**The Atheist’s Guide to Reality** – Alex Rosenberg

The *Atheist’s* Guide to Reality. I’m an atheist. This should be my kind of book. At least, that’s what I thought when I chose to part with a portion of my precious salary in exchange for it. How wrong I was. *The Atheist’s Guide to Reality*, rather than putting the case forward for how science dispenses with religious mumbo-jumbo, actually turned out to be just the latest in a string of books riding the ‘physics explains everything so don’t bother studying anything else’ trend that seems to be sweeping physics corridors at the moment.

The source of my confusion seems to be that Rosenberg conflates atheism with materialism. Atheism is a denial of the existence of any deities. Materialism, on the other hand, holds that all that exists is matter. Taken to its logical extreme, which Rosenberg does, materialism denies not just the existence of non-physical deities but also the validity of introspection, conscious *intentionality*, freewill, human purpose, progress, history, morality, planning, and the self.

So, despite being misled by the title, I did manage to make it to the end, cringing and fuming in equal parts though I was by the time I got there. That cringing and fuming provided the impetus for this article which is a response to the “hegemonic ambitions” of Rosenberg and others like him who attempt to cut off their consciousness to spite their humanity.

Overview

Straight off the bat, Rosenberg makes the modest claim that he has “finally seen how all the pieces fit together to settle the daunting, unavoidable, relentless questions we all have about the nature of things and the nature of us.” Okay, bar set. Let’s see if he can deliver.

After spurning the designation “atheist” since it has earned for itself a bad rap (at least in the US) and thankfully rejecting the condescending and self-aggrandising “Bright”, Rosenberg decides to proudly adopt the originally pejorative term “scientism” (first coined to criticise those who imagine that science has an absolute monopoly on ‘truth’) to describe himself and others like him.

He declares his materialist motto to be “the physical facts fix all the facts” and just in case you’re still unsure how wide his use of the term ‘science’ stretches, he tells us on page 20 that we have to “embrace physics as *the whole truth about reality*.” And with that, the tone for the entire book is set. He seems to hold a particular grudge against the humanities:

“When it comes to ways of knowing, scientism must plead guilty to charges of hegemonic ambitions. There is only one way to acquire knowledge, and science’s way is it. The research program this “ideology” imposes has no room for purpose, for meaning, for value, or for stories. It cannot therefore accommodate the humanities as disciplines of inquiry, domains of knowledge. They are not the source of truths about human affairs, to which real science must reconcile its results. There may be two cultures, but only one of them is free from illusions and qualified to tell us about reality.” (p.306)

So, having established that laws of physics govern all matter (and that matter is all there is) Rosenberg notices, however, that biology still poses something of a threat because it seems to yield a level of complexity and order that shouldn’t be possible (or at least should be highly improbable) in a purely physical universe. Darwin to the rescue. And after giving us a basic rundown on Darwinian evolution by natural selection, Rosenberg has successfully established the twin foundations (materialism (as explicated by physics) and evolution (to explain organic processes and animal behaviour)) that the remainder of the book is built on.

Now, it’s just a matter of asking questions, plugging in his twin formulae and seeing what comes out. First on his hit list is morality where he defends a form of moral nihilism. Obviously, there can be no absolute moral facts because there is no absolute *anything* in a purely materialist universe. Morality is just a collection of attitudes that evolution has selected for over the course of history.

Then he investigates introspection, finding that since it misleads us sometimes we can *never* rely on it. He uses this conclusion to overcome the idea that our thoughts can ever be *about* something. How can one clump of inert matter be *about* another clump of inert matter? This also lets Rosenberg confidently proclaim that any apparent purpose, plans, selfhood or freewill are nothing but illusions foisted on those gullible enough to trust their conscious introspection.

Next, he attacks the idea that we can derive real knowledge from history or any of the social sciences. Since everything (including cultural, economic, political, etc. developments) plays out according to natural selection there is no way to predict what will happen in the future, so these and the soft sciences which study them are useful as sources of entertainment only.

Finally, Rosenberg dispatches with any delusions you may have had about progress. In a universe comprised only of inert matter, what could such a word even mean? Progress to where? From where? Progress implies teleology, purpose and plans. Rosenberg’s atheistic (read ‘materialistic’) universe has no room for such fanciful notions.

Even if you are an avowed atheist (you don’t believe in god/s), you might be thinking something is missing from Rosenberg’s account of things. I hope to detail where he has gone astray in the following pages. Before we begin though, let me dispose of one objection you might be tempted to make that actually gets us nowhere.

Okay, you say. We live in a material universe governed by iron-clad laws of cause and effect… but we can’t actually live *as if* that were true. Even if we wanted to live like mindless clumps of matter evolving according to laws dictated by natural selection, we couldn’t. Even if freewill and the self were illusions, this cannot alter anything because we must still live *as if* we were selves with freewill.

The problem with this argument should be easy to spot. It concedes absolutely everything to Rosenberg. “Yes,” it says, “You’re right. My entire conscious life is just a very powerful illusion. I am nothing more than a sophisticated robot and my feelings, thoughts, hopes and plans are actually completely meaningless since they are literally *about* nothing… Oh, but I’m going to keep believing it anyway.”

Let me be very clear about this. If Rosenberg *is* right in his claims, we are infinitely better off accepting them and facing up to their implications than denying them. But *is* he right? Read on to find out.

Physics

Let me start here by saying I have nothing against physics. Physics is as well-tested and well-established a discipline as you could imagine and, as Rosenberg himself says, its results speak for itself. When it comes to understanding reality (whether at the scale of cosmic events or sub-atomic ones), physics provides insights and understanding that are as fascinating as they are useful. And yet physicists must be careful not to let that success go to their heads.

Physics absolutely does describe the physical world to astonishing degrees of accuracy and completeness but human beings don’t live in the world of physics; i.e. the one populated by quarks and leptons. Rather, we live in a world populated by tables and chairs and other such paraphernalia. In addition, *my* world is a world of intentions, sensory experiences, thoughts, aspirations, interpersonal relationships and a thousand other things that physics has no knowledge of and could never have imagined in its wildest quantum dreams, without the input of people who had actually had these experiences. Suggesting that physics is all we need to understand our world and answer our questions, including those pertaining to human reality, is sheer folly at best and blind arrogance at worst.

The lynchpin holding this, the first of Rosenberg’s foundational principles, in place is materialism; the idea that “the physical facts fix all the facts”. I should come clean and admit that I used to be a staunch materialist myself so I understand the allure of the absolute certainty it offers and the way it so satisfyingly uses logic and reason to clean up the ‘messy’, mystical, supernatural nonsense (gods, energy, higher selves, the healing power of crystals, etc.) humans have littered their mental space with. Speaking from experience, the first consequence of letting go of supernatural/religious belief is to be immediately propelled to the other extreme; the intellectual rigor of science and materialism. But this is a false dichotomy.

Rejecting materialism doesn’t mean that we must open the door to all manner of childish superstitions and inane religious beliefs. We don’t need to look to transparent ghosts and higher-dimensional deities to find evidence that materialism lacks the power to explain our universe. In fact, we need look no further than our own thoughts. Think of a dog. Right now. I dare you.

Where was that image that popped into your head located? Nowhere. What was it composed of? Nothing. This is the quintessential definition of the immaterial. Did it exist? Be careful with this one. I’m not asking whether it had a *physical* existence, only whether it existed at all. The answer is, of course it did. If it had never existed you wouldn’t be able to tell me what colour it was, whether it was standing or sitting, the breed it was, etc. To be sure it didn’t exist in the material world; it would be crazy to claim that, but it would be equally crazy to object that it never existed at all. Yet, that is what scientism would have you believe.

The physical facts fix all the facts. If it isn’t physical, it isn’t a fact. I can only see two ways out of this dilemma for scientism. The first is to say that the dog you imagined was an illusion, a fabrication created by neurons in your brain in response to my request. The obvious problem with this is that all we have done here is stick a label on it. *Something* happened. It doesn’t matter whether you call it an ‘illusion’, a ‘thought’, ‘imaginary’ or a ‘mental event’.

