

*By Lorenzo Sleakes*

### **Introduction**

Philosophy and science in trying to explain consciousness as a single problem assumes a physical monism and makes the hard problem insurmountable. But introspective evidence shows that the content of consciousness (qualia) is separate from the spotlight of conscious awareness itself. The self that observes the world is unaffected by the closing of eyes resulting in the blackness of the entire visual field, unaffected by stepping outside into the fresh morning sunlight, unaffected by dreaming and waking up, unaffected by the passing of years and the change of all the atoms in the body. The subject appears to be largely an enduring spectator that is not seriously impacted by major upheavals in the content of what it experiences. Given this, a fundamental duality should be recognized. Any neurophilosophy that conflates the two (qualia and binding) creates a single insurmountable problem.

The hard problem can be attacked by breaking it in half as follows. Specific configurations of matter and energy deterministically generate qualia according to yet to be discovered universal psychophysical laws. The subjective observers that bind those qualia are like spotlights inside brains focusing attention onto the qualia that are already placed there by physical brain mechanisms. Once it is admitted that the content of consciousness is the product of second to second neural activity but the I (or inner eye) viewing it is a more permanent and irreducible entity, the possibility opens for consciousness to be truly efficacious. Only as a simple individual and foundational element and not a derivative of emergent complexity can mentality have a real executive role in decision making and a real value in evolution.

If the content of consciousness is generated at each instant by neural activity then where does the more enduring conscious awareness itself come from? That is not the focus of this paper, but I believe it was there all along and came from the single celled gametes from which we emerge. see <http://philpapers.org/rec/SLESA>

### **Mind as a non-reducible and fundamental element**

When we look out at the world we see birds and trees and clouds and buildings and most of these things appear to be both independent of each other and independent of the observer. I close my eyes and then reopen them, and the buildings and trees and clouds are just as they were unaware that I was even there observing them. When I close my eyes, although vision goes dark, I can still feel my body and hear sounds. The sense modalities are also independent of each other. My hearing doesn't care that my vision just went black. They all have just one thing in common; at this moment they just accidentally happen to be simultaneously under the gaze of my conscious awareness like separate items thrown in a basket.

Conscious awareness seems to have a loose and disconnected relationship to the content of consciousness, with neither dependent on the other. Brain scientists and neuro-philosophers have created an intractable problem for themselves by conflating two separate issues; how does the nervous

system create the content of consciousness which includes independent sense modalities and consciousness itself which collects these events together into a whole perceptual gestalt.

I contend that the creation of sense qualities is in principle not such a hard problem but does require new psychophysical laws to connect different forms of physical energy and vibration with the sensations they generate. The observers that are capable of knowing those sense qualities as part of a perceptual whole is a different problem altogether and not one that will ever be solved via any kind of psychophysical laws, bridging principle or emergent complexity. The reason is that subjective minds like electrons appear to be truly foundational elements like Leibnizian monads, part of the given simple array of empirical facts observed in the world from which its organization and complexity are comprised.

Our objective scientific worldview today only includes a shared physical universe which can be known via the qualia that it generates but does not include private subjective knowers or minds as fundamental elements within that reality. Nor is there any way to get to new fundamental entities from complex configurations of existing hypothesized fundamentals. So to be clear there are actually two kinds of fundamental entities which play no part in existing physical theory: qualia and minds which perceive qualia simultaneously as part of a whole. There is no reason why qualia cannot lend themselves to objective treatment, existing independently of minds, so we can say for example a particular sound is actually there when nobody is around and conversely more than one listener can simultaneously hear the numerically same sound. While sensations may ultimately prove to be epiphenomenal creations of energy patterns generated according to deterministic law, sentient knowers of those qualia have properties of privacy, wholeness, identity and causal efficacy that it seems can never be subjugated to or understood as secondary to the complex configuration of more primal physical objects.

