

Science converges with Buddhism

Evidence for a Universe of Illusion

An Essay

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Introduction

I believe that the Buddhist paradigm of the phenomenal world—particularly, the Buddhist assertion that the phenomenal world is not as it appears—is supported by a scientific analysis of perception.

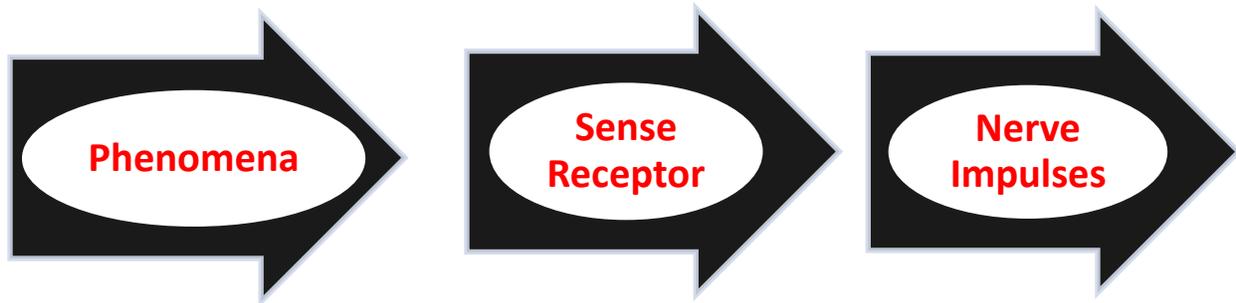
When we consider carefully the basics of human perception, as understood by modern science, it becomes clear that phenomenal events are not represented as they truly are. This infidelity of information transfer from external phenomena to personal experience is consistent with the Buddhist view of the world as 'illusory'. Further, I would argue that the creation of an illusory external world by our sensory instrumentation is compatible with the Buddhist doctrine of the non-duality of perception and perceiver.

The Manifest Universe is a Product of Our Sensory Instrumentation

All information we receive comes to us through our five senses—sight, sound, taste, touch and smell. [Receptors](#) in our [sense](#) organs convert *perceptible* phenomena (that is, phenomena stimulating our sense organs), into [nerve impulses](#). The process by which our sense organs convert phenomena into nerve impulses is illustrated in Figure One.

Figure One: information transfer
From Phenomena to Nerve Impulses

The Five Senses Convert Phenomena into Nerve Impulses

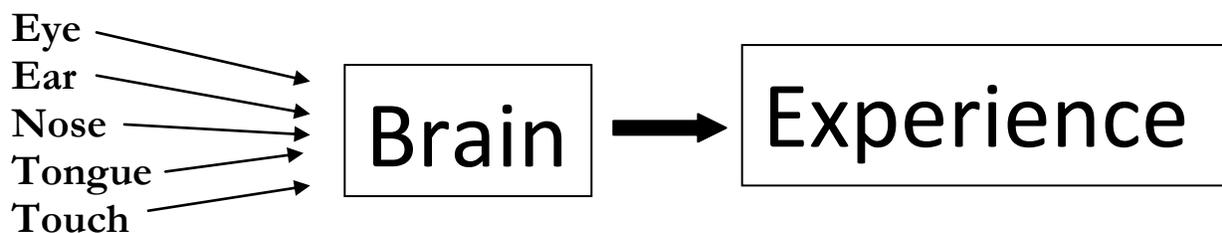


Nerve impulses are not, themselves, the initial phenomenon; rather, they are derived from the initial phenomenon by our sense organs.

These nerve impulses travel from our sense organs to our [brain](#). Our brain converts the nerve impulses from our sense organs into our personal experience—or the universe as we know it. This process is illustrated in Figure Two.

Figure Two: information transfer
From Nerve Impulses to Personal Experience

The brain creates personal experience from the raw material of nerve impulses.