The second thing a materialist could do is just assert that *physical* existence is all that the word ‘existence’ can mean. If it lacks physical existence then it just doesn’t exist, plain and simple. If that’s true though, what on earth are we talking about when we talk about the dog you imagined? We are certainly talking about *some*thing, something that never had a physical existence, sure, but if it never existed at all, how can we talk about it?

You might argue that hobbits have never existed either but that doesn’t stop us talking about them. This would be to conflate *physical* existence with existence though. It is true that hobbits have never *physically* existed as real beings in the physical world but we can still talk about them precisely (and only) because they exist in the minds of anyone who has ever read or watched *The Hobbit* or *The Lord of the Rings*.

What does it mean for something to ‘exist in a mind’, then? What a great question. Unfortunately, it looks as if we’ll never know because Rosenberg just assumes existence means *physical* existence. The fundamental assumption the entire book is predicated on, the physical facts fix all the facts, doesn’t get examined at all. Oh, he tells you how successful science has been and how rigorous the scientific method is but all this is irrelevant because no matter how successful or accurate scientific predictions are, that doesn’t prove that materialism is true. It only proves that, when it comes to understanding the physical world, science is easily our best bet. No one is disputing that.

Note that I am not implying here the existence of two ‘realms’; one made up of physical matter and another comprised of some ethereal, immaterial ‘stuff’ where the physical laws that govern matter no longer apply. All I’m saying is that there is a dimension to human reality, conscious experience, that is somehow capable of reflection and mentation that cannot be exhaustively explained by neurotransmitters, dendrites and axons.

And I haven’t even questioned the foundations of physical science which science itself is busy undermining even as I write this. Rosenberg assures us that although physics is by no means “finished”, there are only two elementary particles in existence, fermions and bosons. Fermions are what matter is composed of and bosons are what fields of force are made of. Done. Any further discoveries will simply slot into this tidy framework, right? Wrong.

Did you know that light is both a particle *and* a wave? Did you know that two ‘entangled’ particles transfer information between themselves instantaneously, even if they are on opposite sides of the universe? And some events involving multiple possibilities (*every*thing?) can be in a nebulous state known as a quantum superposition until someone observes them? In what sense are any of these things ‘physical’?

Oh, I don’t doubt that physicist’s models can describe these events to a level of precision and accuracy most people can’t even imagine, but don’t tell me that nothing can travel faster than the speed of light and then in the same breath tell me that two entangled particles manage to somehow exchange information instantaneously no matter how far apart they are… and *then* tell me that you’ve explained physical reality. Don’t tell me that physical matter is made up of fermions and bosons and then tell me that, oh… these are sometimes massless (like photons) – as good a description of something *non-physical* as I could ask for. Don’t tell me that matter is all there is and then tell me that some of that matter (at the quantum level) can go right through solid objects like a ghost (or even worse, not even bother going through them, just spontaneously appearing on the other side!). Don’t tell me that “the part of it [physics] that explains almost everything in the universe – including us – *is* finished…” and then tell me that relativity (the physics governing the very large) and quantum physics (the physics of the very small) are irreconcilable but it doesn’t matter because for some mysterious reason quantum effects don’t manifest on things larger than atoms or ‘buckyballs’. Whew!

The point of that little rant is not that science is rubbish and we’re better off worshipping bloodthirsty deities or getting a chakra realignment but that a little humility wouldn’t go amiss, especially when the deeper modern physics probes the less ‘physical’ it’s starting to look.

Incidentally, no physicist has ever actually *explained* any of these things. They tell us that particles can disappear and reappear somewhere else without passing through the intervening space, they’ve designed experiments that (supposedly) reveal without doubt that this is what is happening, but *how* can this possibly happen in a world where the physical facts fix all the facts? They tell us *that* it happens but whenever anyone dares to wonder *how*, the response is apparently “shut up and calculate”.

Specifically, how are things like quantum superposition, entanglement, quantum tunnelling or Einstein’s bane, “spooky action-at-a-distance”, any less strange than the idea that thoughts exist or consciousness is *about* things?

Evolution

My sentiments towards evolution are virtually identical. The evidence that we, as physical creatures, evolved over the course of hundreds of millions of years from our distant animal ancestors is completely indisputable. Anything else is unthinkable and any*one* who says otherwise has earned the disbelief and disrepute their pseudo-position should arouse in their peers. But the success Darwin’s dangerous idea has enjoyed has limitations that not all scientists seem to respect. Raymond Tallis calls these people ‘Darwinitics’ and their affliction, ‘Darwinitis’.

Darwinitis is basically Darwinism run amok. It invokes evolution and natural selection to explain not just the long beaks some birds have (because those who had shorter beaks couldn’t get to some food source and were out-competed by their long-beaked peers) but also why people in pastoral cultures are more angry and vengeful than their agricultural cousins (because amongst shepherds and herders, the need to punish rustlers to discourage the theft of livestock is a more adaptive trait than in farmers).

Darwinism is a powerful explanatory framework that convincingly details how we (and all other biological life on Earth) evolved from other organisms. Its deductive certainty relies on a few seemingly innocuous features: first, a unit in which biological traits or tendencies can be encoded (the gene); second, a means of transferring those units to others (sexual reproduction); third, a means of producing variety in those units (random mutations) and fourth, the fact that some of those variations enhance the ‘fitness’ of the individual that possesses it so that it is better able to transfer its units to others (a longer beak equals more food).

This process perfectly explains the evolution of even complex features in biological entities without need of any recourse to a ‘Designer’ consciousness. I have no problem with the sections in *The Atheist’s Guide* that expound this. However, the important question for our purposes is whether human affairs are also subject to *natural* selection, that is to say, unconscious, unguided, random evolution.

Here is Rosenberg on the issue; “Whenever and wherever, in nature or culture, we find the appearance of purpose Darwin assures us that the reality has to be blind variation and natural selection… Since most aspects of human affairs look like they have been designed and have functions, they have to be Darwinian adaptations… Darwinian processes rule culture as thoroughly as they do biology”. Pretty clear.

So, let’s take an example of Rosenberg’s; the Chinese practice of foot binding. Chinese girls with bound feet were deemed more attractive and therefore had more suitors, resulting in a higher likelihood of marriage, a greater chance of having children and a smaller dowry for the girl’s parents. Naturally, this ‘fad’ took off because if you weren’t binding your daughter’s feet, she would be significantly disadvantaged in society.

Can this be explained in Darwinian terms? You bet. The ‘organism’ here is foot-binding which, like a parasite, seeks to replicate itself. It’s ‘adaptation’ (presumably smaller feet) conferred an advantage on those who adopted it and because of that it spread throughout the population. It *had* to. If you weren’t foot-binding, your daughter wasn’t getting married. It persisted until the 20th century when the ‘environment’ changed and “foot-binding went extinct”.

It’s a good story, right? And it’s kind of neat how cultural and social situations can be subsumed into a Darwinian framework like this. Unfortunately, this whole endeavour has taken Darwinism well past the point where it ceases to have meaning and made a mockery of not just Darwin but humanity in the process.

The entire analogy between a parasite evolving according to natural selection and foot-binding breaks down from the very moment we start to seriously think about it. In a materialist universe, what is the practice of foot-binding? I mean, a parasite is a physical organism. But what *is* foot-binding? It’s a norm, a cultural practice, which is to say that it is not physical. But in a universe where “the physical facts fix all the facts” how can something non-physical have any effect? How can foot-binding then *have* features which confer an advantage on its (physical) host and which allow it to spread throughout a population of these hosts? How can it even spread? None of these questions mean anything because we are talking about something that only exists in people’s minds.

