inquiry*. Additionally, people report arriving in similar states through unsought spontaneous mystical experiences and NDEs.

For good or ill, anecdotes are powerful. Individual accounts of mystical experience shape the culture of spirituality<sup>21</sup>—and increasingly therapy.<sup>22</sup> Whilst we can analyse anecdotes to discern patterns<sup>23</sup> and even argue this constitutes science, individual anecdotes of inner experience are neither testable nor refutable and therefore clearly not science. The value contained in them, however, is immeasurable.

At this point we must segue to ask what we mean by 'understanding consciousness'. We must consider that the word *understand* could have very different meanings depending on context.

To give an analogy, what it means to understand a car engine might be quite different whether you ask a physicist, mechanic or racing driver. By extension, understanding consciousness might be a very different thing for a scientist, therapist or mystic. Different forms of evidence then, may hold different levels of value.

For a therapist, understanding consciousness may mean understanding how a process of self-inquiry (consciousness contemplating itself) can affect a transformation in a person's psyche. This is quite different from what a neurologist would think of as understanding, but is in a sense every bit as real and powerful. Through this process, a profound shift may occur leading to the resolution of an otherwise intractable psychopathological condition.<sup>24</sup> What the neuroscientist seeks to achieve through electrical stimulation of the brain,<sup>25</sup> the therapist may also attempt through this contemplative approach.



The field of self-inquiry is like many people descending into various dark caves and reporting on what they find. There is no way to take scientific instruments into the caves, thus we are entirely reliant on these reports. We can compare them and find that many details line up, but there is no absolute way to verify any particular one. To dismiss the plurality of reports because they do not amount to scientific data would be self-defeating. Instead we must be aware of all the ways in which they might deceive as we utilise them to the full.<sup>26</sup>

## Conclusion

The Ryoanji temple contains a Zen garden with fifteen stones.<sup>27</sup> However, from wherever a person stands within the garden, only fourteen of the stones are visible. Whatever the intentions of its creators, it serves as a metaphor for how there may be no one place we can stand to perceive reality in its entirety. A comprehensive perception may require fundamental changes in perspective. That which is obvious from one perspective may make no sense from another; whilst that which is nonsense suddenly becomes the obvious answer. As we make these shifts, even our sense of what it means to understand might change.<sup>28</sup>

In this essay I have attempted to demonstrate that there are indeed multiple non-scientific ways in which we can probe consciousness. These approaches return results which are both novel and powerful in their ability to affect psychological change. Different approaches may have rough edges and not sit comfortably alongside each other. One may return results which seem to contradict another. A full appreciation requires us to be comfortable living with these contradictions.

I do not contend it is necessary for every individual involved in any form of consciousness studies to embrace this plurality. Neuroscientists will continue to reveal the correlates of consciousness in absence of the input of mystics. Mystics will continue to explore their conscious depths without being required to know what an amygdala is. Indeed, a tenacity bordering on dogma may play a productive role in scientific discovery.<sup>29</sup>

Returning to our initial statement: *we cannot know what will ultimately be required to understand consciousness or even what understanding ultimately means.* That different non-scientific methods can be and are being employed to probe consciousness is neither recommendation nor conjecture: it is a fait accompli. We do not have to embrace this to do good work, but if we seek a comprehensive understanding then I suggest pluralism is a necessity.<sup>30</sup>

## References

1 For a thorough treatment see Curd, M and Cover J A (1998) *Philosophy of Science - The Central Issues*

For an overview see [Wikipedia](#)

2 ‘The idea of a method that contains firm, unchanging, and absolute binding principles for conducting the business of science meets considerable difficulty when confronted with the results of historical research.’ Feyerabend, P (1975) *Against Method*

3 von Mises, L (1949) *Human Action*

See also Crovelli, M (2006) *What Empiricism Can't Tell Us, and Rationalism Can*

And Gordon, D (2019) *Praxeology: The Method of Economics*

4 For an account of the surprisingly advanced medical knowledge found in the papyrus see: West, J A (1979) *Serpent in the Sky*

And Gonzalo, S; van Middendorp, J and Burridge, A (2010) *The Edwin Smith Papyrus A Clinical Reappraisal of the Oldest Known Document on Spinal Injuries*

5 For a thorough treatment see Schneider S and Velmans M (2017) *The Blackwell Companion to Consciousness*

For an overview see [Wikipedia](#)