To illustrate the conversion of phenomena into experience, consider vision. Certain phenomena [for example, nuclear explosions on the sun] emit visible [electromagnetic radiation](#), or what we experience subjectively as visible light. Visible electromagnetic radiation stimulates the retina to produce nerve impulses which travel to the brain via the [optic nerve](#).

Using these optic nerve impulses as raw material, our brain constructs, or 'fabricates', our visual experience of sight. But, recall, we do not 'see' electromagnetic radiation, the initial phenomenon. Our experience of sight is derived from nerve impulses sent to our brain by our retinas, in response to encounters with visible electromagnetic radiation.

From a Buddhist point of view, vision is 'illusory' in that it is not a *bona fide* replica of phenomena as they exist in nature.

From a scientific point of view, vision is an 'artifact' of our instrumentation. By artifact I mean a feature that is not naturally present but is introduced during the process in question: here the conversion of phenomena into experience. Vision is derived from optic nerve impulses produced by the retinas upon stimulation by visible light.

The relationship of optic nerve impulses (the artifacts of our retinal sense receptors) to electromagnetic radiation is unknown. Scientific analysis therefore reveals the infidelity of visual perception and I suggest that this infidelity is consistent with Buddhist assertions that the perceptible universe is illusory.

[All five types of sense organs](#) convert phenomena into nerve impulses. For example, what we hear is derived from variations in air pressure on our [ear drums](#), converted to [auditory nerve](#) impulses by our [inner ear](#). The brain converts auditory nerve impulses into the experience of sound. The same conversion of phenomena to nerve impulses occurs with our other senses—touch, taste and smell. The brain constructs our experience using nerve impulses from our five sense modalities (Figure Two).

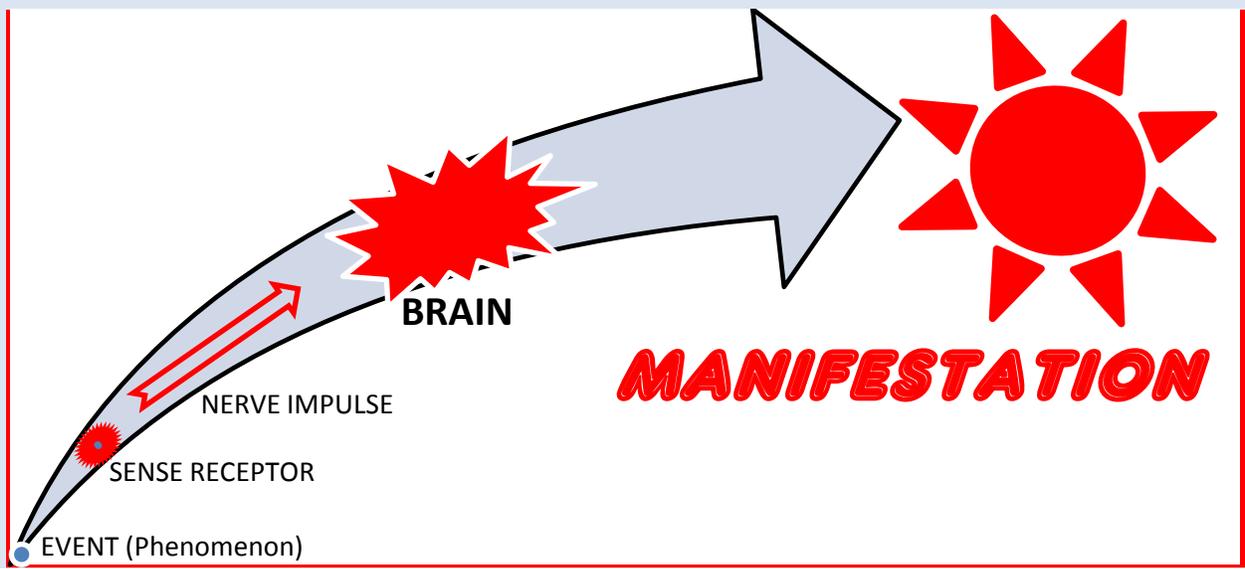
The manifest universe, as presented to us by the instrumentation of our sense receptors and brain, is not an authentic replica of phenomena. Rather, it is illusory or mythical; a mistaken view. See Figure Three for a summary.