The following thought exercise shows that there are really only two logical theories: eliminative materialism and interactive dualism and while eliminative materialism is consistent it fails to explain the most fundamental empirical fact..the existence of phenomenal qualities. While the same patch of red can in theory be viewed by from zero to n observers, observers can never observe each other for that would lead to infinite regress. If there was a deterministic law saying that M configuration of matter produces observer O which then has no effect on the world nor can itself be observed in what way can we say that O even exists? The observer O becomes an empty concept, a phantom which cannot be observed directly or indirectly through its behavior. Observers which cannot be directly observed nor inferred from any unique contribution to objective activity vanish into nothingness. But qualia seem to have no effect on anything until they are experienced by conscious beings. The qualitative redness of the stoplight just shines on an empty highway intersection and affects nothing until it becomes part of the subjective worlds of drivers that have arrived at the intersection. So if conscious entities are an empty concept which don't exist then qualia must also not exist. In following reductive physicalism to its ultimate conclusion and making subjective observers neither efficacious nor directly observable we have achieved eliminative materialism, a theory which fails to explain the basic perceived reality of sense qualities. As a compromise alternative, emergence via complexity, fails as logically incoherent because minds that are not fundamental cannot really be efficacious and so disappear into nothingness along with qualia. The only other alternative, one that can acknowledge that qualia and subjects actually exist, is interactive dualism.

The content of consciousness and the existence of consciousness are separate issues and should not be confused. The content of consciousness consists of sensations and sense relationships which exist in different modalities and include experiences, perceptions and thoughts. There appears to be a largely unconscious neurological processing of information prior to that information reaching a state where it

can be presented to the awareness of consciousness. How sensations are generated is problem number one and would assume the existence of new psychophysical bridging laws through which some kind of physical motion generates some kind of sensation. The brain didn't invent these psychophysical laws but put them to use. This is conceptually rather simple. The second problem, the harder problem of consciousness, is known as the binding problem. How do these sensations become known by a conscious observer? This is a less simple problem and I propose requires the acceptance of the existence of conscious observers as fundamental atomic entities rather than derivable creations generated from the complex organization of physical activity. Conscious observers are fundamental in that they are not the byproduct of complex organization but the elements from which organization is manufactured. Conscious entities simply exist and are part of the reality we live in as are the fundamental particles: leptons, quarks and photons.

The mind has qualities that go beyond the objective qualities of nerve signals in the brain. It has a continuity and permanence that the brain itself does not have. Hume famously looked for himself and saw only bundles of sensations. Sensations are fickle and fluid changing from second to second like the brain activity that generates them. I close my eyes and everything goes black and then open them and see again, but I haven't changed. I step outside and all my experiences transition suddenly and dramatically. But I haven't changed. In fact I have witnessed the transition between being inside my warm house and outside in the fresh air and some specious presence, duration or retention enables me to be directly aware of that transition happening. Something Hume could not see, a knowing observer witnesses the constant changes in sensations while remaining unchanged.

Subjective conscious observers have attributes that overflow a purely objective world view. Absolute privacy is one such added attribute. The objective world has no private boundaries. Objective physical space is a continuous public field accessible to all. But the subjective world is a discrete private universe with invisible walls surrounding it. At this moment I can see what's in my apartment where I rest on the couch and it is laid out as a field of vision that locates all my furniture and possessions and artwork in spatial relation, but I have zero direct awareness of the public space beyond the walls of my room to the lives living in the apartment next door or any other apartments in the city or beyond. The objective universe contains everything and it is all connected in a single whole but minds are compartmentalized in their own self contained bounded worlds of very limited cellular awareness.

Secondly that private awareness has exactly one specific privileged point of view, from one specific location right here and now. There is no here and now in the objective universe, no privileged perspective. So while sensations can be the purely physical end product of complex information processing which is largely unconscious and created by the brain, the viewer of those sensations have attributes that cannot be derived from completely objective brain processes. In principle we can figure out hard problem number one and have an expanded science that contains psychophysical laws for generating sensations or qualia. But solving hard problem number two requires recognition that conscious beings are fundamental entities that have absolute private boundaries and reside at specific locations with specific perspectives.

