

## Chapter 59

### Through the Eyes of a Bug

The science of physical processes will probably always struggle in the highly subjective area of consciousness. Were it not for the fact that we are all embarrassingly alive, the ethos of our scientific approach would probably be to deny it as a real phenomenon, relegating thoughts and the subjective experience of qualia such as pleasure and pain to the realms of the supernatural<sup>a</sup>. US physicist and Nobel laureate Steven Weinberg writes,

*'...although we may well come to understand the processes in the brain responsible for consciousness, it is hard to see how we will ever describe conscious feelings themselves in physical terms.'*<sup>b</sup>

In a broad sense the dimensional structure may hold keys to explain something of the way our minds operate; or at the very least the things the mind does may in some way be represented by the *analogue* of Dimensionality<sup>c</sup>. By application of the simple and consistent geometry of *Flatland* to the dynamics of physicality, time, and life, a model of consciousness emerges that takes us in the direction of a third way which is neither materialistic<sup>d</sup> nor dualistic<sup>e</sup>.

Canadian palaeontologist Scott Sampson, in tackling what he sees as the objectification of science, asks the far-reaching question,

*'What if students were asked to spend more time learning about how a particular plant or animal experiences its world?'*<sup>f</sup>

It is my belief that our *Flatland*-derived *Principle of Relationship*<sup>g</sup>, which has enabled us to extrapolate throughout the structure, provides a degree of insight into how other living things experience the world, particularly if the 'scanning' rather than 'storage' model of memory applies, because in principle this must apply 'structure-wide'. But before we go on to examine this, let's look again very briefly at the way the dimensional structure extends into the realms of life, beginning once more with how the Flatlander experiences his 2D space-time<sup>h</sup>.

### Throw Me a Line

Clearly *A Square* cannot see the entire 2D disk around him (the whole past) because he has not been able to face all 360° directions at once, but only his own personal world line through all the possibilities. His experience of his block universe so far is like a squiggly line (his 'scratch in the record') through the widening 2D disk, which represents all the bits of his circle he sensed and lived through, stretching back to his origin at conception on its outer rim<sup>i</sup>.

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<sup>a</sup> If we were all robots and met beings who claimed to experience these things, we would likely neither understand nor believe them.

<sup>b</sup> Steven Weinberg, *To Explain the World*, Penguin 2015, P268

<sup>c</sup> As we did Section 4 with the basics of Relativity.

<sup>d</sup> <https://en.oxforddictionaries.com/definition/materialism>

<sup>e</sup> Ibid./dualism

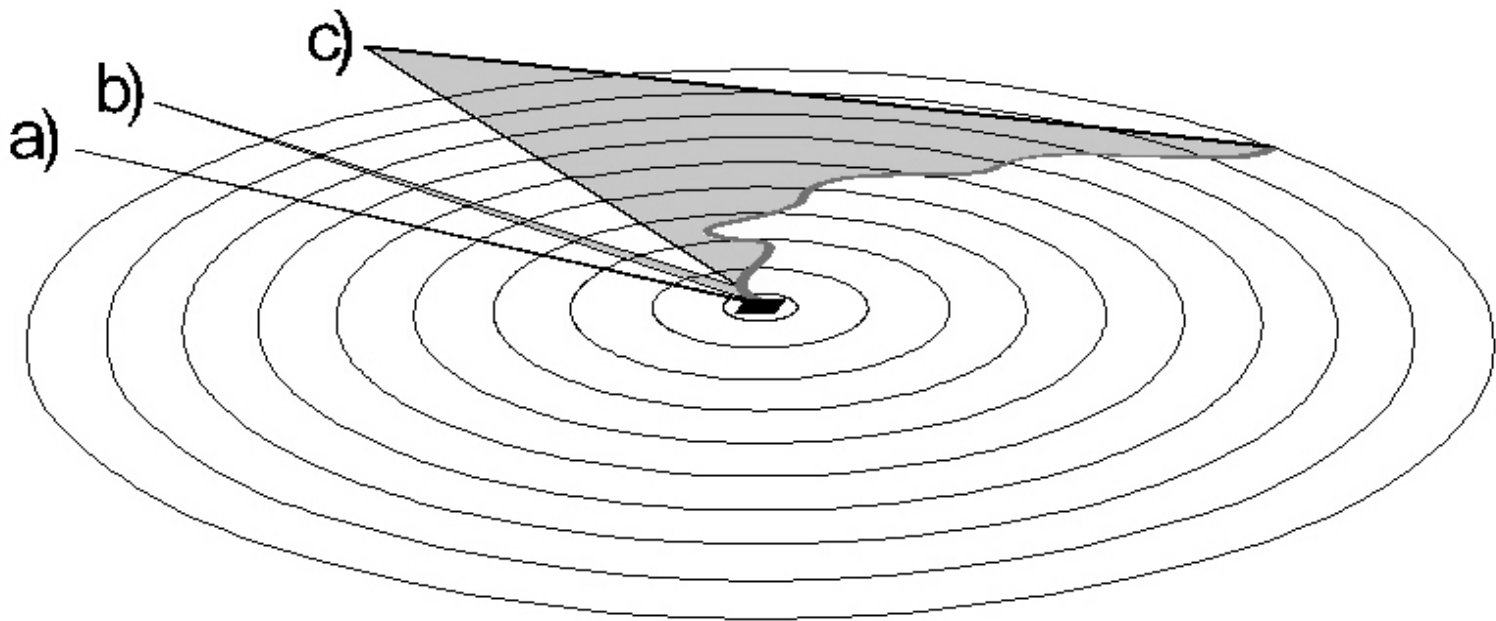
<sup>f</sup> Scott Sampson, *Nature=Objects*, from *This Idea Must Die*, Edited by John Brockman, Harper Perennial 2015, P363

