

## Research Essay

# Consciousness, Science & Values

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### ABSTRACT

Various features and expressions of consciousness are shown to be beyond scientific explanation, and yet essential to the appreciation of human values. Thus, the values realized by consciousness, including life, love, liberty, ethics, morality, art, friends, community, fun and laughter, are not going to be found on a chalkboard or under a microscope.

**Key Words:** Consciousness, science, value, nature, explanation, love, emotion, morality.

Considerations about the nature of consciousness are not just academic exercises. Our beliefs about what we are, even if more-or-less implicit, can have a profound influence on our values, self-regard, personal relations, and political perspectives.

Science is not very helpful in considering consciousness and values, although it has become, for many people, the final authority on every question, the arbiter even of which questions are worth asking. And the appeal to science for beliefs and perspective has been for many of us a liberating alternative to the domination of religious and superstitious dogmas and institutions. But a disciplined science is restricted to the analysis of things that can be observed, and scientific observations involve the reduction of mental activity to biology, and the reduction of biology to physics. The problem is, if the objects of science are (para-scientifically) assumed to comprehend all of reality, rather than just the limits of observation, then consciousness becomes a non-essential bi-product of brain function, and there remains no compelling basis for values like freedom, rights, culture, love, and life. Physical things can be justifiably destroyed and recycled, biological things can be killed and consumed. Nowhere within the domain of science can “things” like ourselves be distinguished based on intrinsic worth.

So while science doesn't necessarily eliminate our values, it renders them rationally groundless, and consequently, more or less heedless.

To look beyond science for the nature of consciousness and justification of values doesn't require a religious or mystical turn. A naturalistic perspective can appreciate science without regarding it as an all-encompassing metaphysics. Our own self-awareness, and reflections on the deliberate things we are able to do in the world, can be considered evidence of something beyond strict scientific understanding, just by a tentative acceptance that legitimate evidence need not be directly or exclusively physical. We can't objectively observe consciousness like we can the workings of a machine, but we have our personal experience to acknowledge, we can observe the physical manifestations of our conscious intentions, and we feel an affinity with values that can be as solid and certain as any sight or sound.

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Consider the evidence of these remarkable features of consciousness:

Consciousness can be **PURPOSEFUL**. We are capable of envisioning an innovation or change of circumstance, planning various means to achieve it, then performing a number of actions to make it happen. Each of the actions has a purpose beyond its immediate effect -- the achievement of a goal, the innovation or change of circumstance envisioned. But there is nothing in the fields of biology or physics that is recognized as having purpose. Even the most complex chain of chemical reactions in the metabolism of a cell is believed to be the result of random mutations that recur and persist only because they enhance the survivability of the organism. Each reaction is considered to be a singular cause-and-effect event, with no wider significance except in the interpretations of science.

Purposeful behavior is thus radically different from physical and biological mechanisms, as science understands them. A science-based metaphysics can speculate that purpose has evolved in humans (and other animals) simply because there's an evolutionary advantage in the ability to combine a number of behaviors to achieve a result, but that only trivializes its significance. Evolution can only exploit natural possibilities. To be able to make oneself disappear with the snap of one's fingers when confronted by a predator would be an evolutionary advantage, but it is evidently not possible. In contrast, what unites a group of purposeful behaviors is the imagined goal, and unlike a physical effect, a goal *precedes* its causes, even if only in concept; and a goal, the unifying effect that directs a series of behaviors, evidently *is* possible. And an effect that precedes and unifies its causes is (remarkably) beyond scientific explanation.

The functionality of computers provides a revealing contrast to actual consciousness, and I'll elaborate on the contrast with several comparisons in what follows. Regarding purpose, computers are thought by some to have it at least in potential; its eventual realization is believed to be a problem only of developing better technology and increasing complexity. But a computer is designed to execute planned instructions, each one entirely distinct from the others. What gives a computer the semblance of purpose is the person who has programmed it by composing a series of directives to achieve some specific goal or goals. The purpose exists before the computer is even switched on. And there's no reason to think that the output of an inorganic, discrete series of instructions has meaning and purpose except extrinsically, for a conscious reader of words on a screen or printout.