Did foot-binding confer an advantage on Chinese parents and their daughters? Absolutely. With only a slight inward cringe, we can even stretch to say it was *adaptive*. But was it adaptive in anything like the same way that long beaks were adaptive in some species of bird? Of course not. Rosenberg says, “foot-binding went extinct” (presumably with a straight-face) because the “environment” changed. This makes it sound like foot-binding died out the way short beaks did, because short beaks no longer fulfilled the function they had evolved to… but think about these changes. In the case of the birds, perhaps the flowers changed in such a way that their stubby little beaks could no longer reach the nectar within. Only the birds with longer beaks could get to the nectar so they produced more offspring. How about foot-binding? Perhaps some young Chinese girls noticed that no other countries encouraged the binding of girls’ feet. Maybe they also noticed that it hurt like hell and had a host of other disadvantages. They decided to start a Facebook group called “No bind”, organised demonstrations in which they argued against the practice, invented a hashtag #bindingsux, and so on until one day everyone agreed it was repressive and distasteful. Now obviously none of this *really* happened but it is a typical example of how the “environment” changes in human culture. Rosenberg’s casual comment – “Environments change” – completely fails to do justice to this phenomenon.

So, the analogy between biological evolution and cultural change is weak. Why is Rosenberg so keen to push it on us then? It all has to do with the quote I cited earlier; “Whenever and wherever, in nature or culture, we find the appearance of purpose Darwin assures us that the reality has to be blind variation and natural selection”. In a materialistic universe, there can be no such thing as purpose because thoughts aren’t really *about* anything (we’ll discuss this little gem later), so Rosenberg must explain how human culture changes in ways that look like they accord to our purposes and intentions without actually invoking these ‘taboo’, non-physical concepts. Since biological organisms change in ways that look like they are orchestrated according to some grand design or purpose, materialists simply hijack this ‘square’ Darwinian explanation and force it into the ‘round’ hole of cultural change.

There are some other reasons to doubt that humans are any longer subject to evolution by natural selection (at least in the same way all of our animal cousins still are) which I have written about in a [short article](http://absurdbeing.com/humans_still_evolving.php?id=22). I won’t rehash these here.

So, physics and evolution are all good. They are ideal when it comes to explaining and predicting the behaviour of non-conscious matter. However consciousness (particularly *self*-consciousness) adds a dimension that these disciplines are insufficient to address, not because there is a mysterious realm of non-physical ‘stuff’ that operates without causes and is impervious to scientific methods of detection, but because consciousness gives us the capacity for abstract thought and lets us reflect on ourselves in such a way that we are self-aware and can take a position on ourselves, our actions, other people and other things.

Consciousness

*Introspection*

Rosenberg begins here by denying the existence of a self or even a mind distinct from the brain. However, he notes, it certainly *seems* as if there is some kind of self or mind. When I sincerely introspect, I get the very definite impression that *I* am a person, a mind, a consciousness. How can I be mistaken about this most fundamental of all intuitions? Simple, Rosenberg says, introspection itself is faulty and therefore unreliable.

He points out three situations in which introspection gives us the wrong answers; blindsight, Benjamin Libet’s experiments and sensory illusions. Blindsight occurs in people who have suffered damage to the primary visual cortex so that, although their eyes function perfectly normally, no visual information is consciously registered. Studies have found these individuals, despite not being consciously aware of anything in front of them, are nevertheless able to, sometimes quite accurately, discriminate colours, shapes and facial expressions. Although they often insist they are just guessing, their ‘guesses’ indicate that they can be guided by sensory information they are not conscious of.

In the 1980’s a man called Benjamin Libet performed a series of experiments in which subjects were asked to lift their fingers whenever they wanted to and record the time they consciously made the decision by noting the position of the hand on a special clock in front of them. Libet found evidence of brain activity (the ‘readiness potential’) around 300 milliseconds *before* subjects reported consciously deciding to move their finger, suggesting that our conscious decisions have no real effect on our actions.

Sensory illusions ‘trick’ our brains in a variety of ways that we have all experienced many times and which need no further explanation.

Rosenberg’s tactic here, much like candidates in a presidential campaign, is to discredit the opponent so we no longer believe what they tell us. Introspection fails under *these* specific circumstances therefore we shouldn’t *ever* believe what it tells us. Before I even begin to investigate Rosenberg’s three criticisms of introspection, we should note that this argument is flawed. It is the equivalent of me noting that when I look at a straw in a glass of water it appears misaligned and when I look at a jagged object from a distance it appears smooth therefore I can’t *ever* believe what my eyes tell me. Just because I am deceived in *some* situations doesn’t mean that I am deceived in *all* situations, nor does it mean that there is something ‘wrong’ with my vision.

So, blindsight. Rosenberg says; “Here is the sort of absolutely obvious thing consciousness tells us has to be true: To tell what color a thing is, you need to look at it, you need to be at least momentarily conscious of its color… if consciousness can be wrong about that, it can be wrong about anything.”

The problem with this argument is that Rosenberg is playing fast and loose with the word “consciousness” here. Can we say that our consciousness or conscious introspection is *faulty* if an opinion we have about our conscious capacities or perception turns out to be mistaken? Hardly. Believing that people who don’t have conscious awareness of things in front of them can’t tell what colour they are, even if this belief turns out to be false (which the phenomenon of blindsight tells us it is), doesn’t undermine consciousness or introspection in the slightest.

‘Introspection’ is the examination of one’s thoughts and feelings, not reasoning about how those thoughts or feelings operate or function. Being mistaken about blindsight is categorically *not* a failure of introspection.

Let’s move on to Libet. This is a little different. Rosenberg claims; “It’s introspectively obvious that deliberate actions are the result of conscious decisions that we make. That couldn’t be wrong, could it?” In this case, I agree with him; introspection *does* tell us that we consciously direct our actions. If science tells us something different, we need to address this.

My responses to the Libet experiment fall into three categories:

*Conflicting findings*:- If all you had read on this subject was Rosenberg, you could be forgiven for thinking that the evidence is all in favour of Libet. Brain activity surges 300 milliseconds *before* a conscious decision is ‘made’. Volition is actually a useless epiphenomenon that merely notices what the brain has done and generates the illusion that “I” was responsible. Cut and dried. Congratulations, you’re a robot. However, this is far from the case. A study conducted by Guggisberg et al. in 2011[[1]](#footnote-1) measured neural activity through high-gamma oscillations and failed to find evidence of a delayed conscious intention in the performing of a forced-choice task. Matsuhashi and Hallett[[2]](#footnote-2), in another experiment, found that the readiness potential (RP) only occurred before the conscious intention to move in two-thirds of the subjects and worse, they found that the lateralised RP (basically a specialised form of the RP which measures the RP from the cortex on the opposite side relative to the movement minus the RP from the same side) *always* occurred after the conscious intention.

*What is the readiness potential anyway?*:- Libet and others since him have noticed this RP occurs before the movement and the conscious urge to move. But does it cause the movement? Does it cause the impression of a conscious volition? If it is, as it’s claimed to be, the beginning of a sequence of brain events which terminate in movement, then why does the length of time between it and the actual movement vary so much across different people and even different trials by the same person? Libet found that the RP occurred in a range from 225 milliseconds to 900 milliseconds before the movement. This discrepancy needs to be explained if we are to believe our brain is simply acting on ‘autopilot’, as it were.

Another problem concerning the RP was raised by a study conducted in Otago, New Zealand, by Trevena and Miller[[3]](#footnote-3). They asked subjects to decide whether or not to tap a key when a tone was played and found that the readiness potential was triggered irrespective of whether the subject carried out the action or not. This suggests that the RP merely indicates that the subject is paying attention or preparing for the decision, rather than indicating the beginning of a chain of brain events which ends in movement.