<sup>g</sup> *The Principle of Relationship*: Whatever is true of the relationship between two adjacent dimensions is true of the relationship between any two adjacent dimensions.

<sup>h</sup> As previously described in Chapter 45, with reference to Chapter 11.

<sup>i</sup> As discussed earlier, his and our origins are analogous to the Big Bang, which, because of the way that light travels throughout the universe, is also located on the outer rim of our observable sphere. In relation to the observer at *Centre B* the universe has a

As discussed earlier, this process governs his ‘free will’, because, although he has no control over the emerging ‘lava-flow’ of time<sup>a</sup>, he has power to choose which direction to face. His snakey line forms a ‘world braid’ as it intertwines with the lives of all his compatriots. His life experience may be summarised under three headings:



- a) **Senses:** He processes sensory information from the single point on his 1D circle that he is currently experiencing, deciding constantly which direction to face (anticipating the future).
- b) **Continuity:** In his mind’s eye he accesses (from his 3<sup>rd</sup> Dimension) the points on his 1D circle that he has recently faced because, although they are now set and receding into his 2<sup>nd</sup> Dimension (his ‘block universe’ past) this gives him continuity and context around the circle.
- c) **Resources:** He continuously scans (from his 3<sup>rd</sup> Dimension) more distant points on the receding 2D disk as they treadmill radially away from him, relating what is there to his now-experience. He may appear to scan them at random, but they will be in some way connected, providing him with the source material of knowledge, creativity, and experience for the business of living.

Of course there is no particular order of priority to these three because they happen simultaneously and feed constantly into each other. However, breaking the Flatlander’s cognitive experience down using this dimensional analogue, these three processes describe his:

- a) Sensory input
- b) Short term memory
- c) Long term memory/imagination/creativity/learning

They also describe ours, because all this may be extrapolated by the *Principle of Relationship*<sup>b</sup> to apply within *Abbott’s* 4D Hyperland, for which we don’t really need to change very much. All we need do is slip in two more spatial dimensions (width and height), renaming his last space-time dimension (the 2<sup>nd</sup>)

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point origin at *Centre A*, projected around the sky by 2D equatorial lensing. It must therefore be possible in theory to extrapolate this 4D ‘twin demisphere’ geometry into the 5/6/7D realms of life by looking at the action of ‘poles and hemispheres’ in these higher dimensions; fabulously complex no doubt to the man/woman in the street, but it provides the possibility of an access point for mathematics into physiology and psychology.

<sup>a</sup> See Chapter 11 for a discussion of the *Magic Treadmill Principle*: Time, as the *n*th Dimension in an *n*Dimensional space-time, issues forth perpendicularly and radially from within the frame of reference of each space-time event. To the observer this *n*th Dimension appears 0-Dimensional (is viewed ‘point-on’) and is therefore invisible, but results in (*n*-1)Dimensional change, and stacking of the (*n*-1)D surface into the *n*th Dimension, taking the form of the past.

<sup>b</sup> *The Principle of Relationship*: Whatever is true of the relationship between two adjacent dimensions is true of the relationship between *any* two adjacent dimensions.

as our last dimension (the 4<sup>th</sup>)<sup>a</sup> to become *our* block universe as it treadmills forth ‘magically’ in time. Now, like the Flatlander, we survey all this – our 3D world ‘line’ through the 4<sup>th</sup> Dimension – from above: i.e. from a 5<sup>th</sup> Dimension or higher.