The brain is a network of millions of neurons sending signals to each other. The signals form circular feedback loops between different parts of the brain. All of this communication and signaling creates a semi enclosed system of interacting parts. But that system is never completely closed. It is still open to interactions from the rest of the body and the rest of the universe. There is no closed system in the physical universe, as all things interact and affect each other. Even black holes may leak radiation. The neural network is only a relatively closed system of reverberating interactions. The subjective mental

self is however a completely closed and private world. In my field of vision things move towards the boundary and suddenly disappear. There is a hard boundary to what I can experience. Either things make it into my little closed bubble of awareness or they do not. The flashlight of awareness shines on things that are unexpected and have nothing to do with the fact of my existence, things that just happen to make it inside the shining light while just off to the side of where it shines there is no awareness at all. Many neuroscientists think that if we can get a very large network of neurons communicating in tight feedback loops the relative oneness they exhibit via the dynamic self referencing “binding” of their interactions will generate the absolute privacy and wholeness of a mental being. But the pattern of organization in the brain is continuous with the entire physical world where energy flows without any real boundary while the internal world has real boundaries that are not objectively observable.

Unlike relatively whole networks of synchronized neural firings, mental beings are absolute discrete self contained atomic cells walled off within boundaries. Mental beings appear more like quarks as elemental and indivisible. They can in theory split into two or combine into one but they cannot be explained as mere conglomerations of more fundamental organized subunits. They are more likely seen as the atomic units, the elements from which organization is made. We are like little subjective self enclosed universes; little mental worlds but we have a definite relationship with the larger universe. We each have a location that at any one time gives us a unique perspective from which to view events in our local neighborhood. We are situated. Like other monads, mental beings each have a unique place in relationship to others.

Objective science aims to portray a world that is independent of any point of view, as Nagel said “a view from nowhere”. But there is no nowhere anywhere to be found, only “now-here”s. We cannot imagine anything except from some particular perspective. A map is only an imaginary view from high up. A molecular model is an imaginary view from the microscopic land of the tiny. Special relativity says that any measurement is from a particular frame of reference and there is no objective single correct frame of reference. It may be more correct to say that objectivity is not the impossible view from nowhere but “the view from everywhere” – that is a collection of consistent subjectivities. A complete understanding of reality must include subjective entities that look out from specific locations with unique perspectives.

Our unique locations are necessary indexical attributes that distinguishes us from each other. Even if brains can create selves, why would my brain continually create me and your brain continue to create you? What distinguishes me from you? One thing is our locations. I am here in my brain, in my body in New York. You are there in your brain in your body in Los Angeles. These are new facts that have to be added to the world of known objective facts. If we are identical with our brains rather than residing in a location within our brains there is no attribute that can distinguish us, but if we are separate entities with specific locations it is more correct to say we reside inside our brains. Rather than a creation of other physical things, we are actually elemental mental things that have spatial relationships with other things. Furthermore there is spatio-temporal continuity so I stay attached to my body and you to yours. Perhaps this is a mass delusion and we are switching bodies all the time while being deceived by false memory. That would seem quite contrary to our own most heartfelt intuitions.

Says the philosopher Thomas Nagel in *The View from Nowhere*:

*“One acute problem of subjectivity remains even after points of view and subjective experience are admitted to the real world—after the world is conceded to be full of people with minds, having thoughts, feelings, and perceptions that cannot be completely subdued by the physical conception of objectivity. The general admission still leaves us with an unsolved problem of particular subjectivity. The world so conceived, though extremely various in the types of things and perspectives it contains, is still centerless.*

*It contains us all, and none of us occupies a metaphysically privileged position. Yet each of us, reflecting on this centerless world, must admit that one very large fact seems to have been omitted from its description: the fact that a particular person in it is himself. What kind of fact is that? What kind of fact is it—if it is a fact—that I am Thomas Nagel? How can I be a particular person?"*

Indeed there may be many individual conscious beings at different locations but I am one of those at my location while you are another at your location. The objective world contains us all, but subjectivity contains a fact missing about the real world: I am at this location right here and now.