Consciousness can be **RESPONSIVE**. Everything that occurs with the objects of physics and biology involves an immediate *reaction*, but as conscious beings we are able to *respond* to complex situations in the present, in view of implicit values, even of considerations of consequences that don't yet exist. When we're not being "absent minded", or performing habitual tasks, we can deal with ambiguous, unexpected, even unprecedented events in the moments they occur, situated in an ever-weaving fabric of place and time. A policeman can respond to life-and-death situations for which there can only be general guidelines. A flood victim without food can ponder whether it is right to procure, or wrong to steal, from an abandoned store. Rules of behavior (as with "instincts") can't apply and regulate reactions to all situations, but we nonetheless have the evident and distinct ability to respond to our surroundings as a coherent *environment*, uniquely, resourcefully, and with a presence in the moment.

In contrast to responsive consciousness, computer “intelligence” can only react to situations that have been anticipated and projected into the present by the imaginative responsiveness of the programmer. At best, a computer programmed for “artificial intelligence” can expand its repertoire by “learning” new interrelationships that can be identified and reacted to *next time*.

Consciousness is *here* and *now*; an object of science simply *is*. And a world where responsiveness is possible is fundamentally different from a world of reaction. A para-scientific world-view can only attempt to explain the emergence of responsiveness with an utterly unscientific magical “presto!” whereby a virtual infinity of mutations is claimed to have led to a whole new kind of reality, where the present awareness of a responsive consciousness supplants mechanical reaction as if by some miraculous leap.

Consciousness can be TRANSCENDENT. I don’t mean “transcendent” in a metaphysical sense. To transcend is to encompass, to unify, by getting “outside” the elements of a situation. When a computer is mistakenly instructed to complete an impossible task it goes into an “endless loop”, and would continue forever unless it is somehow interrupted. But consciousness is able to transcend a situation, to comprehend it from beyond the particulars, and immediately say, in effect, “this can never work – it is pointless to even try.”

The evidence for conscious transcendence is abundant. When we derive meaning from a collection of words that goes beyond their individual and literal definition we *transcend* the elements of language to form a thought. Poetry is a celebration of transcendence; it is the essence of poetry to evoke an image or concept that can’t be expressed in the literal combination of words, and poetry would be meaningless in a world defined by discrete linguistic elements and their serial combination. Even in everyday conversations, our comprehension can transcend the meanings of words. To hear, for the first time, someone say “that’s *bad*” and realize they actually mean “that’s very *good*”, is to transcend definition -- and to delight in (or abhor) the novel reformulation of the words. Language can of course be influential in our manner of thinking, but for transcendent consciousness, language is only the material basis, the stepping-stones of thought.

Much humor, maybe *all* humor consists in the enjoyment of suddenly transcending a situation or juxtaposition. When at the end of each of the old Burns and Allen comedy routines George told Gracie “say goodnight, Gracie” and she complied daftly, saying “goodnight Gracie”, the audience laughed at her chronic inability to transcend the literal. When we first heard the question “why did the chicken cross the road?” we searched for some transcendent explanation of motive; then when we laughed at the unexpected answer, it was with the sudden appreciation of our initial and unnecessary transcendence of the immediate and obvious. When the difference between a reaction and a response sneaks upon us in a joke framed like a trick, it can be a lucid and *funny* encounter with our own transcendence.

The transcendence of consciousness is scientifically inexplicable, except by a dismissive tautology. (“Every characteristic of behavior is simply a physical evolution or bi-product, therefore every characteristic of behavior is simply a physical evolution or bi-product”.) In the para-scientific view, thoughts must be reducible to, and determined by their elements -- in

language, conceived as a product of evolution. The irony here is that transcendence is required to deny transcendence; there is nothing *in* language itself to indicate that it may be a conceptual enclosure.

Just as the science of linguistics has been dominated by the belief that our thoughts are “determined”, as if imprisoned by our language, anthropology was for a time dominated by a belief that we are “determined” by our native culture -- until it was realized by some that the anthropologist has to transcend her own culture in order to conclude that cultures cannot be transcended. Anyone who is truly confined by their cultural beliefs would be unable to conceive that their beliefs are only cultural.

It’s been said that “infinity” is a concept beyond comprehension, and yet we have a word for it, and we can share it with others who understand what we mean. Obviously it *can* be comprehended, but (appropriately) only as a transcendent, not specifiable, non-finite concept.