The point I am making is that, when we ally the *Magic Treadmill Principle*<sup>b</sup> to the central viewpoint triad<sup>c</sup>, our entire cognitive experience of life may be described in terms of simple *Flatland* geometry.

## Context

Of course, as discussed earlier, the dimensional axis as it passes up through a human being is vastly more complex than our simple *Flatland*-based analogy, resulting in all the richness of emotion, creativity, intellect, knowledge, learning, memory, physiology etc of which we are composed. For this I have postulated a further two dimensions taking us up to 7D, but the raw principle at work is exactly the same as if there were *only one* higher dimension – a 5<sup>th</sup> – because the same innate drives which are 5D in a 5D organism (survival/reproduction) are also active within us and operating from the same 5D level<sup>d</sup>.

This would suggest that the sense of continuity which we describe as the ‘flow of time’ is experienced geometrically within the structure by even the simplest of 5-Dimensional organisms. The principles of *Flatland* geometry tell us that this must be so, because the ‘*Edge-On*’ Principle<sup>e</sup> reveals that a 5D thing views the world ‘edge-on’ in 4D, which would indicate that the *total experience of being of an insect, a plant, or a bacterium (for example) is in terms of the flow of time*. It has none of the 6D power to ‘feel’ its awareness, or the 7D power to further ‘reflect’ on its awareness or how it feels about it. All it knows is ‘context’; that it occupies a rightful place within the flow of time wherein it experiences an unreasoned, utterly dispassionate drive to survive and reproduce.

This means that ***the limited ‘consciousness’ of even the simplest of organisms includes the ability to process short term memory*** as the provider of context to project its current experience into its immediate future, and perhaps even something of a longer term memory as the enabler of rudimentary learning, as evidenced in Chapter 51 by the *mimosa pudica*. Indeed these operations may be what define the organism as a ‘living’ thing within the dimensional matrix<sup>f</sup>, capping it at 5D.

This renders redundant the supposition of science that neurons or a nervous system are required in order to facilitate this process<sup>g</sup>. It functions *dimensionally* and is therefore active in even the simplest of cells, with neuron-related activity gradually coming into its own with the physical demands of progressive complexity in precisely the same way that more sophisticated systems are required for *every* operation – for example the digestive system, or the leg.

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<sup>a</sup> *The Role of Time Principle*: The  $n^{\text{th}}$  Dimension in an  $n$ -Dimensional space-time acts as the means of change (time) for the process of its own stacking.

<sup>b</sup> *The Magic Treadmill Principle*: Time, as the  $n^{\text{th}}$  Dimension in an  $n$ -Dimensional space-time, issues forth perpendicularly and radially from within the frame of reference of each space-time event. To the observer this  $n^{\text{th}}$  Dimension appears 0-Dimensional (is viewed ‘point-on’) and is therefore invisible, but results in  $(n-1)$ -Dimensional change, and stacking of the  $(n-1)$ D surface into the  $n^{\text{th}}$  Dimension, taking the form of the past. (See Chapter 11)

<sup>c</sup> See Chapter 46

<sup>d</sup> *The Principle of Inclusion*: Each dimension includes all the ones below.

<sup>e</sup> *The ‘Edge-On’ Principle*: Each dimension is viewed from within itself one dimension lower.

<sup>f</sup> They define the quality of its 5D life experience, although they do not define which particular 4D cross-section that 5D thing appears as. In other words, it has life at the 5D level, but which 4D life-cycle (‘species’ or individual) it exists as is defined by cross-sectioning into the 4D continuum.

<sup>g</sup> For a fuller discussion of this see Chapter 51.

## How Was It for You?

We are pretty sure that rocks are not conscious; we call them ‘inanimate’ because we sense that whatever life is, they don’t have it. However, interestingly, a rock does have something of a memory. If you throw it hard at a wall then pick it up and look at it you may see a chip surrounded by a small patch of white dust at the point of impact. This survives as that rock’s memory of the event. (The wall will remember it too!) The difference is, it has neither the inclination nor the wherewithal to *interpret* the memory because it took place on the same dimensional level that it has all its existence<sup>a</sup> – in other words, it cannot look down dimensionally upon the event from above.

But you can.

You *remember* throwing the rock. Like the rock, you too have a memory of the event,

except yours is etched within a higher dimension and enables you to interpret and process your memory as it relates to all others of which you have awareness. Although it lies in your past, you can still access the experience because, unlike the rock, 4D is farther down your axis and you are able to include it in your processing of the present and the future.