From the neuroscientist Bjorn Merker: *"This is what David Hume failed to realize when he searched his mind for a self and found only perceptions and bundles of perceptions. The self he was looking for is the place from which he was looking."*

As improbable as it is to ask of a law of physics to create unique cellular perspectives out of thin air based on configurations of matter and energy it is still not enough if we are to take Nagel seriously that there really is an additional indexical fact that "I am one of those perspectives". We cannot ask that a general universal law of nature would create a one single unique individual "me" as a single particular perspective at a particular location. How can a general law create a single unique instance of the form "I am Lorenzo", a real fact that doesn't apply universally? Clearly then I cannot be a derivative product of any physical structure and can only be understood as a primary entity, like a basic particle, in addition to whatever material physical structures exist. I must be a unique citizen of the universe at a particular location viewing out and acting outward from a particular unique perspective.

Conscious mental beings have an independence from the content of consciousness. The mental images that are observed are fickle. We turn on the light and we can see things in the room. We open the door and walk out into the fresh, cool sunshine as if entering a new world. Experiences are constantly changing but the experiencers that are us are fundamentally unchanged by it. There is something about us that is unmoving in spite of the flux of sensations we experience. Even after I have undergone anesthesia and was apparently unconscious and have no memory of the operation that happened when I awake it appears that I am still me...I am still the same enduring entity that slept obliviously while doctors probed inside my body. It seems that I am a continuing thing at a continuing location...not something newly generated at every instant by the flux of reverberant networks of neuron firing.

A posting from British author, scriptwriter, former medical doctor, pilot, engineer and computer designer Martin Woodhouse:

*"Never mind 'replacement times' and God's proposed intentionality. It's very implausible indeed that all the molecules which compose my brain right now — I am seventy-eight — are the same ones which went to make it up when I was eight.*

*I'd go so far as to say that it's highly unlikely that any of them are the same ones.*

*Yet I am quite sure that I am the same person now that I was then.*

*See? As so often, we don't need appeals to abstruse or contorted philosophical thought-experiments. We need only look at the facts of the matter. They indicate — though they do not in themselves amount to a proof, I agree — that dualism represents the case and materialism is a load of old cobblers proposed by*

*the philosophical equivalents of rather bright teenagers who want to look clever.”*

From the great brain researcher and a dualist Wilder Penfield:

*“For my own part, after years of striving to explain the mind on the basis of brain-action alone, I have come to the conclusion that it is simpler (and far easier to be logical) if one adopts the hypothesis that our being does consist of two fundamental elements... Because it seems to me certain that it will always be quite impossible to explain the mind on the basis of neuronal action within the brain, and because it seems to me that the mind develops and matures independently throughout an individual's life as though it were a continuing element, and because a computer (which the brain is) must be programmed and operated by an agency capable of independent understanding, I am forced to choose the proposition that our being is to be understood on the basis of two elements. This, to my mind, offers the greatest likelihood of leading us to the final understanding [for] which so many stalwart scientists strive.”*

We each exist as observers living inside a virtual world created within our own brains. The virtual world in the brain is a highly complex result of transitory information processing by the neural network computer, but it does not create the more stable and enduring observer. This view also agrees with the ideas of modern Buddhists such as the Eckhart Tolle, who see the real self as the silent and motionless observer of form, not to be confused with the endless and changing forms that are observed.

We can never hope to derive the inner from the outer. We can only accept that they are both primary elements of reality. You can't directly observe other observers. You can only infer the existence of other observers from their actions. By trying to fit subjective real primary atoms of existence as just a derivable subset of forms within the objective world we will always fail because the subjective observer is not a form, but the ability to know forms. If you assume the world to be made only of things that can be known without knowers, there is no way to put knowers back as fundamental parts of the universe.

The brain then is understood to be not the creator of the viewer in the brain but the creator of the virtual reality show being presented to the viewer in the brain. The viewer has a stable personality, memory and knowledge that, though ghostly, transcends the rather fickle content of the movie and so can't be reduced to it. That show, the movie in the brain, is not that different from the real reality out there in the world, just like real movies and photographs are practical because they are good copies of what they depict. But the movie in the advanced human brain is an augmented virtual reality, filled with predictions, expectations, possibilities, imagined other points of view, and memories to provide a rich world of understanding, adding depth beyond the present here and now.

