

Talking about Consciousness

Andrew OBERG

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「意識について話すならば」

オバーグ アンドリユー

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Abstract

One of the most intractable problems in the philosophy of mind today — and in philosophy generally — is that of consciousness. Some think that it cannot be accounted for and must somehow be an extra element of the universe, while others reject such thoughts as ludicrous and maintain that a reductionist and purely physical account can provide all the answers necessary. The present piece (prudently perhaps) does not try to solve that debate but instead argues that fault is to be found in the manner in which the debate is being conducted, that it is the dialogical terms and approaches that are at the root of the troubles. In exploring this position thinking, intent, feeling, experience and qualia are all considered, and the beginnings of a multi-layered model are presented.

Key words: consciousness; experience; feeling; intent; qualia; thinking; what it is like

要 旨

心の哲学、あるいは哲学一般の最も難解な問題のひとつには、「意識」が挙げられるのではないか。意識の根拠を示すことは不可能であり、どうやら宇宙の部分として説明されるべきであると考えの人がいる一方、そのような考えをたわごととして一蹴し、物理的な現実への帰一によってすべての答えが得られると考える人もいる。本稿では、この議論の解決を示すという大胆な手には出ず、むしろ、議論が行われるやり方に、とくに一連の争論のもとにある対話用語およびアプローチに欠陥があると論考する。この立場を明らかにしつつ、思考・意図・感じ・経験・クオリアの類をすべて考察し、重層的なアプローチへの第一歩を示す。

キーワード：意識、経験、感じ、意図、クオリア、思考、・・・であるとはどのようなことか

1. Thinking about talking about thinking?

Consciousness, thinking, experiencing, are such fundamental parts of our everyday lives that we typically — and probably rightly — pay no attention to them, and if pressed we may even equate them as a single phenomenon and switch all the foregoing referents to the singular form. (By not doing so I am already staking a number of claims.) Yet at the moment one asks ‘What is it to be conscious/to think/to experience?’ one finds oneself embarking on a dark journey that raises far more questions than it answers, leaves one feeling confused and dissatisfied, and more often than not results in the judgment that philosophers of mind are surely

amongst the worst sort of irrelevant academic masturbators who could not find the word ‘applied’ in any of the many technical dictionary apps they scroll through when writing. This is perhaps best reflected in the debates on consciousness itself, which may at times appear to be the very epitome of fruitlessness; that appearance is mistaken, I think, but what validity there is in the assessment stems from the manner in which the discussions have been unfolding. It is my estimation that many participants have been speaking to each other on the wrong levels, on differing levels, and that it is in changing the discourse where advancements may be found. Thinking about consciousness is however such a tangled thicket that the most progress anyone can really hope to make nowadays (‘applied’ again) is incremental at best, but even at worst such progress still results in a slightly clearer picture although it may not lead to anywhere. It is nevertheless the goal of this piece to try and lead somewhere; let us anyway see what happens.

2. Consciousness ≠ thinking

The primary point I wish to stress here is that one of the main, and perhaps *the* main, problem that we confront when we look at consciousness is that we have a terrible tendency to confuse ourselves right from the start by the manner in which we talk about the issues under consideration. What I mean is that I think we tend to start from, or to overly focus on, the wrong level (in one of two ways) and in so doing we either present ourselves with a seemingly unsolvable mystery or a seemingly incomprehensible simplification. I will get to each of those levels in turn, but first we must lay out what the terms that are commonly used in discussions of consciousness actually indicate as it is from them, and from our use of them, that much of our confusion arises. To begin with, consciousness is not thinking; thinking is rather one potentiality of organisms with the ability to manipulate the information that their brain receives and in turn produces; consciousness is more fundamental. That statement in itself is probably not very clear so let us take a moment to look at how the brain processes information.