*Conscious decisions*:- Just take a moment to think about what was actually happening in the minds of the subjects when they were doing Libet’s experiment. (This doesn’t just have to be a theoretical exercise; you can try it out yourself online at <http://www.informationphilosopher.com/freedom/libet_experiments.html> where you can find the clock Libet used in his experiments) You are sitting in a room, watching a dot race around a clock face, preparing to raise your finger. Now, if you’re anything like me, you will notice that *the instant the conscious intention to move is formed is not at all clearly defined*; rather the decision is buried in a hazy, ambiguous mental state in which you are priming yourself for the movement.

The first thing I note is that the moment of my conscious intention, as I reflectively observe it, is *always* the moment my finger moves. It strikes me as very odd that in Libet’s experiment the subjects reported the intention to move 200-300 milliseconds *before* actually moving. This may not sound like a large number but if all of our actions occurred a fifth of a second *after* we intended them, life would feel very disjointed indeed.

Another thing is that in order to correctly report when I decide to move my finger I find that my attention is distributed, particularly around the clock face. This may not sound like a problem but it means that I am not *just* acting on a random “urge” to move, in a vacuum, as it were; rather, I am aware of the dot and the lines around the clock face, but I am particularly aware of the lines around the clock face *that the dot will soon pass over*. In other words, I am telegraphing my intention into the future and I can’t avoid doing so simply because I am so acutely aware of everything happening on that clock face… and I *have* to be in order to accurately report on the time I decide to move my finger.

The conclusion of all this is that Rosenberg’s claim that our deliberate actions aren’t the result of our conscious decisions hasn’t been sufficiently attested to, particularly considering he is attempting to refute something that appears obviously, even *trivially*, true to anyone who has ever performed a physical action.

What about sensory illusions? Let’s start with Rosenberg again; “Introspection tells us that human sight is “now-sight.”… Human sight, which we think gets as close to *foresight* as anything, really just turns out to be *hindsight*. Vision is just another Darwinian process, one that produces the appearance of now-sight by filtering incoming variations for fitness to past environments… Despite appearances, vision is hindsight masquerading as now-sight.”

His argument here is that when we see things in the world, in real-time, what our brain actually does is filter the incoming signals in ways that have proven useful in our evolutionary past. Because of this, he claims, we aren’t seeing what is actually there; we are just seeing what has *usually been* there when we encountered similar visual inputs in the past. Because of this, certain images appear brighter, dimmer, longer, etc. than they really are.

Once again, Rosenberg is being imprecise in his use of language. “Introspection tells us that human sight is “now-sight.”” But what he seems to mean by “now-sight” is not that we are seeing things in the present moment, but that our mental and perceptive faculties have suddenly arisen, unconditioned by any prior events or experiences. That is explicitly *not* what my introspection reveals. Introspection tells me that what I am looking at *now* is what I am seeing right this moment. That I can be mistaken in what I am seeing *now* is irrelevant. That what I am seeing *now* is conditioned by what I have seen in the past, and even by what my distant ancestors saw in the Pleistocene, is irrelevant. My introspection *doesn’t* tell me that I can never be mistaken in my sensory perceptions.

Rosenberg thinks that “the only arguments against… [scientism] start by taking introspection seriously, something the empirical evidence shows we should never do.” I would agree with the first part of that sentiment but disagree with the second.

Yes, the only arguments against strict materialism do take introspection seriously precisely because that is where the answers provided by strict materialism (scientism) seem deficient and fail to explain direct human experience. Of course, this is not to say that human experience is infallible but something is taking place in consciousness that scientism completely fails to capture.

No, the empirical evidence has absolutely *not* shown that we should never trust introspection. I have tried to illustrate why Rosenberg’s attempts to undermine the introspection his entire life is built on have failed but even if I *couldn’t* refute him (or *haven’t* refuted him to your satisfaction), as I said earlier, the fact that introspection is *sometimes* fallible does not mean it is *always* wrong. This is as inane as noting that two documentaries produced by XYZ broadcasting company contain erroneous statements and *on this basis alone* refusing to believe any other documentaries they broadcast.

Now of course, this does mean that we may have to work a little harder to determine which intuitions as revealed to us by introspection are wrong and which are correct, but if you wanted ‘easy’, you definitely shouldn’t be studying human consciousness.

*Aboutness*

What are you thinking about right now? You’re possibly thinking about Rosenberg and his book or maybe you’re thinking about me and wondering, ‘Is this what this guy does for fun, write articles about consciousness and physics?’ or perhaps you’re thinking about what you are going to have for dinner. In any case, what is clear is that your thoughts are *about* something, right? Well, I hate to break it to you but Rosenberg says no.

He invokes two principles in defence of this (both of which I have (hopefully) successfully discounted); the first is that your introspection cannot be relied on and the second is that “the physical facts fix all the facts.”

“How can one clump of stuff anywhere in the universe be *about* some other clump of stuff anywhere else in the universe…?” “Physics has ruled out the existence of clumps of matter of the required sort. There are just fermions and bosons and combinations of them. None of that stuff is just, all by itself, *about* any other stuff.”

What Rosenberg is doing here is something curiously (and ironically) like the god of the gaps argument. The god of the gaps argument notes that there is something we can’t explain and then infers God as an explanation. We don’t know where the weather comes from therefore God must be making it rain. (Hey, I know, if we sacrifice bigger livestock maybe He will make the sun come out!) Rosenberg is saying that since we don’t know how one clump of matter can be *about* some other clump of matter that first clump must actually *not* be about anything after all. God of the gaps resorts to magical thinking to explain things we don’t understand; Rosenberg simply denies that there are things we don’t understand. Since we can’t explain it, *it* must be wrong.

And this leads me to another ‘religious’ irony in which we see precisely the danger of scientism or what we could also call, ‘blind faith that the laws of physics explain everything in the universe’. It espouses its dogma and refuses to believe anything that appears to contradict it, no matter how strong the evidence in favour of the ‘heretical’ idea is. What has happened is that ideas (one in particular) have ossified into ironclad doctrines that cannot be broken. Physics has ruled on the subject; *all* matter is inert, case closed. What? You think you are having a thought *about* something? You can express that thought to me so that I think I am having a thought *about* that thing too? Impossible. Physics has already spoken. Long live the physicist! Hurrah!

So the above all comes together into a particularly weak argument (actually it’s *no* argument at all) but not to worry, Rosenberg has a couple of aces up his sleeve, the first of which comes in the unlikely form of a sea slug. A man called Eric Kandel showed that a sea slug can learn to withdraw its gills and siphon from a conditioned stimulus. Poke a sea slug with a harmless electrical stimulus on one nerve and a painful stimulus on another nerve and the creature will soon react the same way to both stimuli; i.e. withdrawing its gill and siphon. So the sea slug learned something. But Kandel also noticed the changes in the brain of the animal that produced the learning. “What the sea slug has learned is not some new fact *about* the world. It has acquired a new habit to do something under certain conditions.” Apparently the same process has since been witnessed in a rat’s brain. So, what’s the point here? No learning (or thinking) is *about* anything; it’s just the re-wiring of inert physical matter in the form of synapses and neurons.

This is an argument from analogy. No one is under any illusions about a sea slug possessing the requisite brain power to understand and actually be conscious of what is happening to it. So since sea slugs learn without intentional consciousnesses and since human beings learn too, we must also be doing it without intentional consciousnesses.

First of all, it’s worth noting that the conclusion is not deductively certain. Just because sea slugs can ‘learn’ without intentional consciousness *does not* prove that human beings also learn without intentional consciousness. It *does* say that it’s *possible* for ‘learning’ to take place without intentional consciousness but we can’t draw any definitive conclusions about the learning that human beings engage in by comparing us to sea slugs or rats.

Related to this is the problem that it doesn’t directly address human learning and the vivid sense we have that our thoughts *are* actually about things. Unless you’ve already bought into Rosenberg’s worldview that we can’t trust our introspection and the material is all there is, this argument completely fails to hit the mark.