### **Real Mental Causation**

Sensations are epiphenomenal; they occur at the end of a causal chain of physical events and register something that has already happened in the world. But when they are collected into the mind of an observer they may become causally efficacious resulting in the beginning of a new causal chain. For example, the traffic light turning from green to red is a sensation that registers a change in the world. In

itself it is completely neutral and epiphenomenal, just a piece of information saying something has happened. But if it enters into my conscious awareness it may have a special significance to me causing my foot to step down on the brake.

Many scientists today believe that consciousness is purely an epiphenomenon and some doubt that it even exists. They do so in order to preserve causal closure (closed mindedness?) or the theory that all laws of nature are already known and no new forces or causes are necessary. Since consciousness does not exist as part of any current physical law by definition either it doesn't exist or the laws are incomplete. Assuming consciousness does exist then it being epiphenomenal is the next closest thing in preserving causal closure because then it is only the end result, a dead end branch of activity in the physical world which causes nothing to happen. To preserve closure epiphenomenalists say unconscious activities create conscious states purely as a side effect with no real force of action. In this view we are robots. In other words stimulus A causes some brain activity B which causes a motor action C. If activity B also happens to cause sensations such as a pain P then this is a dead end and in itself causes nothing. But if P, the actual sensation of pain, has no causal significance then for what purpose did it evolve?

Some brain scientists think that P (pain) must have survival value and causal significance but they can't break free of believing in total physical closure. They try to take a middle position saying that qualia such as the sensation of pain have real physical effects while at the same time they try to preserve causal closure of the known physical laws. In trying to have their cake and eat it too they take an untenable stance that there is no need for new causal forces in nature but still think consciousness provides for something unique that would not be without it. For these halfway theorists the sentient self is entirely a creation of neural networks while still adding something new as if the brain has created a Frankenstein monster having breathed life into that which it no longer seems to have complete control over. That is not logically possible. For consciousness to be an independent cause of its own and therefore add survival value it can't also be completely at each instant created by and under the control of unconscious automatic forces.

For example the neuroscientist Llinas says in his book *I of the Vortex*: "*subjectivity or self is generated by the dialogue between the thalamus and the cortex; or to put it in other words, the binding events comprise the substrate of self.*" But he also says: "*Given the complexity of the decisions and the speed at which the nervous system must implement a given global strategy, the only solution that will make this work is one in which the animal is conscious of the particular emotional state. Why? Because consciousness has the great ability to focus—this is why consciousness is necessary. It is necessary because it underlies our ability to choose.*" There is inconsistency here that is typical of the halfway theorists. If the consciousness self has any real ability to choose and any real survival significance then it can't also be a complete slave of the more primary thalamocortical binding events. Can it be that it is the content of consciousness and not conscious decision making itself that actually ties to the binding events? For only as a true independent force of nature can consciousness really be contributing anything new. Llinas seems to also believe that consciousness and sense qualities are of great importance and make a difference. He even postulates that they must have existed in primitive form in single celled animals. By banishing the dreaded mental "ghost in the machine", that is mind as an independent force of nature not totally derived from other physical forces, how can consciousness really make a difference? What is so terrible about ghosts anyway? In physics today elementary particles have no extension and have disappeared into localities surrounded by ghostly force fields. At the most fundamental level matter has no static features and its existence is inferred as dynamic centers of activity. Bertrand Russell said: "the main point for the philosopher in the modern theory is the

disappearance of matter as a thing. It has been replaced by emanations from a locality – the sort of influences that characterize haunted rooms in ghost stories". Perhaps we conscious beings are like those ghostly particles whose intrinsic nature cannot be seen but whose existence can be deduced from its influences.