All organisms with senses of some kind, no matter how rudimentary (a single-celled organism moving away from danger or towards food), receive input that is processed by, or in, a region specializing in that processing. A cat smells a mouse and her brain triggers a certain response. A cockroach’s antennae alert him to movement in the vicinity and his brain triggers a certain response. A bat hears a particular pinging and her brain triggers a certain response. A paramecium’s cilia sense an acid nearby and its ‘brain’ triggers a certain response. The reader will have noted that the final ‘brain’ is in quotation marks/inverted commas,¹ and the reader will probably not have found anything amiss with that — yet why not also do so for the cockroach? Can his brain really compare to that of a cat’s or a bat’s? Of course it cannot, but it is a very far cry from the simplicity of a paramecium’s two nuclei and that much is easily recognizable and just as easily agreeable. Thinking about why that might be the case though brings doubts to our minds, especially when we consider that the paramecium’s nuclei act in much the same information processing and directing manner that a more acceptable ‘brain’ does, the difference being one of degree, and that of degree of complexity. To get through this potential logjam let us establish that a brain — as reflections of this sort lead us to conclude — is an information

¹ The reader may also have noted the use of gendered language for all but the paramecium; given the presence of genders in these organisms I find the use of such appropriate (and indeed, instructive of how we might wish to think of our place in the world, but that is another topic).

processing tool that handles the input it receives and generates, for better or for worse, a responding output. A sense interacts with something in its external environment, feeds that interaction via chemical channels into itself (body), a brain works on what has been transmitted to it, sends out from itself another chemical signal, and other parts of the body react in some manner (noticeable or not). This is how life works, and it is easy to see why life should work this way because all life happens in an environment of some sort that is outside of the life inhabiting it. The very same life also has an internal environment though, and the very same brain (of whatever sort) is also always receiving input from it — volume and complication are beside the point, each brain processing unit is getting signals from outside its body and from inside its body all the time. In fact, nearly all of those inputs are from the inside, for once past the initial sensing or perceiving organ/boundary all that commences is internally accomplished.² Biology 101; yet we forget these important points and jump right to how we move and — crucially — *feel* in our world and begin to trip ourselves up.

We have these senses and they are sending information to our central processing units, fine, but what about consciousness? The model I wish to present, the model as I conceive it (and I think and write as a philosopher; I am admittedly not a qualified neurologist), is many layered. Underpinning the model is how the brain itself deals with the information it receives, and that is in the production of representative maps by the flexible and shifting use of neurons. A neuron is a very special kind of cell; they are not found in all living creatures and are not essential to life processes, but they have come to function in complicated creatures as assistants in the management of the many other necessary cells that make up the organism. Groups of neurons can be molded (switched on or off is the usual terminology) in countless ways to help the brain process now this, now that. An incoming signal will cause the relevant area of a brain to generate within its causal pathways certain chains of events that (could) result in X neurons being grouped or ‘switched on’ in such a manner that symbolically represents the pertinent information as a map upon which the brain can operate in its processing and determination of output. Though such might primarily be handled by a specialized region in the brain, the brain’s pathways importantly cross and intersect its many regions, with all areas linked and in communication via internal signaling. The brain as a whole is, after all, a manager, and as a manager it is built to respond, and like any good manager it needs to be able to handle vast amounts of information adequately when it makes its responses; the biological key to all this is the formation and utilization of (neuron constructed) representative maps.³ Consciousness, I think, is to be found at this level, but just ‘where’ or ‘how’ will become clearer in the following section on the so-called gap between the level of neurons and that of experience (I do not think either ‘where’ or ‘how’ are appropriate questions but they are the natural responses); for now I wish only to posit that the brain’s networked use of representational tools — tools that are constantly being formed and reformed for the purpose of directing the organism in its environment — is the foundation of consciousness. Note that

² Douglas Hofstadter emphasizes this point in his *I Am A Strange Loop* (New York: Basic Books, 2007). On the neurological picture and some related issues described here and below see in addition to Hofstadter’s work Michael S. Gazzaniga, *Who’s In Charge?: Free Will and the Science of the Brain* (New York: Ecco, 2011); V.S. Ramachandran, *The Tell-Tale Brain: Unlocking the Mystery of Human Nature* (London: Windmill Books, 2011); António Damásio, *Self Comes to Mind: Constructing the Conscious Brain* (New York: Vintage Books, 2012); Galen Strawson et al., *Consciousness and Its Place in Nature: Does Physicalism Entail Panpsychism?*, ed. by Anthony Freeman (Exeter, DEV: Imprint Academic, 2006); Daniel C. Dennett, *Consciousness Explained* (New York: Little, Brown and Co., 1991); and David J. Chalmers, *The Conscious Mind: In Search of a Fundamental Theory* (Oxford: Oxford University Press, 1996).