6 Fried, I; Koch, C and Gabriel K (2000) *Nature*

For summary see [Caltech](#)

7 Tomoyasu, H; Tamaki, M; Miyawaki, Yi and Kamitani Y (2013) *Science*

For presentation see Gallant, J (2017) *Human brain mapping and brain decoding*

8 See article in [The Economist](#)

9 See article in [Scientific American](#)

10 Crick, F (1994) *The Astonishing Hypothesis*

11 Sartori, P (2014) *The Wisdom of Near-Death Experiences - Chapter 7, A Five Year Prospective Study on NDEs*

A list of Dr. Sartori's academic publications can be found [here](#)

12 As an example: ‘that would not be ESP or PSI, and we would have no need to call it a “paranormal” effect, because we would then know the ability to read minds was due to the properties of neurons and atoms.’ Shermer, M (2016) *Arguing Science*

[13](#) See: Radin, D (2018) *Real Magic*. In particular the section *Consciousness and Magic* (Page 192)

[14](#) See: [How many ways are there to prove the Pythagorean theorem?](#)

[15](#) Galilei, G (1638) [Dialogues Concerning Two New Sciences](#)

[16](#) Fahie J J (1903) [Galileo, His Life and Work](#)

[17](#) von Mises, L (1949) [Human Action](#)

See also Crovelli, M (2006) [What Empiricism Can't Tell Us, and Rationalism Can](#)

And Gordon, D (2019) [Praxeology: The Method of Economics](#)

[18](#) For details see: Rothbard, M (1974) [Hayek and the Nobel Prize](#)

[19](#) Freke, T (2009) *How Long is Now?*

And [Love is How Oneness Feels](#) presentation at SAND

[20](#) 'If it can, then, based on the application of proper skeptical parsimony, it is as unnecessary to postulate a world outside consciousness as it is to postulate the flying spaghetti monster.' Kastrup, B (2014) [To understand the anomalous we need MORE skepticism, not less](#)

[21](#) For example see Tolle, E (1997) *The Power of Now*. Eckhart Tolle's work, which has been read by tens of millions, is rooted in his anecdotal account of a spontaneously arising self-inquiry.

[22](#) For example see Bays, B (2001) *The Journey*. Brandon Bays' work on psychological and physical healing, whilst drawing on neuro-linguistic programming, is rooted in the self-inquiry practice of the Vedanta school.

[23](#) See for example: Long, J (2017) *God and the Afterlife*

[24](#) For an account of the author's own experience see Cox, R (2016) [Depression and Non-Duality](#)

[25](#) Blumberger, D (2018) [Effectiveness of Theta Burst versus High-Frequency Repetitive Transcranial Magnetic Stimulation in Patients with Depression](#)

[26](#) It is worth noting that scientific data is also not without its problems. See Corbett, J (2019) [The Crisis of Science](#)

[27](#) [Counting the Stones at Ryoanji Zen Temple](#)

[28](#) For a full exploration of these ideas see Feyerabend, P (1987) *Farewell to Reason*, in particular Chapter 1, *Notes on Relativism*

[29](#) 'Though preconception and resistance to innovation could very easily choke off scientific progress, their omnipresence is nonetheless symptomatic of characteristics upon which the continuing vitality of research depends.' Kuhn, T (1961) [The Function of Dogma in Scientific Research](#)

[30](#) For a full exploration of the case for pluralism see:

'A scientist who is interested in maximal empirical content, and who wants to understand as many aspects of his theory as possible, will adopt a pluralistic methodology, he will compare theories with other theories rather than with 'experience', 'data', or 'facts', and he will try to improve rather than discard the views that appear to lose in the competition.' Feyerabend, P (1975) *Against Method*

And:

'Proliferation means that there is no need to suppress even the most outlandish product of the human brain. Everyone may follow his inclinations and science, conceived as a critical enterprise, will profit from such an activity. Tenacity: this means that one is encouraged not just to follow one's inclinations, but to develop them further, to raise them, with the help of criticism (which involves a comparison with the existing alternatives) to a higher level of articulation *and thereby to raise their defence to a higher level of consciousness.*' Feyerabend, P (1981) *Consolations for the Specialist, Problems of Empiricism, Philosophical Papers Volume 2*