Is that the only difference between us and the rock? Perhaps. Physicist Max Tegmark points out that complexity is a *property* of life, describing how we exist as a complex mathematical pattern, or braid, in space-time. Other than this, he concludes, ‘*it’s fair to say that we humans don’t yet fully understand what we are.*’<sup>b</sup>

Rocks cannot have any concept of the passage of time. Why? Because they don’t have any concept. The inanimate universe has no way to know *how* it experiences the 4D universe. Dimensionally it’s all above its head. This absence of awareness means that it’s possible that inanimate objects do not experience the 4<sup>th</sup> Dimension in consecutive 3D slices as we do, but, in tandem with the fact that the universe contains a finite amount of energy which may neither be created nor destroyed, are in a sense simply ‘there’ – existing as one long continuous lump of energy<sup>c</sup> from the Big Bang to the End.

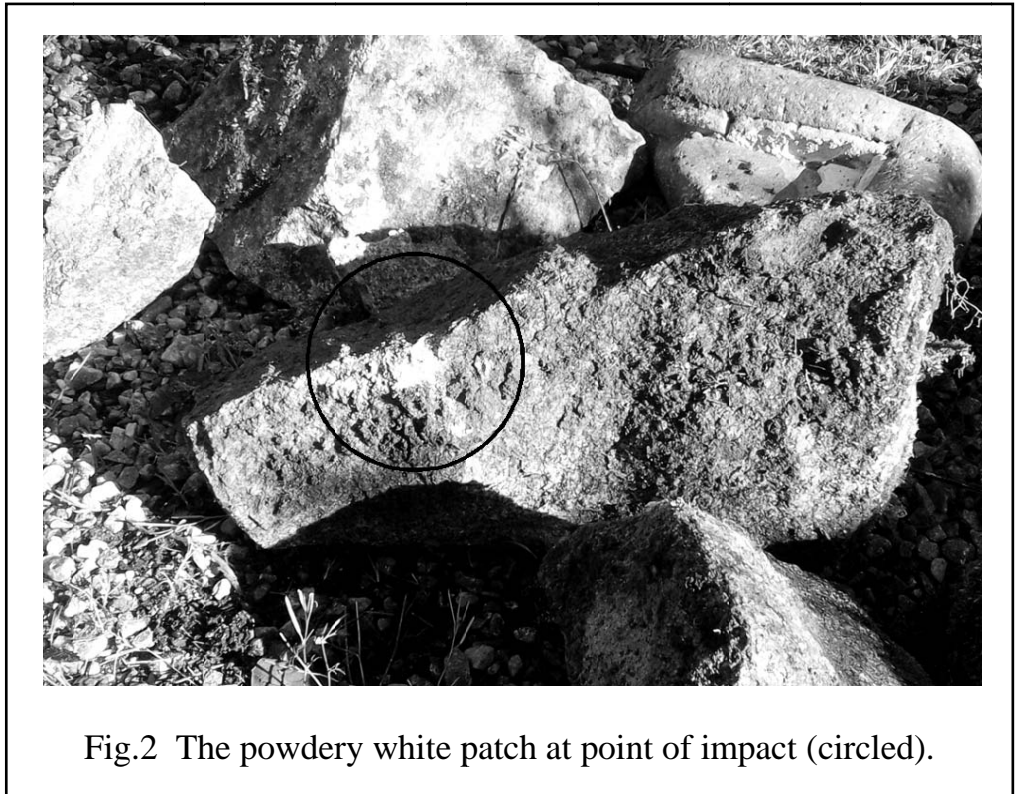


Fig.2 The powdery white patch at point of impact (circled).

*Reflection...* In the same way that the electro-magnetic spectrum reveals that the world does not ‘actually look like’ the way we see it, we may be interpreting the rock’s fundamental existence subjectively in terms of our own. Just as quantum physics has already pointed up the capricious nature of our viewpoint as applied to matter, there may be something unique about the way that each dimensional level experiences the rest which our science ought to reflect. To truly understand the physical world we need to ‘walk in its dimensional moccasins’, extending Scott Sampson’s radical approach right down through the inanimate.

<sup>a</sup> As a 2D cross-section of 3D truespace. See Chapters 15-18

<sup>b</sup> Max Tegmark, *Our Mathematical Universe*, Penguin 2015, P283

<sup>c</sup> This is true of the massless packet of energy due to Relativity, and may also be true in a dimensional sense of all things which exist within the matrix below the 4<sup>th</sup> Dimension.