Real mental causation means minds must be real forces of nature and for that to be they must first exist as truly fundamental entities; real players at the table. If mind is totally derived from other fundamental entities, that is quarks, electrons, etc and their chemical, neural, electrical organization according to known electromagnetic principles, then mind is not really a force of nature and not really efficacious. The idea that complexity can cause the emergence of a fundamental entity is flawed. Emergence itself is only a pattern of organization of existing fundamental entities; nothing new and foundational is ever created; no electrons, no force of gravity, no minds can ever be created from complexity because they assume the very elemental pieces which are building the complexity. If at every second complex feedback loops in the brain re-create the subjective self in the brain, then the brain must also be responsible for whatever decisions are made by that observer and real mental causation is not possible.

The halfway scientists use complexity as a cover to say that minds and qualia are efficacious while at the same time are completely derived from the underlying real electromagnetic forces. This position is incoherent. While there is overwhelming evidence that the content of consciousness is created by neural activity, the more durable self through which that content is observed is not easily explained leaving open the possibility that minds are also players in the game. Real mental causation requires that minds be forces of nature and by extension their existence can never be a mere side effect of complex processing by the real causal players. A small minority of scientific theorists such as John Eccles and Karl Popper have speculated that there is a fundamental mentality and a true interactive dualism and that an expanded interpretation of quantum physics leaves room for realizing that possibility.

John Gregg explains on his philosophy of consciousness site in a section on free will:

*Regardless of the particular laws governing the low-level entities in any given universe, if all things in that universe are either those simple low-level entities or high-level things that are nothing more than aggregates of the low-level entities, such that all of the behaviors and properties of the high-level entities fall out as inevitable consequences of the behaviors and properties of the low-level entities, then free will (at least as something possessed by the high-level entities) is an incoherent concept.*

*The claim of free will ultimately depends upon there being some kind of holism at work in the universe. Specifically, for free will to exist in me, it is necessary that I am an intrinsic, inherent individual (i.e. that seeing me as one single thing is not just some way of looking at the pile of matter that is generally considered me); that whatever Nature's principles of individuation are, I count as one of Nature's individuals; that I am a partless whole.....If I act the way I do because of the inherent nature of the thing that I am, and what I am will never be repeated, one could say I obey my own custom-made law of nature, of which I am the only instantiation.*

In spite of the argument for physical closure the evidence from common sense is overwhelming that there is an interactive dualism. If I can't hear a car approaching or can't see the light turn red I can die. Can these things happen entirely in the absence of conscious sentience? Certainly it is possible. Maybe the unconscious mind has already started to step on the brakes when the light changed to red and before I became aware of it. But that does not mean the conscious mind isn't also a cause as there can be multiple causes contributing to motor action. Many things happen unconsciously. I can take the subway train and get to work mostly without any thinking about it but only if it follows an automatic

routine. If today I am taking a different path, perhaps on this day I have a dental appointment and I am not going to work, the thought needs to consciously occur to me that today is different or I simply take the automated route and end up at work. Without some conscious thought that today is a dentist appointment the unconscious brain follows the robotic protocol. Perhaps I had originally trained my unconscious brain to take the normal route to work or it just learned from observing me so that I didn't have to pay much attention to it afterwards.

Says Alexander Cairns-Smith: *"all of what we do on a time scale below a second or two is done unconsciously, we become conscious of these actions, if at all, only after the event. Does this spoil the idea that we are conscious agents in any sense at all? Not necessarily. Delegating so much of our driving skills to a faster automatic pilot, for example, is not a serious infringement of our liberty. We trained our automatic pilot and were in control then. We exerted our conscious minds in the past, as it were, to be applied in future contingencies"*

For almost all animals the experience of pleasure and pain is of great importance. Animals are able to act flexibly by learning to avoid things that cause pain and promote things that cause pleasure. Why would the brain go through the trouble of creating the sensations of pleasure and pain if these were not experienced by a separate active agent that could do something about it? The body seems to be telling the mind: "I am in pain..Now stop everything and do something about it". It is important that the conscious mind may have to make a decision to override the normal course of unconscious action. The mind may have to choose to ignore the pain which is normally reflexively responded to. For instance, the dentist is drilling and I know that this in the long run is good for me, so I endure it. Implied in this is the belief that the self that will experience the long term future benefit of enduring the pain now is the same continuously existing self that will benefit later.

