





CONSCIOUSNESS AS ART

Our subjective experience of the world may be like
a visit to a gallery where the artist is our brain

By Nicholas Humphrey

ILLUSTRATIONS BY JON HAN

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Consciousness matters to us. Many would say it matters more than anything. We relish the beauty of a winter sunset, the memory-fueled comforts of a homecoming, the inviting caress of a lover's hand. Conscious sensations lie at the core of our being. Without access to this marvel, we'd be poorer creatures living in a duller world.

Yet the fundamental nature of consciousness remains a scientific mystery. The problem is not that we do not understand consciousness at all: some aspects of it are relatively easy to explain. The problem is that one aspect of it continues to baffle everyone, and that's the "feel" or "phenomenal character" of consciousness—or, as philosopher Thomas Nagel has put it, simply "what it is like." Biologist H. Allen Orr probably speaks for most scientists when, in a recent review of Nagel's book *Mind and Cosmos*, he writes: "I... share Nagel's sense of mystery here. Brains and neurons obviously have everything to do with consciousness, but how such mere objects can give rise to the eerily different phenomenon of subjective experience seems utterly incomprehensible."

Theorists tend to fall into one of two camps. Some assert that the manifestly eerie and ineffable qualities of subjective experience can only mean that these nonphysical qualities are inherent in the fabric of the universe. Others, including me, are more suspicious. They argue that consciousness may be more like a conjuring show, whereby the physical brain is tricking

FAST FACTS

THE GRAND ILLUSION

- 1 Debate rages as to whether the qualities of conscious experience can be explained simply as the workings of the physical brain or whether there must be an additional ingredient of a nonphysical kind.
- 2 Considering consciousness to be an illusion—a mere trick of the physical brain—offends people, so perhaps we should think of consciousness as art instead. Whereas people resent being duped by illusions, they are proud to be art lovers.
- 3 If our brains have evolved to create masterpieces of consciousness for our private enjoyment, scientists will want to know what the evolutionary payoff is. Perhaps the purpose of this brain art is to make people fall in love with themselves—and other people, too.

people into believing in qualities that don't really exist.

But no one wants to be told the latter story! So I am going to try telling the story in a different way. While I believe consciousness may indeed be a stage trick by the brain, I want to suggest that it is also a stroke of artistic genius. Consciousness as art is surely a more palatable notion than consciousness as illusion. I am not just looking to make friends for a theory that may be hard to swallow; I also want to influence the further questions scientists ask.

The Experience of Pain

Suppose you prick your thumb. Your brain responds to signals from the thumb with an internalized hurt response, the neural correlate of pain. From an objective point of view, this response is nothing more than the activity of nerve cells. From your subjective point of view, however, this experience seems to be nothing less than—well—conscious pain.

Yet how can this transformation possibly occur? How can there be physical matter on one side of the equation and non-physical consciousness on the other? Philosophers talk about the existence of an "explanatory gap" here. As Colin McGinn has put it, "You might as well assert that numbers emerge from biscuits or ethics from rhubarb."

I am a scientist. But when the philosophical skeptics put it like that, I agree they may be right. You really can't get numbers from biscuits, and you really can't get pain from nerve cells, at any rate not if the pain is conceived of as some kind of alchemical substance exuded by the brain.

But what if this is simply the wrong way to conceive of pain? What if pain is nothing other than your "inner picture" of the neural activity? And what if this picture is actually pure make-believe—part of your brain's internal conjuring show?

These are some big what-ifs, and we should tread carefully. I may be convinced that some such explanation must be true, but other theorists treat the idea with incredulity and even scorn. British philosopher Mary Midgley has entitled her latest book *Are You an Illusion?* Her answer is to pinch herself, feel the reality of the sensation and say, in effect, "Don't be daft."

Midgley balks at the suggestion she is an illusion because she takes it to imply she is some kind of mistake. But let's try telling the story in another way. How about suggesting that when you see red or taste a lemon, your brain is creating something like a cubist painting—not necessarily a misrepresentation but an artistic *re*-presentation of the facts? Would Midgley feel better if she could be persuaded that she is actually a remarkable work of art?

Consciousness, Defined

Let's step back so we can place this new idea in the context of consciousness in general. The "eerily different phenomenon" to which Orr drew attention may still prove to be the sticking point. But we should not assume at the start that everything about consciousness is impossibly difficult. Indeed, the first steps toward a scientific understanding are straightforward and have already been taken.

The subjective quality of consciousness seems to defy explanation. Why does the sound of a trumpet or the pain of a bee sting feel to you the way it does?



We should begin with a definition. Although opinions differ, I think it is helpful to start by describing consciousness simply as introspective access to mental states. That is to say, you, the subject of consciousness, are conscious of mental states—perceptions, memories, wishes, and so on—just in so far as you know about them by looking in on your own mind.