Physics tells us that the photon does not experience time or space – these are just aspects of how *we* see it. Its bare ‘speed of light existence’ is due to the fact that, being massless, it is not able to ‘look down’ upon space and time because they occur on a higher dimensional level. The rock is not moving at the speed of light, therefore it will experience the photon as we do, but not much else, because not much else is massless. The principle at work throughout the dimensional structure is that a lower dimension can never experience the world any higher than the level at which it is capped within the overall matrix. This is perfectly straightforward when we remember the simple *Flatland* principle which governs every interaction:

*The Principle of Viewpoints:*

**Any dimension may be viewed from three vantage points: from above (complete), level (‘edge-on’), or below (in cross-section).**

When we take hold of a rock we do so atom-to-atom. It experiences you – an ultra-sophisticated 7-Dimensional mega-being – only in cross-section, as though we humans were... just another rock. Expressed in terms of the whole structure, this simple principle would explain why the photon cannot comprehend the world as experienced by the rock, the rock cannot comprehend the gravitational field, the gravitational field cannot comprehend the flow of time, the flow of time cannot comprehend the earthworm, the earthworm cannot comprehend the cat, and the cat cannot comprehend you.

Is there anything that you cannot comprehend?

*Reflection...* All higher dimensions are experienced in cross-section, which means they are always viewed as though they belong to the same dimension as the viewer<sup>a</sup>. The plain logic of this simple *Flatland* principle has opened up the possibility for us to gain insight into the way that animals and plants experience their world. However, it could hold even more shocking implications which we will look at in the next chapter.

## The Bucket of Existence, aka Consciousness Explained

So, dimensionally, what is consciousness? The only things that can be aware of how the contents of time are experienced are things that are dimensionally composed of those contents. In the same way that sticking your head into a bucket of water would make you aware of the situation in the bucket, it is our ‘*Sphere-like*’ cross-sectioning into the 4<sup>th</sup> Dimension from a higher dimension that results in comprehension of our surroundings in time and space.

As higher dimensional entities we are all sticking our heads into the bucket of existence for the duration of a lifetime. Carl Sagan expressed the kernel of this idea, rather more poetically, when he said,

“*We are a way for the Cosmos to know itself.*”<sup>b</sup>

## 4D-ism

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<sup>a</sup> As discussed in Chapter 55 this is our *Flatland-geometrical Principle of Seamlessness*: A higher dimension can cross-section through any lower dimension without reference to those in between, but the lower dimension has no way to discern the level of the original.

<sup>b</sup> <https://www.youtube.com/watch?v=wLigBYhdUDs> - Accessed 30<sup>th</sup> June 2017

In the full knowledge of the twin breakthroughs of Relativity and Quantum Mechanics (of which he was a progenitor), Max Planck said in 1931,

*'I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness.'*

This is not a view that is popular today, but, fortunately for humanity, the structure of reality will not be decided on a vote. EA Abbott writes in Chapter 16 of *Flatland*, where *A Square* is speaking about *Sphere*,

*'When he regained his original size, he heaved a deep sigh; for he perceived by my silence that I had altogether failed to comprehend him. And indeed I was now inclining to the belief that he must be no Circle at all, but some extremely clever juggler; or else that the old wives' tales were true, and that after all there were such people as Enchanters and Magicians.'*

As I never tire of saying, *Sphere*, although he was 3D, appeared within Flatland in 2D form. This was all that poor *A Square* could take in, to the point where he was willing to theorise wildly – anything and everything – just so long as it was 2D! And so it is with the whole person as he or she interfaces through the body: that which is dimensionally higher has no alternative but to manifest cross-sectionally within the world as 100% physical. *A Square's* '2D-ism' corresponds to our 'scientific materialism', therefore – as per *A Square's* floundering experience of *Sphere's* sojourn through Flatland – we should not be surprised that consciousness is the greatest scientific mystery of them all.

Clearly, Dimensionality cannot simply be materialistic, and yet, neither is it the stark, 'cop-out' dualism of René Descartes. As a paradigm, the dimensional structure describes a third way: a nested hierarchy in which the higher is *composed* of the lower<sup>a</sup>, although the higher dimension must in principle supply the blueprint<sup>b</sup>. It's Planck's '*matter as derivative from consciousness*', except, strangely enough, the other way round, to a blueprint that consciousness supplies.

I leave you with a very famous quote from the aforementioned JBS Haldane,

*'My own suspicion is that the Universe is not only queerer than we suppose,  
but queerer than we **can** suppose.'*

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<sup>a</sup> *The Principle of Stacking*: Each dimension is composed of an indefinitely high number of cross-sections (slices) of the dimension below, stacked together and fused into a single entity.

<sup>b</sup> See Chapter 57