In contrast to conscious transcendence, the main difficulty in learning to interact with a computer “intelligence” is having to adapt to the need to give it specific, literal instructions. A computer, an exemplary object of scientific manufacture, is frustrating, and sometimes funny as Gracie Allen, for its inability to transcend the elements of communication. No addition of bytes, or registers, or layers of process can be expected to improve the interaction, except by invoking *the virtual magic* of a *virtual infinity* of technical complications whereby (*presto!*) literal water turns to transcendent wine.

Consciousness can be NEGATIVE. By “negative” I don’t mean the common association with being quarrelsome or pessimistic, although they do involve negativity. To be negative is to *negate* what *is* -- to say “no”, or “not”, to refuse, to decide that something shouldn’t exist, to imagine that something which doesn’t exist *should*. And there is no likeness of negativity in the objects of science.

A chemical interaction is understood to be the product of what-*is*. Molecule **A** reacts with molecule **B** in a definite way, unless something external and accidental interferes. Genetic mutations, as understood in biology, are chance modifications; they don’t occur because an existing gene is not good enough, or because some alteration might be better. Whether a mutation is an improvement to an organism is irrelevant to its occurrence. But our abilities to *critique*, to *imagine*, to *wish for* what *is-not* express conscious, deliberate negations that elude the scientific world of cause-and-effect, just as they elude the world of supposed randomness and pointless unpredictability proposed by quantum theory.

It may be easy to say an insight like Einstein’s theory of relativity -- a radical negation of established beliefs -- was caused by the performance of his most excellent network of neurons, and at a higher level, by various psychological, sociological, and historical factors. But a negative insight can only be reduced to a series of positive reactions by a determined refusal to negate implausibility. A theory *is* what it *is*, its inconsistencies *are* what they *are*, and for someone to say that a theory is not complete or not perfect or even *wrong* is to go beyond what it is, beyond the convention, to refuse what is given, to *negate* and conceive something else in its place -- which is to do something that’s not just un-caused, but un-*causable*.

Art is, in general, both the creation and experience of negation. Art is, remarkably, *not* what it *is*. To appreciate art is to negate its material. A painting is not (typically) just a cluster of colors, and not just the product of an excellent technique. An artistic object has to be negated as-such to be experienced as art, to be grasped as a whole, as an intangible reference to something else, in order for it to evoke a thought or feeling that is transcendent of the immediate experience, the causation of color on the visual cortex, and the recognition of expertise.

A computer can only deal with what *is*. An instruction may mean something negative to a programmer, but for the computer it is always a positive command or comparison, typically in the form of a composite of a number of “plus” and “minus” electrical charges. Even when a computer reports that something is not true, the report actually consists of a statement that something specific, somewhere specific, returns a specifically empty datum -- “it *is* that it is an empty *is*.”

Consciousness is CREATIVE. It might seem that only someone disconnected or divested from their own dreaming could fail to appreciate the amazing creativity expressed in dreams. Fantastic images that could never have actually been seen through the eyes can be produced when consciousness is most spontaneous during sleep, just as ideas that have never before been conceived can be produced when consciousness is most awake and deliberate.

Whereas negativity is a reaction to something that *is*, *might be*, or *might have been*, creativity produces realizations out of nothing. Scientists argue that elements of prior experiences give the necessary content to creative ideas, but an inspiration is no more tangible than a dream, and the inspiration itself, a feature of consciousness, can't be explained by its incidental, particular contents — except of course by the same sort of method already discussed that tries to explain the scientifically inexplicable by explaining it away.

Computer scientists might try to mimic poetry or music by programming random combinations of likely elements, but how could a computer produce the *idea* of poetry or music? How could such a programmed instruction be given, as-in “be creative”? And how could a world of cause-and-effect evolve to produce the creative impulse, an *affect* that is unrelated to cause and independent of effect?

Consciousness can be WILLFUL. The age-old controversy of whether we are free or causally determined is an argument between extremes of interpretation. We are, evidently, neither entirely free nor completely determined by chains of cause-and-effect. To be willful is to be self-determined within limits, whether the limits are imposed from the environment without or the personality within.