Note that we encounter only one you here. When you feel pain, or you want breakfast, or you remember your mother's face, it's the same you in each case. This unity is not a logical necessity. It is theoretically possible your brain could have housed several independent versions of you, each representing a different module of the mind. Indeed, you may actually have started out this way at birth. As your life got going and your body began interacting with the world, however, the separate subjects soon became orchestrated as one. Your perceiving self, your remembering self, your acting self became merged into the one big you.

The unity of the self underlies the most obvious function of consciousness: namely to provide a mind-wide forum for planning and decision making. Your brain has brought information from different modules to the same table, as it were, to allow fertile cross talk. This integration opens the way for a central processing unit to recognize patterns, marry past and future, assign priorities, and so on. Computer programmers might call this central processor an "expert system," rather like an intelligent autopilot. You call the onboard pilot "I."

With all this activity happening on a single stage, consciousness has become something like a theater, where the engine of the mind is on show. You find you can reflect on what's going on. And this capacity for self-reflection supports a second important function of consciousness: to allow you to appreciate how your mind works. Observing, for example, how beliefs and desires generate wishes that lead to actions, you find your mind revealed as having a clear psychological structure. You

begin to gain insight into why you think and act the way you do: you can explain yourself to yourself and explain yourself to other people, too. What's more, you have a model for explaining other people to yourself. Consciousness has laid the ground for what psychologists call "theory of mind."

So far so good. We have a definition, two important functions for consciousness and a suggestive metaphor, the theater of consciousness. We have not yet had to raise the question of illusion, and—for that reason perhaps—nothing about this account of consciousness seems completely incomprehensible. In fact, as readers of *Scientific American Mind* will know, neuroscientists are already making considerable headway in discovering how the brain could realize some of these features. Stanislas Dehaene of the Collège de France in Paris has been mapping what he calls "the global neuronal workspace." Giulio Tononi of the University of Wisconsin–Madison has proposed a statistical model of "integrated information." Christof Koch of the Allen Institute for Brain Science in Seattle (who is a *Mind* columnist and serves on the magazine's board of advisers) has identified a brain structure, the claustrum, as a likely candidate for the master of ceremonies.

The Eerie Quality

Hold on, however. The picture that is emerging may not be incomprehensible but neither is it eerie. Where's the peculiar

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The eeriness of consciousness changes your sense of who and what you are. It feeds your self-worth, your joy in life, your fear of death. Perhaps the evolutionary function of “consciousness as art” is to make you fall in love with the artist—yourself.

is bizarre that brain matter should exude these phenomenal feelings. Consciousness is so vivid, and its properties appear so otherworldly, that it seems to call for God.” He may have been half-joking. But who’s laughing? Short of invoking some supernatural agency, where are we to go?

Most theorists now accept that only two options can be taken seriously, along the dividing line I sketched earlier. We can be realists about qualia, or else we have to be illusionists. Unfortunately, both options come at a considerable price.

Realists take qualia at face value. In their view, if your sensations appear to

what-it-is-like-ness that Nagel pointed to? Where’s the phenomenal quality philosophers beef about?

We should note that the quality in question does not pervade every aspect of consciousness. In fact (although not everyone agrees), I’d say this quality is not a feature of higher levels of cognition. There is no “what it is like” for you to have the thought that two plus two is four. Rather this quality seems to kick in only at a more animal level, in the way you represent what’s happening at your bodily sense organs. Of the variety of mental states of which you’re conscious, it is your sensations—and only your sensations—that have this peculiar dimension to them.

The special qualities of sensations are what philosophers call “qualia.” Although scientists don’t often use that term, there’s no denying that qualia present natural science with a spectacular challenge. Koch wrote to me not long ago that “it

have qualities that lie beyond the scope of physics, then they really do have such qualities. And these realists explain their reasoning by suggesting that the brain activity underlying sensations already has consciousness latent in it as an additional property of matter—a property as yet unrecognized by physics but one that you, the conscious subject, are somehow able to tap into. The price for this explanation is that it implies that the standard physical description of the world is radically incomplete.

Illusionists take the contrary line. If your sensations appear to have these qualities, then your physical brain is playing tricks on you. Your brain can pull off such magical effects because it houses a computational engine that deals in symbols, and physically based symbols can perfectly well represent states of affairs that do not and could not exist. The price for

this explanation is that it devalues not only the mystery but the majesty of the core experience.

Art Rather Than Illusion

I belong, as I said, to the illusionist camp, and I've provided extensive psychological and evolutionary arguments for my position over the years. But even if illusionism is scientifically correct, I well understand why it is not the story many people want to hear. So now let me try sweetening the pill. Why might it be more persuasive if we were to talk about qualia as art rather than illusion? I am not proposing an alternative theory to illusionism, but my hope is that shifting the emphasis in a positive direction may in fact make the illusionist theory more scientifically acute and at the same time more humanly agreeable.