 Second and more importantly, Kandel’s findings rely on a very thin definition of ‘learn’. Is a sea slug withdrawing its gills and siphon in response to a stimulus anything like an adult scheduling time between her part-time job and picking the kids up from school in order to attend a university class on WWII because she needs the extra credits to complete her degree… and anyway, she has always been interested in history, particularly wars, and thinks this might make her more employable in the future… then creating mindmaps to help her recall and poring over textbooks each night in order to understand Japan’s activities because she has a test in a week…? The problem here (once again) is loose use of language. Full-blown learning is much more than just exhibiting a changed behaviour. Rosenberg is right in thinking that learning requires an intentional consciousness, so if he can demonstrate learning taking place in the absence of such an intentional consciousness then he will have successfully made his case. The problem is that demonstrating animals can exhibit changed behaviour in response to different stimuli *doesn’t* come anywhere near showing learning in the absence of an intentional consciousness. If I log into Amazon.com, it automatically throws up some suggestions of books I might like. Is anyone tempted to say that it has ‘learnt’ what kinds of books I like? Of course not. *But it has shown altered behaviour in response to stimuli. And if a programmer digs under the hood, he will be able to identify exactly what has changed in the website’s ‘brain’!* This is the problem with imprecision in our use of terms.

Interestingly enough, Rosenberg also goes the computer route. We can all agree that nothing in a computer is *about* anything so if a computer can store and use information without having a single thought *about* any of it, then so can we. “After all, your brain is a computer, too.”

Obviously, this falls prey to the exact same thing we just saw with the sea slug. No one is even remotely tempted to think a computer is having thoughts, whereas we are not just tempted to, we *strongly believe* that we are having thoughts about things and what’s more, we can talk *about* them so that other people have thoughts about those things too.

There is another fallacy in the above though. The idea that the brain is a computer. Apparently, we haven’t learnt anything from the mistakes of our ancestors who also (wildly erroneously) compared consciousness/intelligence to the most sophisticated technology of the day. First there was the religious which subsumed the mental under the guise of “spirit” or “soul”, then hydraulics explained emotions and personality as fluids moving around the body. During the scientific revolution, mechanical explanations of the body and thought became popular and after we harnessed the power of electricity the brain was compared to a telegraph. Fortunately nowadays we are far more sophisticated and can see through the folly of past generations to realise that the brain is actually a computer.

What does this analogy mean? It holds that a brain, just like a computer, is just a sophisticated information processor. Inputs come in, get processed and then generate outputs. Once more, we are in the presence of a sloppy use of language. Obviously, in some sense, the above description is true; we see a particular pattern of orange and black (input), correctly interpret this as a tiger (processing), and then run (output). But if you truly think that is even remotely close to an adequate description of what your brain does, I suggest you pause and think about your mental life a little more carefully. (Something no computer is even remotely close to being able to do, by the way)

Plants are also information processors. They take in information about the light source (input), use this to determine its location in relation to them (processing) and grow in that direction (output). So, are plants just sophisticated computers then? Or maybe computers are sophisticated plants? In truth, the comparison is completely meaningless. Who would think of comparing an electronic, human invention to a living organism? And yet we think nothing of comparing that same electronic, *non-conscious* invention to a human organ and the conscious awareness it somehow engenders.

Rosenberg takes another tack to show that there is nothing more going on in consciousness than inert, physical processes in our brains by pointing out that changing the brain also changes our mental capacities. He notes that if scientists knock out the clump of neurons that allow you to recognise your mother’s face, the next time you see her, you won’t recognise her. You haven’t forgotten her, you can still have a completely normal conversation with her on the phone, but as soon as she walks into the room you won’t recognise her face and will deny it is her. There is nothing theoretical about this – it is a phenomenon that has been very well-attested to and closely documented.

At first, this might sound pretty damning but before you throw your hands up and resign yourself to being a non-conscious robot for the rest of your ‘operating capacity’, remember that this phenomenon is only a problem if you believe in some non-physical soul or Cartesian mind, somehow ‘inhabiting’ a clump of matter. As I hope is abundantly clear, that is *not* my position. There is absolutely no doubt that a physical brain is necessary for consciousness and that is exactly what this experiment proves. On the other hand, this story says absolutely nothing about the idea that your thoughts aren’t *about* anything.

In this section, Rosenberg is asserting something I completely agree with. Neurons are just clumps of matter. They don’t *look like* anything, they can’t be *interpreted* as anything and they don’t *represent* anything. So where do we diverge? He thinks this is the end of the story. In Rosenberg’s material world, nothing is *about* anything else. He solves the Gordian knot of consciousness, not by cutting it, but by just turning around and pretending it isn’t there. You aren’t conscious; at least not in the way you think you are.

On the other hand, I happily acknowledge that the neurons in my brain are just clumps of matter. But I also acknowledge that I am conscious of them and *about* things in general. I can’t *explain* it, no one can, but I refuse to deny it just because it doesn’t fit in with my worldview. The fundamental question which separates Rosenberg from me is, ‘Can I be mistaken in thinking that I am having a thought *about* something when I’m actually not?’ He seems to think the answer to this is yes; I, however, think the question itself is incoherent. To be mistaken about something is precisely to be thinking *about* something. But I’m getting ahead of myself. I’ll return to this topic in the final section.

*Plans, Purposes and Designs*

Once Rosenberg has disabused us of the foolhardy notion that our thoughts are actually *about* things, it’s a trivial matter to note that we can’t possibly make plans or set ourselves goals. Plans are necessarily future-oriented (that is, *about* the future) but since nothing can be *about* anything, the idea that we can plan or set goals must be another illusion.

Rosenberg points to the extraordinary organisational capacity of ants which certainly *looks as if* it could only have arisen through carefully made and consciously executed plans, but as we all know is a feat orchestrated by nothing more than blind instinct. This is another argument from analogy in which the analogy doesn’t hold. It is absolutely true that purely non-conscious processes can produce a situation which looks planned but in fact wasn’t. Great. But this doesn’t even imply that humans can’t plan, set goals or consciously design things for themselves.

In this section, Rosenberg says something else worth commenting on; “If you are going to allow that real purposes and designs can somehow pop up out of nowhere in a world where physics had hitherto fixed all the facts, you might as well have put God into the universe at the outset.” I don’t think this is fair. What Rosenberg is saying here is that since all that exists in the universe is crude, inert matter, it’s impossible for anything like purposes (which are *about* things) to exist. If we are going to postulate such ephemeral and unproven things like purposes then we might as well go the whole hog and throw in an equally ephemeral and unproven deity.

I see two problems with this. The first is the assumption that physics fixes all the facts. Matter is matter. The fermions and bosons in your brain are no more capable of being *about* something than the fermions and bosons in my desk. This is wildly implausible to me and I have already challenged it (and will turn up the heat in the final section of this essay). The second is that believing I can make plans and set goals is equivalent to believing in a supernatural deity that listens to prayers and grants absolution vicariously through sacrifice. The evidence for the former is overwhelming. It is however supposed to be an illusion so powerful that we cannot see through it (I challenge you to live a normal life while truly believing you can’t set goals and plan for the future), which of course begs the question how Rosenberg has somehow pierced the veil of Maya to the truth behind. On the other hand, the evidence for our favourite jealous God is… well, to be honest, there isn’t any.

That quote I cited implies that I’m taking a wild leap of faith in postulating that I can make plans but this is not what is happening at all. What is happening is that Rosenberg is explicitly and adamantly denying the evidence before his own consciousness. He makes plans for the future, sets himself goals, designs his lectures the way he wants to… all while denying that he can. Of course, this doesn’t mean he is wrong. It just means that if there’s a leap of faith anywhere here, it’s in his position, not mine.

*The Self and Freewill*

It will come as no surprise to hear that Rosenberg doesn’t believe in the self and denies that we have freewill. He’s already done the legwork to demonstrate this (the physical facts fix all the facts, you can’t trust introspection, etc.) and I’ve already argued against it so there is really nothing new to add here.