We sometimes experience our willfulness by its absence, its nullification, in the frustration we feel when we're restricted by external forces. To be truly constrained by cause-and-effect, as when locked in a room or tied to a table, can be a terrible feeling -- a *repression* that shocks us into an immediate recognition of willfulness by the experience of its suppression and duress.

We can experience our willfulness in both the enjoyment and the dread of our ability to make

choices. We can embrace beliefs, and customs, and dictates, because they enable us to avoid our willfulness and its attendant dilemmas -- and their sometimes fearsome implications. But we have to choose not to choose, as when we invoke some given commandment to determine our behavior, rather than act according to our own inclination.

To stand at the edge of a cliff is to confront the terror of one's potential for spontaneous and arbitrary willfulness: In the next moment I can choose to defy my wish to remain alive, to take the smallest step, to lean the slightest bit, and plunge to a painful death, just by invoking a simple act of will that I know, without doubt, to be within my power -- as surely as I know the ledge is beneath my feet.

Consciousness can be RATIONAL. To be rational can be defined in this context as the sum of our abilities to be purposeful, to transcend and negate the elements of experience, and to choose deliberate, self-determined courses of action. It allows us to act resourcefully in the world, to have the world react in a way that confirms both our rationality and the world's affinity with reason, as when a bridge stands strong according to its mathematical-rational design.

Reason is a resource beyond the capability of a computer. No matter how intelligent a computer's actions may appear, its simulation of reasoning is stored in its bank of data by the actual reasoning of the programmer. An unanticipated circumstance can render the most "intelligent" computer utterly stupid, as when a human opponent mischievously interrupts a match by removing her king from the chessboard.

Consciousness can be FREE. Freedom in these terms is the ability to be purposeful, responsive, transcendent, negative, willful, and rational -- to be an autonomous, unique individual, (conditionally) independent of physical determination. Freedom, when fully appreciated as such, can substantiate our most ideal value: It forms the intuitive basis of our recognition of the speciality of consciousness in a world of apparent thinghood, maybe the ultimate basis of our love of self and others. And its reduction, its denial, forms the counter-intuitive basis of devaluation, of dehumanization.

The common and observable manifestations of consciousness -- free and rational behavior -- seem as certain as any principle or law of science. It may be difficult to reconcile consciousness with nature as defined by physics and biology, but it is just as true that the para-scientific worldview is difficult to reconcile with our personal experience. It's been an age-old problem for philosophers, and for para-scientists (closet-philosophers!), to correlate the evident subjectivity of consciousness ("mind") with the objective world ("matter"). But regardless of how the seeming duality of *mind* and *matter* might one day be resolved, the para-scientific view is clearly inadequate, as it ignores the evidence of our personal experience and interactions, and our indomitable sense of values.

Ours is a universe of intricate physical structure, a world of astounding biological organization, populated with conscious beings able to reflect upon all there is -- capable even of imagining things that don't exist. Though physical science has discovered much about the rudiments of existence, though biology has revealed much about the mechanisms of life, to believe they could be adequate to fully comprehend consciousness -- maybe the most consummate development in

all the universe -- is to believe that what is expressed in more highly developed and organic systems is somehow unreal, or alien and disconnected from the more basic and undeveloped. As-if life is to be understood in its reduction to physics, to the exclusion of how it has been able by its abounding nature to develop into consciousness. As-if consciousness is to be understood in its reduction to biology, to the exclusion of its manifest powers beyond biological explanation. As-if physics and biology are to be understood without reference to their fullest expression in consciousness.

This much seems evident, if we are to trust our own experience rather than defend a philosophy of analysis, objectification, and reduction: A conscious being (we might better give it the form of a verb rather than a noun, and say a conscious *beingness*) is beyond objectification and reduction, because as a *beingness*, consciousness is not an object, and as *individual*, it is irreducible.

The values realized by consciousness -- including life, love, liberty, ethics, morality, art, friends, community, fun and laughter -- are not going to be found on a chalkboard, or under a microscope. A world where consciousness is possible is a world of more wondrous matter, more wondrous life, more wondrous mind and culture than science with its analysis, objectification, and reduction can comprehend or evaluate. It's evident, it's good, it's valuable.