First, we generally consider illusions to be sources of error, but we think of works of art as sources of enlightenment. In Pablo Picasso's words, "Art is a lie that makes us realize truth." Or in Paul Klee's, "Art does not reproduce the visible; rather it makes visible." Or in Friedrich Nietzsche's, "Art is not merely imitation of the reality of nature but rather a metaphysical supplement to the reality of nature." Ellen Dissenayake, a writer on art and evolution, has characterized art in general as the activity of "making special." By likening sensations to works of art, therefore, we can emphasize how ordinary information from the sense organs is transformed and embellished on the way to consciousness.

Next, we tend to think of illusions as fortuitous or accidental, but we think of works of art as necessarily involving an artist. So now we can draw attention to the active agency behind conscious sensations. The immediate agent—if not the ultimate designer—is your own brain, when it responds to sensory information by creating the neural correlates of qualia. Neuroscientists do not yet know what these neural correlates amount to (although I have made some detailed suggestions in my book *Soul Dust*). But wouldn't it be revealing if your brain employed some of the same aesthetic principles that artists use?

Furthermore, as Marcel Duchamp said, "The artist performs only one part of the creative process. The onlooker completes it, and it is the onlooker who has the last word." Art necessarily implicates an audience. So now we can also draw attention to your self as the reactive and appreciative observer of the brain art. Moreover, drawing on what we know about art appreciation, we can go on to ask how you evaluate qualia, cognitively and emotionally. Are there individual differences in susceptibility to the illusory message? Do people learn to read qualia, as they learn to appreciate art? What does it take to become a qualia connoisseur?

Last and most important, we seldom regard illusions as having any human value, but we expect works of art to be intellectually and spiritually nourishing, good for our souls. We don't care to be dupes of an illusion, but we are proud to be art lovers. Thus, this way of thinking about sensations allows us to look out for—and celebrate—the psychological growth that human beings derive from participating in the self-made show.

The Beauty of Consciousness

The chief scientific bonus of conceptualizing consciousness as art may prove to be precisely this: that it raises new questions for an evolutionist about the value and purpose of consciousness. If sensations are art, the artist behind them is actually not the individual brain as such. Rather the artist—the ultimate designer—must be the evolutionary forces of natural selection, which have contrived to put in place the genetic code for building the qualia-generating brain. Yet natural selection promotes only variants that contribute to biological survival. What then can be the biological advantage of a brain that delivers such awe-inspiring but seemingly superfluous flummery?

The analogy with art continues to help. Charles Darwin struggled to explain several of the more exotic features of animal courtship until he hit on the idea that such displays are designed not to serve any obvious utilitarian purpose but rather to show off—and to seduce. The peacock's gaudy tail does not enable him to fly any higher, but it raises his status in the eyes of the peahen. Darwin suggested that one of the chief functions of human art, too, is to induce the onlooker to fall in love with the artist.

Thus, an extraordinary possibility suggests itself: the evolutionary function of brain art is nothing less than to induce you to fall in love with yourself. The qualia of visual sensation, for example, are not necessary to your perception of the outside world, but—along with all your other sensations—they enlarge your sense of who you are. Qualia feed your self-worth, your joy in life, your fear of death. Nor is this idle speculation. In my book *Seeing Red*, I describe a remarkable case of a woman with a form of "blindsight"—vision without conscious qualia—whose sense of self seemed to be so damaged that she became suicidal.

French philosopher René Descartes famously intoned: "I think, therefore I am." But the self that evolves around sensory consciousness is deeper and more generous: I feel, therefore I am. Therefore you feel, and you are, too. Consciousness, by placing you at the center of this brilliant and perplexing work of art, encourages you to think of all humans as equally touched by magic. Thus, you end up, though by a different route, just where Midgley, Nagel and others want you to be: as centers of spiritual excellence, spreading the joy. **M**

FURTHER READING

- **Consciousness: The Achilles Heel of Darwinism? Thank God, Not Quite.** Nicholas Humphrey in *Intelligent Thought: Science versus the Intelligent Design Movement*. Edited by John Brockman. Vintage, 2006.
- **Soul Dust: The Magic of Consciousness.** Nicholas Humphrey. Princeton University Press, 2011.
- **Consciousness and the Brain.** Stanislas Dehaene. Viking, 2014.
- Royal Institution video on *The Magic of Consciousness*: www.youtube.com/watch?v=NHXCi6yZ-eA

From Our Archives

- **What Is It Like to Be a Bee?** Christof Koch; *Consciousness Redux*, December 2008/January 2009.