In *The Road to Substance Dualism* by Geoffrey Madell he writes

*"Is it seriously claimed that a world in which the qualitative aspect of pain was totally absent, a world in which no one had ever felt pain, would have been just like this one, a world in which people over the centuries have devised hideously painful ways of putting men and women to death, such as burning at the stake and being hanged, drawn and quartered? What is the current debate on whether torture is ever admissible about, if it is not about whether it can ever be right to inflict such horribly unpleasant experiences on anyone? And in contrast with the case of pain, what can we be doing on Kim's view when we recommend a certain sensory experience – a scent, or a taste, say –as particularly pleasant? How can this be reconciled with the claim that sensations are mere epiphenomena, having no place in the causally determined order of the world? The attempt to hive off qualia as items which have no causal relevance is clearly quite misconceived."*

Another area where it seems a sentient observer actually experiencing colors and sounds and feelings must have causal relevance is in artistic creation. To think that our subjective world experienced in all its wholeness is not a force of nature is to take an absurd position. Is it possible that the audio sensations of Beethoven actively imagining his music as he rehearsed the sounds in his head played no role in the creation of that music and Picasso experiencing the full emerging sensory visual gestalt of his creation unfolding as he painted the colors on the canvas played no role in his artistic creations? There is

a distinct wholeness and a unique organization to the colors and sounds of each artistic expression as experienced by the artist that goes into the creation of the work of art. The way the colors on the canvas and the notes in a song come together has an integrity that is unique and particular to the artistic creation. In "Three Tricks of Consciousness: Qualia, Chunking and Selection" David Hodgson says: *"I cannot believe that a unique work like .. Les Demoiselles is created without the artist experiencing it in its uniqueness and particularity, and assenting to and adopting it on the basis of that experience..."*. Can we really believe that the Rolling Stones created their songs without ever needing to fully experience hearing and feeling them? Were those songs created by their robotic brains unconsciously without any requirement for real auditory feedback and revision? If this seems quite absurd as it would to most people then we must accept that the mind as it experiences the wholeness of qualitative patterns is an independent force in nature and known electrochemical processes in the brain are inadequate to account for its artistic and creative decisions.

A simple thought experiment is presented by the physicist Avshalom C. Elitzur: *"Here is a thought experiment for you: How about turning all your qualia off, thereby putting you to permanent sleepwalking? All your percepts will remain the same, hence all your actions will be the same too. No one, therefore, would ever notice any difference in your behavior. But your qualia would be gone, forever. For doing this experiment on you, you will be paid \$1,000,000. Would you agree?...In physics, a gedankenexperiment (thought-experiment) is an indispensable tool, enabling one to anticipate technology by many years. Just bear in mind that physics allows the existence of humans with no qualia at all; and moreover that such humans are more compatible with physics than we conscious humans. So, again, would you agree, for that nice sum, to go into lifelong sleepwalking which will leave your observed behavior intact but turn off your qualia of red and blue, sorrow and joy, forever? Well, others won't see any difference, but for me it would be nothing short of death."* Elitzur argues that the subjective observer is in fact making an objective difference by refusing the money.

We need not even go to such lengths as Elitzur. The mere fact that we are spending so much time here discussing consciousness must mean that consciousness has some ability to speak for itself. Now turning off the speech mechanism in one part of the brain can render a person mute, but that does not mean that consciousness is under total control of physical processes as a damaged car would also render the driver incapable of driving and has no bearing on the capacity of the driver.

Why does the brain go through the trouble of generating these internal images called thoughts if not that some conscious entity can do something about it? Why do humans spend so much time with all this internal chatter and image making called thinking? It seems that the brain generates images of future possible situations for the benefit of a conscious being that can then make informed choices amongst potential possibilities.