I will just briefly mention one thing I agree with Rosenberg on; the recent appeal to quantum indeterminacy in a desperate attempt to salvage freewill. Rosenberg is quite right to knock this notion down. First, even if quantum indeterminacy *does* actually affect our thinking in meaningful ways, it still doesn’t get us to agency (which is surely the whole point). We are still nothing more than clumps of matter being buffeted around, only by laws of quantum probability now rather than causal certitude. Second, no one (least of all quantum physicists) actually understands quantum physics, which makes any rush to adopt it as the foundation for a theory (freewill, quantum ‘healing’ Deepak Chopra style, etc.) premature and likely to end in ruins.

Morality

In general, I have few problems with Rosenberg’s intuitions about morality. He defends moral nihilism, an outlook which “rejects the distinction between acts that are morally permitted, morally forbidden, and morally required.” This doesn’t mean that ‘anything goes’. On the contrary, all it means is that there is no such thing as *intrinsic* moral value. In short, we’re making it all up as we go along. This, I believe, is almost certainly correct. The idea that a capital-M Morality exists independent of us and our moral formulations is absolutely incoherent.

He goes on to claim that all cultures have similar moral principles which he calls “core morality”. You might be tempted to disagree here and argue that different cultures have wildly different morals, even the same culture taken at two different points in time exhibits different morals. Rosenberg’s point here though is that we’re immediately starting off thinking about principles that are not in fact fundamental; like abortion, murder, female genital mutilation, etc. The principles that make up core morality include things like; protect your children, it’s wrong to punish the innocent and if someone does something nice to you, then you should return the favour if you can.

Now, you’re probably imagining instances where people have violated these so-called universal norms; for example, the Nazis punished innocent Jews, right? But did they see what they were doing as punishing the innocent? Would the Nazis have said that it’s right to punish the innocent? No, on both counts. It wasn’t that they held a different set of core morals but that they had wildly false *factual beliefs* about Jews. So, the idea is that we don’t disagree over “core morality” but over the facts of the situation. And where did this universal “core morality” come from? Easy, it evolved by natural selection. And what was being selected for? The same thing evolution always selects for; biological fitness, that is to say, reproductive success.

Now, I’m not sure I agree with Rosenberg that there is such a thing as a core morality which unites us all, but this isn’t where I want to apply pressure. Rather, I want to focus on his belief that we ‘evolved’ our morals. It seems to me that this must be at least partly true. Genes that gave individuals a tendency to work together (what Rosenberg calls “nice nihilism”) rather than compete against each other “tooth and claw”, could very well have conferred upon their carriers an adaptive advantage that saw them live longer, have more babies and spread those genes further afield. Rosenberg uses game theory to defend this thesis and this seems to me to be a robust defence.[[4]](#footnote-4)

The only problem is that Rosenberg carries the idea of our morals being selected for to ridiculous lengths. He talks about modern humans as if we are nothing more than non-conscious animals, slaves to our genetic programming, mindlessly enacting ‘moral behaviour’ shaped by our environments. One such claim he makes is that since pastoral cultures have to look after animals which frequently stray beyond immediate supervision, “the norm of going to any lengths to punish rustling will be highly adaptive. So there will be strong selection for emotions of anger, revenge…” As you will have no doubt noticed, this norm must be “culturally established and transmitted”, that dubious concept we have already seen employed regarding Chinese foot-binders.

What Rosenberg has completely ignored here is the fact that we don’t just act, like our animal cousins. We formulate ethical theories, we use reason to justify our acts, we argue, debate, fight and even kill over our morals and of course, we think *about* morality. The only thing he can say to refute this is that it is all an illusion. We only *think* our deliberations and debates actually affect our behaviours and morals. In reality we are just biological machines ticking away, non-conscious neurons firing in non-conscious patterns in non-conscious brains, stimulating non-conscious bodies to act in such a way as to maximise biological fitness. I’ve already tried to show how unlikely this is.

History and Progress

Armed with his slogan “the physical facts fix all the facts” and an omni-explanatory theory of natural selection which reduces everything to biologically (and culturally, when the going gets tough) determined processes, it is child’s play to show that history (and all of the social sciences in fact) is “bunk”. Rosenberg remarks that history is only suitable for entertainment purposes because “to provide knowledge, [it] has to show improvement in predictive success.” Since the past represents nothing more than events/situations/emotions/decisions that conferred a selective advantage on us, there is absolutely nothing we can learn from it. As we all know, natural selection is blind, which means it completely lacks any teleology. The eventual evolution of *homo sapiens* (or *any* species in fact) would have been completely impossible to predict beforehand because there is no ‘direction’ in natural selection. Random genetic (or perhaps ‘mental’) mutations survive if they are adaptive and die out if they aren’t. All historical facts are completely contingent.

This also means that progress is, by definition, an illusion. Progress measures the improvement of something over time but, in a world where the physical facts fix all the facts, the word ‘improvement’ doesn’t mean anything. Nothing is intrinsically ‘bad’ or ‘good’, so it can’t get ‘worse’ or ‘better’. Cultural progress? Moral progress? To Rosenberg, these are misnomers.

No doubt it didn’t escape your attention that Rosenberg equates knowledge with “predictive success”. This is a very… *scientific* definition. It therefore comes as no surprise that nothing in the world except science turns out to be capable of providing knowledge. Nothing circular about that!

This definition of knowledge is completely unjustified. History is replete with meaning and lessons which yield knowledge, if about nothing else, at least about our own histories! But we need not limit ourselves to this observation. History *can* also guide us in the future decision we make even though, like everything related to human beings, it doesn’t allow us to know what will happen with mathematical certainty. Just because I can’t predict with absolute certainty what you will think after reading this sentence doesn’t mean that I can’t know anything about you. Setting the bar at this level isn’t setting it too high; it’s setting it at the wrong event.

The other point we might make here concerns the definition of progress. If you take ‘progress’ to mean movement along some Absolute, human-independent arc angling ever-upwards then of course, there is no such thing as progress, but only because there are no Absolutes. But if you are prepared to grant that some states are ‘better’ (in a relative sense, naturally) for us than others, then progress is no longer such a lofty and unattainable notion.

Is it progress that slavery has been largely abolished and only continues in the shadows? Is it progress that we no longer break people on the rack (as public entertainment, no less!) for believing something different from the church? Is it progress that we can now access virtually any information we want at the click of a button?

Rosenberg would have you believe that to answer in the affirmative about any of the above is also to call the lengthening of the beaks of certain birds ‘progress’. After all, the rights revolutions, the end of torture as a means of punishment (for highly dubious crimes) and modern, technological innovations are all just rungs on an evolutionary ladder to nowhere. They arise from nothing more than behaviour which has proven to be evolutionarily adaptive.

And it is here that we must part company with Rosenberg simply because we cannot agree with him that the gradual lengthening of a bird’s beak over millennia is the same as humans deliberating, justifying and arguing amongst themselves about whether corporal punishment is acceptable. Particularly when we note that the primary argument against us consists in the repetition of mantras (“the physical facts fix all the facts”, “you can’t think *about* anything”), which directly contradict our conscious experience.

Arguments against Scientism Raised in the Book

OK. So we’ve seen why Rosenberg thinks the way he does. But there must be counterarguments and he must have answers to them, right? Well, that’s half right, anyway. Rosenberg himself acknowledges the danger here when he says, “if the mind isn’t the brain, then there exists at least one nonphysical kind of thing; at least one set of facts won’t, after all, be fixed by physics. These will be the facts about the mind, the self, the person… It’s enough to roll back at least three chapters’ worth of scientism…” High stakes.