³ Damásio *ibid.* is quite clear in his description of maps and their roles, as he is in explaining the specialized structure and purpose of neurons.

this means that not all living organisms have consciousness, and certainly that not all of the universe is conscious, or at least not in the way that we know consciousness. It also, however, means that just as some organisms' map-making abilities are more rudimentary than ours — but still there — consciousness too appears to come in different degrees. For if the production and utilization of representative maps is what anchors consciousness then a dog, say, with her simpler maps, has a less sophisticated consciousness than a chimpanzee's, and we might postulate that our maps could be a dog's version compared to another organism's — the universe is a big place, after all. What is important is the fundamental structural level of consciousness in creatures who have it, to whatever extent.

We are not yet discussing intent, and that is a meaningful detail as intent, consciousness, will, thought, are all too often conflated in our thinking and our discussing. Intent is a step up from consciousness, and it is rooted in the organisms' push towards survival, to the pursuit of its (unique) pleasure and the avoidance of its (typically less unique) pain. Some thinkers attribute a kind of 'natural will' to all life that arises from this urge to stay alive and to reproduce one's kind,⁴ but I find such to be almost a form of anthropomorphism for to say that a paramecium 'wants' anything is to stretch the concept of 'want' beyond the breaking point. We might instead speak of a 'drive' but that is hardly much better, and given that just as we cannot imagine what it would be like to be a paramecium and operate without any of the mental capacities that we take for granted, and that a paramecium moreover cannot itself think nor imagine anything at all, it is probably safest and wisest to just leave it at the point where we simply recognize that life is built to keep going. Intent, then, comes from an organism's constant body monitoring when it has a functioning brain, a working central processor and manager, and it of course differs widely across time for each kind of organism and for each individual within that kind. The cat now wishes to lick her fur while sunbathing, the cockroach to return to his nest, the bat to obtain a better perch, and those wishes are based on the brain's analysis of the current overall state of affairs and used as directing impulses/commands for the according behavioral output. Intent needs consciousness, it is not consciousness.

Finally, then, thinking. Just as consciousness is neither universally found nor universally equal, so too for thinking. The incessant body monitoring that the brain engages in allows for degrees of reflection on one's own being in those creatures whose brains make use of representative maps, though understanding the extent to which such self-reflection is possible for other species may always remain out of our reach. Does a dog know that he is happy and therefore wags his tail as an expression of that, or does he rather automatically wag his tail because he is happy? Whichever is the case for dogs, for us we find ourselves in the position of not only being able to consider what is mentally represented but to consider representations of representations, and it is the considerations born out of this symbolic and abstract processing ability that we call 'thinking'. Our brains are capable of a limitless degree of representation, and though that representation is rooted (evolutionarily) in internal biological monitoring vis-à-vis the environment and organism health, the skill itself is hardly limited by its ordinary purpose. In sum, consciousness is not thinking, but thinking could not exist without consciousness, and — as everyday experience indicates — thinking comes in many forms and in many versions. With that the specter of experience has once again been raised, and so let us turn to the idea (thinking) of the gap

⁴ See, for example, Damásio *ibid.*, especially Chapter 2 'From Life Regulation to Biological Value'.

that is perhaps the real crux of the matter for such a plethora of writers working on issues related to consciousness.

3. Seeing a gap: There is no gap

The gap in question, as mentioned, is that between the world of neurons and biological brain functioning and that of our felt experiences as we go about the business of living. It is the question, really, of qualia. We cannot imagine how it could be that an accumulation of sticky brain bits and pieces, which taken cell by cell have neither consciousness nor experience, could work together in such a way that a rose when viewed gives its beholder a subtle feeling of comfort and appreciation of beauty, that a chocolate does not merely taste sweet but is also soothing, that a photograph evokes a memory of a time and a place that fills us with nostalgia. All of these things are descriptions of the ‘what it is like’ aspect of qualia,⁵ and they are necessarily internally bound and contingent upon the experiencing individual — my interaction with a rose, though perhaps quite similar in recognizable ways, will differ from yours (though ours will necessarily be far more like each other’s than a cow’s interaction with the same rose; what I am getting at is the personal side to qualia based on our unique particulars). Intellectually knowing that our brains make use of neurons to create representative maps that provide them with usefully abstracted information upon which they can function and thereby better manage our beings in our environments does nothing to help us overcome what seems for all the world to be a tremendous chasm between that cellular level and our lives as lived. We have no analogue to what is going on inside our brains and so we cannot properly think about it,⁶ we cannot pull our brains apart as we might an engine to see how it all works because there are far too many parts involved and the details of the interactions between those parts remain far too opaque. This is the central baffling mystery, and it is a very old one, though its contemporary groundwork was perhaps best laid in the questioning of the physical raised by luminaries like Arthur Eddington and Bertrand Russell.⁷ It has led even giants of the astounding stature of Thomas Nagel to proclaim that our physical picture must be wrong, that what we know cannot possibly be all there is to it, and should therefore be questioned and perhaps (even entirely) reworked.⁸ An excerpt of an interview by Tim Parks of Riccardo Manzotti that deals with this issue via the experience of color and that appeared on the *New York Review of Books* website gives a good example of just how unfathomable we take this gap to be:

Parks: I appreciate that you’ve spent a great deal of time researching the history of science’s dealings with color, but are you telling me that contemporary neuroscience offers no dominant view on the matter?

⁵ This concept was first brought to wide attention by Thomas Nagel in his wonderful 1974 essay ‘What is it like to be a bat?’, collected in *Mortal Questions* (New York: Cambridge University Press, 1979), 165-180.

⁶ Hofstadter, *op. cit.*

⁷ Arthur Eddington, *The Nature of the Physical World* (New York: Macmillan, 1928); Bertrand Russell, *The Analysis of Matter* (London: Routledge, 1927/1992).

⁸ This call was made in Thomas Nagel, *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False* (New York: Oxford University Press, 2012).

Manzotti: Well, the current textbook view goes like this. The world is a place where objects reflect light, sunlight being the dominant source and as it were default setting as far as the kind of light is concerned. However, each object reflects only a subset of that light. Rays from this subset enter our retina and stimulate a honeycomb of cells, known as cones, because of their conical shape, whose function is to react differently to different portions of the visible spectrum (we remember of course that only a small part of the vast electromagnetic spectrum is visible). Most humans — animals are rather different of course — possess three kinds of cones, referred to as S, M, and L cones, depending on whether they react more vigorously to short, medium or long-range light wavelengths. The ‘output’ of these cells is first merged together in the retina then sent via the optical nerve to various cortical areas — including the famous V4. And that’s as much as we know.

Parks: Riccardo, you just gave me the whole explanation without ever using the word color.

Manzotti: I know! Oddly, this is a theory of color that does not need the notion of colors. I suppose the reason is that however carefully you follow neural signals from the retina along the optic nerve and across the brain you don’t actually come across anything like a color, or anything that explains color perception. You could almost say that the notion of color is useless to color science, unless...

Parks: Unless?

Manzotti: Unless we bring consciousness back in the picture. Colors are something we *experience*, individually and collectively. But without our experience of color, science would have no reason to suspect its existence. There would just be fifty shades, or more likely fifty thousand shades, of electromagnetic waves.⁹

To my mind, the purported oddity that is assigned to the given description of how light is processed by our eyes and brains stems from the fact that both Parks and Manzotti are approaching the issue from the higher, abstract, level of the concept ‘color’ and not from the cellular level on which the processing itself takes place. They are thinking, and hence they are talking, on a level that is not apposite to their topic: that of the end product experience of color perception rather than its biological and informational input aspect. They are looking at the output and asking how it could possibly have been made from the interaction of the sense with the stimulus and its physical processing. They are alleging that the brain — as a mere physical thing — cannot be connected with consciousness since consciousness is not itself physical. They are seeing an ‘extra’ that is

⁹ Riccardo Manzotti and Tim Parks, ‘The Color of Consciousness’, *The New York Review of Books: NYR Daily*, 08 December 2016. <<http://www.nybooks.com/daily/2016/12/08/color-of-consciousness/>>. Accessed on 29 June 2017.

claimed to arise from the physical; they are asserting that in all of our described experiences the physical picture can do little better than to stubbornly insist, without explanation, on a something coming out of a nothing.¹⁰