Figure Three: a universe of illusion

Manifestation as Myth

A Schematic of How the Myth is Made

From Phenomenal Events to Subjective Experience



The Central Enigma in Science and Buddhism

The mechanism by which the brain [converts nerve impulses into experience](#) is unknown. I refer to this mysterious transformation as 'The Central Enigma' of human experience.

The Buddhist and scientific views of the Central Enigma are not incompatible. For example, the scientific view that the brain manufactures conscious experience from sensory nerve impulses is functionally similar to Buddhist notions of non-duality, as expressed in assertions such as 'whatever arises is merely the play of the mind' and 'all apparent phenomena are the play of the mind' [Chogyam Trungpa, Rinpoche, [The Sadhana of Mahamudra](#)]. From both the scientific and Buddhist viewpoints, the central processor—called the 'brain' in science and the 'mind' in Buddhism—is regarded as the author of experience.

The simple interpretations of established science presented above provide evidence for the Buddhist assertion of an illusory universe. Further, the Buddhist doctrine of non-duality of the perceived and the perceiver is compatible with the scientific view that the brain (the perceiver), generates perceptions of an external universe from sensory nerve impulses.

We receive no direct information from phenomena as they occur in nature. Our perceived universe is our illusory rendition of the phenomenal universe (i.e., [reality](#)). Perceiver and perceived are entangled, the perceiver creating the perceived.

Scientific and Buddhist paradigms converge.

The Central Enigma as Path

It seems to me that the possibility of un-masking manifestation using the five senses (and associated brain), is remote, due to the limitations of perception outlined above.

To recapitulate, sensory nerve impulses are not authentic replica of the phenomena stimulating their production. Sensory nerve impulses are in fact artifacts of our instrumentation, that is, the organs of our five sense modalities. Our brain then fabricates perceptions from the raw material of sensory nerve impulses. Such a derived perceptual process, when used to analyze phenomena, generates a display, or myth, absent direct information about reality.

I am aware that [others](#) are convinced perceptual experience can be understood by application of the [scientific method](#). I think this unlikely since the scientific method is unconditionally dependent on sense perceptions, which, as discussed above, are uncharacterized derivatives of phenomena.

Given the limitations of our instrumentation (sense organs and brain), what options are available to better explore reality? I believe the most promising alternative is to shift attention from the application of instrumentation (i.e., the application of the five senses via the scientific method), to information processing—meaning the enigmatic process by which the brain converts sense perceptions into experience.

The brain, or, if you will, the central processing unit, converts the raw data of nerve impulses into the final product of personal experience. In my view, attention should be directed to this internal conversion process, via introspection.

I suspect that ‘manifestation as myth’ (Figure Three), can best be ‘demythologized’ by introspective exploration of the Central Enigma. When the mind observes the mind, how the brain fabricates personal experience from nerve impulses can be investigated. Buddhism contains a variety of methods to observe the mind and perhaps glimpse the relationship of personal experience to reality. Eventually, one may begin to appreciate how the brain fabricates personal experience from the raw material of sensory nerve impulses, or, in Buddhist terms, how ‘all apparent phenomena are the play of the mind’, the riddle of non-duality.

Due to the inescapable confines of sensory perception, introspection, rather than the scientific method (which is reliant on sensory perception), emerges as an alternative gateway to novel information about phenomena as they exist in nature. The limitations of objective analysis encourage more subjective approaches, such as the Buddhist Path, which have less obvious constraints.

The manifest universe is an illusory product of our five senses. We cannot directly apprehend reality through the front door of our sense perceptions. Perhaps we can approach phenomena as they exist in nature through the backdoor of introspective analysis.