Patricia Churchland says: *Part of the major business of nervous systems, from crayfish to humans, is to make good predictions about food, mates, enemies, and friends, so that the body can live on to reproduce. Poor predictors often end up as meals for better predictors. Imposing structure on our sensory stimuli in the service of better prediction is what representation is all about. Using internal representations allows for much more sophisticated behavior than mere stimulus-response reflexes. Using internal representations is a common strategy that nervous systems have developed as part of evolution's way of favoring adaptive structures. The philosopher Rick Grush has developed a useful tool*

*for getting a handle on this. Suppose I am running a huge construction crane, which is a very high-tech crane that I can operate from the comfort of my office a mile away. It would be a good idea for the engineer to design it so that I have access to a small-scale model that shows where the hook will be if I give the order for a certain movement. That way I can correct my movement without waiting for feedback. The emulator in my office generates internal feedback that helps me predict. Even better, the designer could allow me to fiddle with the model so that I can test possible movements before I choose the best, thereby maximizing the accuracy of the movement when I do finally make the actual hook move. Very crudely, this is what Grush thinks brains do. They build "emulators" of the world and of their bodies in that world.*

There is no doubt that this model making is a very important part of what the brain does. But then for whose benefit are these representations made? Who is manipulating the models and making decisions based on them if not an independent entity with its own values and desires and creative judgment? Perhaps there is a great deal of unconscious information processing going on in the brain but this is not what we usually call thinking. Thinking happens when the unconscious information processing generates words and images for the benefit of a conscious observer that can then use that information to make informed decisions. Scientists committed to the causal closure of the existing paradigm may say one unconscious module in the brain creates the internal model for the benefit of another unconscious module in the brain which can manipulate it. They would say if the internal model is actually sensed consciously it is an epiphenomenal side effect. But our subjective evidence is that creative processes involve focused effort in an internal struggle to achieve an unknown goal. We feel that there is a physical involvement, care, and investment in building our internal models; an active effort of manipulation, feedback and deliberation. Then once constructed, as philosophers are well aware, we fight for our imagined model creations and defend them as if they were our children.

While philosophers talk of hypothetical zombies walking around that are essentially unconscious robots behaving just like me or you, this is contrary to all subjective evidence. While the brain is a great tool that can be trained we should not overestimate its robotic capabilities. Consciousness has dominion over voluntary movement and decision making. While movement can be largely unconscious you don't see zombies or people in sleep or unconscious states walking around. Dynamic communication and interaction is conscious. While movement can be automated and taken over by unconscious robotic functionality we need to be conscious to make unexpected adjustments when we are walking around in the real world. In the light of day it is way too important to make the intelligent second to second judgments of simple immediate interactions to be left to the robot and that is why we do not see an army of zombies out there on the street. Our unconscious robot brains are merely automations that we have programmed through past conscious effort and are constantly reprogramming. The hypothetical zombies are not out there walking around. Consciousness is too important to allow us to be out and about in the dangerous real world without it. In the real world those unconscious zombies are in bed in a vegetative state and they are not talking or interacting at all.

But why do we need an independent consciousness if not that it actually adds something of survival value to an animal? What real benefit can it have that the brain can't do without it? The answer is the same reason a company or a country needs a single chief executive that can see the big picture and set high level policy. An organization is a complex association of potentially millions of individuals but those individuals have specialties and divergent opinions and priorities. The chief executive provides a unified face to the outside world and resolves conflicts by having the highest level comprehensive view and selecting from various alternatives and then imposing its own priorities. Think of a country where

slightly more than half the people want to declare war. A decision has to be made. Either we go to war or we don't. Something has to bring an order, a coordinated, unified and consistent response in dealing with the world and the chief executive serves that purpose. Says Cairns-Smith:

*...A similar analogy is sometimes made between our conscious minds and the manager of a company. Perhaps the manager usually only comes in once a week, if it is not raining, reads over a once-sentence page summary report, says 'very good, carry on' and then goes home. ...High level control should not require continuing interference. It is more about adjusting, and making more radical changes occasionally when necessary."*

Then maybe we should not think of the mind as a ghost in the machine but rather like the chief executive of an organization which is a collection of many living individuals cooperating towards a common purpose. The chief executive is powerless without an effective organization but the organization lacks leadership without its director.