This tendency to approach the so-called problem of experience from the point of view of the abstract and symbolic level is where I think our difficulties come from, and it is an entirely understandable tendency since it is on that level that we operate in our daily lives given our brains' map-making representational procedures. As the creatures we are we function solely on this higher level of symbols and their meanings as we negotiate our way through our physical and social (and mental) environments, with the result that we are oblivious to the physicochemical in our thought; Douglas Hofstadter, in making this point, puts it this way:

This, our innate blindness to the world of the tiny, forces us to hallucinate a profound schism between the goal-lacking material world of balls and sticks and sounds and light, on the one hand, and a goal-pervaded abstract world of hopes and beliefs and joys and fears, on the other, in which radically different sorts of causality seem to reign.¹¹

The key to bridging this schism, to seeing that there is not really one there at all, is to recognize that there are not in fact any 'radically different sorts of causality' present (to think that there are is to look from the wrong level, or to fail to shift levels between our default conceptual and the more abstruse biological); yet to get to that point we must first understand the depth of emotional processing in our brains and what that in turn entails for our experiences — our feelings of 'what it is like' — as we become aware of them in self-reflection. The going will not be easy.

Recent psychological research into decision-making and the root sources of behavior has revealed that the brain operates in its relation to the world in two different ways: one is the automatic, efficient, and preconscious (i.e. pre-aware, or unaware) method that is dominant and is often referred to as System 1, and the other is the regulated, slow, and laborious method of rational analysis, often called System 2. Or, in other words, the intuitive and emotional method and the reasoning-based method.¹² What is most crucial for our

¹⁰ See the whole interview, and the one that preceded it in their series, for full details. The first installment is called, 'The Challenge of Consciousness', and can be found here: <http://www.nybooks.com/daily/2016/11/21/challenge-of-defining-consciousness/>. Accessed on 29 June 2017.

¹¹ Hofstadter, *op. cit.*, p. 204.

¹² The psychological research in this area has become quite dense; some of the primary sources that have informed my thought are: Jonathan Haidt, 'The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment', *Psychological Review* 108:4 (2001), 814-834; Jonathan Haidt, *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (New York: Pantheon Books, 2012); António Damásio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Putnam, 1994); Amos Tversky and Daniel Kahneman, 'Judgment under Uncertainty: Heuristics and Biases', *Science* 185: 4157 (1974), 1124-1131; Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011); Ap Dijksterhuis, 'Think Different: The Merits of Unconscious Thought in Preference Development and Decision Making', *Journal of Personality and Social Psychology* 87: 5 (2004), 586-598; Gary A. Klein, 'A Recognition-Primed Decision (RPD) Model of Rapid Decision Making', in *Decision Making in Action: Models and Methods*, ed. by Gary Klein, Judith Orasanu and Roberta Calderwood (New York: Ablex Publishing Corp., 1993), 138-147; and Joshua Greene, *Moral Tribes: Emotion, Reason, and the Gap Between Us and Them* (New York: Penguin Press, 2013).

purposes are two points in relation to this overall picture, namely 1) that due to the real-time pressures we have faced in the course of our evolution System 1, with its rapid judgments and responses that bypass the need to stop and think, is by far the more frequent decision-making apparatus upon which we operate (indeed, many animals, lacking the means for System 2 reasoning, live their lives quite successfully solely on it), and 2) that due to its preponderance the unceasing results of System 1 analyses conducted by the brain as it processes the information it receives are always included as one of the evaluative elements if/when a later System 2 analysis is conducted. What this means in practice is that for every stimuli/perception encountered the brain very quickly conducts an entirely preconscious analysis based on genetically equipped biases, information from previous encounters, relevant knowledge/memories, etc., and delivers up a judgment, an intuition, a 'gut feeling' regarding the stimulus/percept in question; this could be something very simple (fight/flight) or more complex (approach and investigate with/without caution), but it will always be there. For nearly all of the time that is how we operate, automatically and non-rationally. Our brains however also have their System 2 components, and System 2 is capable of overriding the judgments of System 1, but its analyses will still include within them the results of the preceding and unavoidable System 1 judgments. Again, in practical terms we might encounter a strange-looking object on the sidewalk on our way to catch a train to work and be curious as to what it is, we might be so curious in fact that as we approach it we begin to think whether or not we have time to pause and look at it, maybe even to handle it a bit, maybe even to keep it. In our considerations on this point a number of factors will play their part but amongst them will be the initial result of whatever our System 1 analysis determined, and we will experience that result as an intuition — not as a known but rather as a felt inclination in one direction or another. That feeling will influence whatever rational procedures we bring to bear on the decision. This is the emotional face of the brain, and it is constantly present; now felt as a general and almost ethereal background mood, now as an overwhelming compulsion. When we regard the brain in the dichotic terms of common parlance we find that it is far more of a tool for feeling than it is a tool for thinking, though in truth the line between the two (feeling and thinking) is far blurrier than is usually supposed, as I hope the preceding has shown. Herein lies the answer to the presumed quandary of qualia.