Descartes’ famous utterance, *Cogito, ergo sum* (I think, therefore I am), is about as succinct a challenge to scientism as it gets. One of the consequences of this statement is that I can doubt the existence of my brain but I cannot doubt the existence of my mind (this *I* as thinking thing) because the very act of doubting can only take place if there is something (I) to do the doubting. This means that there is something true of my mind (namely, that it can’t be doubted) that is not (logically) true of my brain; hence they can’t be identical.

Rosenberg also notes that even scientism can’t doubt we are having experiences and; “Since scientism admits that experiences exist, they will have to be physical for scientism to be true. If the facts about experience can’t be fixed by physics, scientism will be false.” So, once more, it’s all on the line.

How does Rosenberg deal with these eminently respectable and genuine challenges to his understanding of the world? Surprisingly, he doesn’t. “Does scientism actually have to take Descartes’ argument and others like it seriously? Does it actually have to diagnose each of their mistakes, or any of them? No. Even before you hear them, science provides a compelling reason that they must all be wrong. One has only to weigh the evidence for scientism – 500 years of scientific progress – and the evidence against it – including those cute conundrums. It’s clear which side has the weightier evidence.” And there you have it. The most outrageous claim any scientist has ever made right there. *Scientism doesn’t have to defend itself because it already knows it’s right*. According to Rosenberg, scientism doesn’t have to dignify challenges to its authority with a response because… well, just because; nah nah, pants on fire.

Rosenberg goes on to discuss the philosopher Thomas Nagel’s famous paper, “What is it like to be a bat?”, in which he argued that materialist theories of mind fail to address the all-important phenomenological aspect of consciousness. When you see something red, you aren’t just measuring the wavelengths of the light hitting your eye and determining it is that colour called ‘red’; rather, you are *experiencing* red, and that experience is qualitatively different from experiencing green. What’s more, science is completely unable to capture this aspect of consciousness, no matter how deeply or how completely they map individual neuronal activity in the brain.

Rosenberg makes a half-hearted attempt to address this by pointing out that blindsight has demonstrated that we don’t need subjective experience to have vision. He seems to have forgotten the little (inconvenient) fact that we still *do* have subjective experience and he has done absolutely nothing to explain it. Ah, but silly me. Why should scientism be held to the same standards as every other discipline in the world; “Scientism is safe to conclude that there are flaws in Nagel’s argument… We don’t know where the slips occur. But we know that their conclusions are false.”

As if this wasn’t enough, Rosenberg then claims that “the arguments against the mind’s being the brain cheat. They stack the deck against neuroscience so that it cannot succeed in meeting their challenge. The arguments demand that neuroscience take conscious introspection seriously. But they subtly deny it the use of any tools to do so... The demand is that science explain what it’s like to experience red, but not tell us anything about its causes and effects or what it is made up of in the brain or anywhere else. This, in effect, ties the hands of science.”

This is flat out wrong. The challenge is to explain experience. The problem is that just identifying causes and producing ever more detailed descriptions of neuronal activity (in short, doing science) is fundamentally incapable of doing this. No one is tying science’s hands; science is bringing a knife to a gunfight and then wondering why no one takes it seriously.

Pointing out that electrochemical activity is taking place in these parts of the brain when we think of something *absolutely does not explain my experience of thinking of that thing*. Throwing your hands up in the air, repeating a mantra (“the physical facts fix all the facts”) and complaining that everyone else is “cheating” does not change this basic fact.

Going on the Offensive

Up until now I have been content to play defence, responding to Rosenberg’s claims rather than pushing my own. In this final section, I will reverse this formula and give four reasons why I think scientism is false.

*Scientism Alone rises above all Illusions*

Rosenberg claims that, since the sixteenth century, some people began to see through the illusions that had been evolutionarily crucial to our survival and, reasoning from evidence, learnt to think about reality “the right way”. If you think there is something funny about Rosenberg claiming that scientism is “right”, you aren’t alone. After he has gone to so much trouble to convince us that in this material world where the physical facts fix all of the facts there is no ‘right’, only what natural selection has selected for, it strikes me as extremely odd that he suddenly believes something in this material realm (scientism) *has* gotten it ‘right’, after all. What he has been saying all along (our brains didn’t evolve to understand the truth, there is no such thing as progress, etc.) turns out to be not quite true. It seems that these inviolable facts about the universe apply to every discipline *except* scientism. If Rosenberg is right about Darwinism ruling our material and mental lives, then it must also relegate scientism itself to the status of the merely evolutionarily adaptive.

Of course, Rosenberg might argue that the results of scientism speak volumes. Scientism demonstrates its truth every time we use it to invent some new technology or understand some physical phenomenon. Doubting scientism is like doubting the computer in front of me even as I’m typing this essay. But wait a minute… what is scientism? It’s just a whole bunch of theories and mathematics. It’s bits and bytes in a computer or scrawls of black ink in books or configurations of neuronal patterns in the brains of physicists. But these can’t actually be *about* anything, right? Least of all, *about* other clumps of matter? Surely Rosenberg wouldn’t allow himself to get sucked into any such foolish illusion?

You might have noticed that Rosenberg is trying to have his cake here and eat it too… or rather, have *his opponent’s* cake and eat it too. If we take him seriously when he says all that exists is brute, non-conscious, matter labouring under the illusion of consciousness, it would seem to be absolutely impossible for a little portion of that matter to suddenly realise that it is being deceived, that is to say, “become powerful enough to see through the stratagems of Mother Nature… get off the Darwinian train and stop acting in our gene’s interests if we want to.” Nowhere does Rosenberg explain how this magical feat is possible, how we can spit in the face of Darwin and rise above our brute, physical nature. Presumably this is because he spent the entire book arguing that it is absolutely impossible.

This whole line of enquiry truly opens the floodgates and reveals how Rosenberg has cut the branch off the tree only to find he was sitting on it. We see another example of this if we consider the fact that science makes empirically testable predictions. Clearly, Rosenberg’s own reasoning once more works against him, only this time with an added twist that makes the above assertion even barmier than the one he levelled at us; how can one clump of matter in a scientist’s head be *about* another clump of matter *which doesn’t even exist yet* (i.e. a future state)? He says as much himself, “…there is one thing consciousness can’t contribute: It cannot contribute thoughts about the future…” Well said. So either scientism itself is all an illusion or it demonstrates precisely what it has fought so hard to disprove.

*The Reductionist Dream*

Reductionism is the idea that complex phenomena can be adequately described by *reducing* them to, and describing, their “simple” parts. Ultimately the goal of scientism is a reductionist one in that it completely ignores ‘complex’ phenomena (like conscious experience and intentionality) in favour of descriptions of the behaviour of individual neurons and in particular, thinks that *the latter tells us everything we need to know about the former*, when in reality it tells us nothing.

Think about colour. Everything we see has a colour and yet the atoms which make up those things are colourless. Now, we know what colour is (the way our brain interprets the frequency of the light waves reflected off different materials) but we would never have been able to deduce the existence of colour from a reductionist, scientific explanation of the physical processes taking place in vision. If a reductionist account of the universe *cannot* explain something as basic as colour, how on earth could anyone expect it to explain something as complicated as conscious experience?

Neuroscientists dig deeper and deeper, identifying more and more subtle processes in an attempt to understand consciousness without realising that they are going the wrong way. It’s like probing the atomic makeup of a red hat to find the ‘redness’. It’s not in there. Nor is it in the brain. Even if you could identify at the level of the atom(!) the neurological differences between ‘seeing red’ and ‘seeing green’, this would still tell you absolutely nothing about red or green, let alone what it is like to see colour. Consciousness, intentionality, agency. These things aren’t in the minutiae of the brain and looking for them there is futile.

*I Thought I was having a Thought* about *Something*

We have seen that Rosenberg’s position here is that even though you might think you are having a thought about something, in reality, you aren’t, because it’s impossible. But is this something we can be deceived about?