Experience, on our multi-layered model, operates at a step down from thinking, it is the pre-reflective and automatic (physicochemical) reaction to the received input that the brain has processed; it is far less abstract than thought, though it is still based on the brain's system of representative maps. It is also far more directly connected to the body proper — the physical organism in its environment — as it is the result of automatic analyses done in the interests of life management. The reader will recall that even when dealing with external perceptions the process is almost entirely an internal one (once sensed the signal begins its fully internal journey to the brain, its fully internal processing by the brain, and its fully internal response signal sent back by the brain); and the brain manages the body by use of the intuitive judgments and emotional tags that it assigns to absolutely everything. A strong feeling of aversion is a far more efficient, and far more effective, means of avoidance than is taking the time to stop what one is doing and think about the merits and demerits involved before arriving at a costs/benefits-based decision and then taking action (or concluding not to take action). Everything feels as it does to us because the use of feelings are one primary way that the brain does its job of directing the body, and since the signals sent internally to the brain and the brain's internally sent signals in response are so remarkably intertwined within ourselves every percept, every stimulus, every experience,

begins to feel *like* something.¹³ Qualia. More specifically, the physical basis for qualia; more generally, the disappearance of the chasm, the crossing of the schism, the closing of the gap. Feelings are biologically caused and biologically expressed, and it is only in our descriptively given experiences of them — the point at which we bring in the conceptual level — that we begin to consider them to be otherwise. Moreover, while you might have differing personal associations with roses than I do due to your individual past (perhaps a lover jilted you by curtly returning the dozen roses you sent him) and hence will experience them in an altered way from me, both of us will have a physicochemical response to roses and our brains will process such with the attending intuitions and emotions applied. Once again, the process is a biological one and the qualia generated are likewise biological, even if we describe them in terms that are very much non-biological. There is thus no difference between what a feeling is and what a feeling *feels like*; there is only a difference in how we think about and discuss them.

4. Talking about consciousness

We are now able to see that when we talk about consciousness we either tend to approach it as a top-down question (abstract symbols), or as a bottom-up question (neurons), and unfortunately for us never the two shall meet when dialogue is conducted in such a manner. The sides engaged in this debate have been having trouble arriving at agreements with one another because they are arguing from different platforms, and although there have been no lack of extremely clever and well thought-out presentations, the asymmetry between the starting perspectives has thus far doomed the enterprise to an irreparable failure (and as intuitively attractive as I find the idea I do not think panpsychism is the answer; but that is a discussion for another day). If we remain only on the top-down level we will take consciousness to be like an engine that has a mysterious extra element called ‘power’ that cannot be found anywhere within its parts; if we remain only on the bottom-up level we will take consciousness to be like an engine that has been disassembled and insist that once properly put together it will generate something called ‘power’: just take our word for it. What we ought to do instead, I think, is to juggle and shift between the levels of discourse depending on the particular question being addressed and always, always, reference our dialogical level as a preface to the point we wish to make. Only by doing so will we be able to avoid the damaging confusion and cross-talk that has so marked this issue.

We set out on our investigation with the goal to ‘try and lead somewhere’, and although that goal was vague and noncommittal such traits are perhaps fitting for a topic as onerous and fraught with difficulties as consciousness. I hope, at least, that the reader will agree that the discussion as it stands — being conducted on its two separate levels — is likely to instead lead to the nowhere we have become accustomed to. A change of approach might be called for, and a shifting of our thinking along the lines outlined here might be of benefit to that new approach. I make no claims to have solved ‘the problem of consciousness’, but I do wish that the reader will find the foregoing of some use in continuing to explore this aspect of life that lies so much at the heart of all that we take for granted.

¹³ Damásio 2012, *op. cit.*

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