Note that I’m not saying, “If Rosenberg is right, we’re just robots… boo hoo, it can’t be true because that’s so depressing.” That’s special pleading, not an argument. I’m saying that if you think you are thinking *about* a dog, then there’s no way you can be mistaken about that. If you can describe where it is, what it is doing, its size, colour, etc., then *something* is undeniably going on here. Just labelling this event an ‘illusion’ and declaring that it’s physically impossible because the physical facts fix all the facts doesn’t… no, *can’t*, in any way, void it. In fact, the very fact that Rosenberg has to deny it guarantees that it happened. If it didn’t, that is to say, if it was genuinely illusory, what could he possibly be talking about?

We need to separate intentionality (and the claim that it is an illusion) from the things we typically think about in this regard. If someone thinks plants suffer pain and refuses to pluck flowers because he likens this to severing a limb off an animal, we can be quite sure that he is wrong and is labouring under an illusion, a false belief. But this is quite different from saying that he is wrong about thinking he has this belief (that plants suffer like animals). He can’t be wrong about holding this belief precisely because he *is holding this belief*.

If he isn’t *really* holding this belief, then what is going on when he *thinks* he is? Presumably, Rosenberg would want to say all that is taking place in the world when he *thinks* he has this belief is a flurry of electrical and chemical activity in a certain clump of matter. End of story. And yet, that is manifestly false, because this activity resulted in something more, something we’re talking about, I’m arguing for and Rosenberg is denying. And *none of this is possible if there are no thoughts about things in the first place*.

In short, in order for me to court the illusion that I am thinking about things, I must actually be having the illusion that I’m thinking about things. And since the supposed illusion is a mental event, then it means that mental events must be taking place. To suggest anything else is incoherent.

*Scientistic Mental Health*

Rosenberg has a suggestion for people who are feeling *weltschmerz* (literally, ‘world-pain’, a German expression which means something like a depressing state of mind brought about by the realisation that physical reality will never satisfy the demands of the mind), take Prozac. And if that doesn’t work, take some other drug until you do see results.

Since mental events are all illusory and all that is *really* happening is that neurons in a certain clump of matter are firing, if that mechanical activity is producing unwanted results (depression), the solution is simple. Just manually alter the faulty machine. If your car won’t start, you don’t hire someone to talk to it gently, ask it probing questions about its mileage and inquire into its relationship with the manufacturer who assembled it. You take it to a mechanic who will pop the hood and get her hands dirty, checking connections and changing broken parts until the damn thing is fixed. Why wouldn’t you do the same when your daughter tells you she is experiencing anxiety over what to do with her life? Malfunction. Rectify. Interrupt chemical processes A, B and C, excite under-performing neurons M and N, correct an imbalance of chemicals X and Y and hey presto, your human is fixed! Including parts and labour, that will be $49.99, thank you.

This is the kind of dystopian future Rosenberg and others like him seem to be looking forward to. Obviously, they wouldn’t put it in such stark terms, but why not? The truth is we are just machines, computers processing inputs. Why continue to cater to emotions which are nothing more than evolutionary adaptations? Why alter your behaviour out of a misguided respect for other people’s mental events and subjective experiences which are all illusory; that is, absolutely and positively unreal? The answer, of course, is that they matter because they are real.

Presumably, you wouldn’t treat your daughter like you treat your television. But why not? It’s just another collection of fermions and bosons (your daughter, that is). You might argue that you have evolved to care about this particular clump of matter more than others. But your brain has “become powerful enough to see through the stratagems of Mother Nature” and you can get off the Darwinian train if you want. Well, maybe the lump of matter that is you knows that if it treats the lump of matter it co-assembled (with another lump of matter) like what it really is, i.e. a mere lump of matter, the first lump of matter would go to jail for the ridiculous crime of child abuse (as if you could abuse a bunch of fermions and bosons!). But it’s hard to see why the ‘you’ clump of matter would care about that – it’s not like it has plans or goals that could go unfulfilled, right? Ah ha, but perhaps the illusion is so strong we *can’t* escape it. Even if you have climbed out of Plato’s cave and seen the Light of scientism (presumably by studying neuroscience or physics), thanks to the physical constitution you have been cursed with you still can’t help seeing those blasted shadows on the cave wall as reality. Then we find ourselves thrown back on the unavoidable fact of our internal, subjective, conscious experience *which all the scientism in the world cannot and* (as we saw above) *will never be able to explain*.

Conclusion

Science is a powerful discipline and has revolutionised human life on this planet. Its unflinching refusal to accept flights of fancy as explanations for natural phenomena is undoubtedly one of the keys to its success. Scient*ism*, on the other hand, is a perversion of science. It takes the greatest tool the human mind has ever conceived of and turns it into a creature with unbridled “hegemonic ambitions” that denies the very mind which gave birth to it and rejects anything that doesn’t fit into its strict framework of calculation and prediction.

I know the allure of reducing the world to atoms because I used to be a strict determinist and there was a time when I would have read *The Atheist’s Guide to Reality* nodding all the way through. If you take the physical world as your start point (and why would you not?) and (quite rightly) ignore mystical/superstitious/magical nonsense, then it’s obvious that nothing can be happening in the world except physical interactions of matter at the quantum level.

The first thing that convinced me this view was wrong was the realisation that there is at least one thing which somehow doesn’t fit into this worldview; consciousness. No matter what state, emotion or characteristic the fermions and bosons in my brain are creating/representing/simulating (take your pick of verbs), I am not *just* this emotion; rather, I am *conscious* of it. Calling this self-reflective capacity we all have an illusion doesn’t get rid of it much less explain it. Claiming that the mind just *is* neurological activity is patently false; a thought of a dog cannot participate in a relationship of identity with inert clumps of matter. Getting lexically creative and calling the mind an *emergent* property of the brain only masks our ignorance with a fancy word. Something interesting (and real) is going on here and we can’t even begin to understand *human* reality without taking this most human of qualities seriously.

The second thing that swung me to the ‘dark side’ was quantum physics. I am, now more than ever, convinced that physicists are only barely keeping their heads afloat and they have absolutely no idea what is going on with physical reality. They obviously continue to make massive strides in learning how to manipulate and control matter and create ever more complete and sophisticated models of reality but the deeper we probe, the more the gaps in our understanding stand out. As it stands today no one on earth can even tell you what an electron is. They will tell you that before someone observes it, it exists around its nucleus as some kind of ‘cloud’, at every point simultaneously, but with differing probabilities of ‘actually’ (whatever that means in this context) being at any one of them. I am not, no matter how it appears, ‘physics-bashing’ here. I am merely pointing out that as it stands today, traditional accounts of materialism appear to be at least as unlikely as the idea that the mind is not the brain and, just as importantly, completely fail to gel with the latest developments in physics.

In a universe which is not only stranger than we imagine, but stranger than we *can* imagine[[5]](#footnote-5), I have argued in this essay that there is absolutely no reason to stubbornly cling to a simplistic, old-fashioned form of materialism and rely on this to deny the evidence our own consciousnesses put before us every second of every day. Rosenberg has made his case. I’ve made mine. And now we must step aside and leave you to make up your own ‘neurological impulses’.

1. Guggisberg A. G., Dalal S. S., Schnider A., Nagarajan S. S. (2011). The neural basis of event-time introspection. Conscious. Cogn. 20, 1899–1915. Online at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3161169/> [↑](#footnote-ref-1)
2. Matsuhashi M. & Hallett, M. ‘The timing of the conscious intention to move’, European Journal of Neuroscience (2008) 28: 2344-2351. [↑](#footnote-ref-2)
3. Trevena, Judy; Miller, Jeff (2010). "Brain preparation before a voluntary action: Evidence against unconscious movement initiation". Consciousness and Cognition. 19 (1): 447–56. [↑](#footnote-ref-3)
4. Steven Pinker argues for the same thing in his masterly *The Better Angels of our Nature*. [↑](#footnote-ref-4)
5. A paraphrase not of some humanities “entertainer” but of the respected scientist J.B.S. Haldane. [↑](#footnote-ref-5)