6 Mental Phenomena as Causal Determinants in Brain Function

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The central concepts concerning consciousness that I shall try to defend have already been presented in some detail (Sperry, 1952, 1964, 1965). Accordingly, I shall review them only in brief outline, devoting the bulk of the discussion to various peripheral aspects and implications that previously have had less emphasis. At the outset let me make it clear that when I refer to consciousness I mean that kind of experience that is lost when one faints or sinks into a coma. It is the subjective experience that is lacking during dreamless sleep, that may be obliterated by a blow on the head, by anoxia, or by pressure on the inner walls of the third ventricle during brain surgery. On the positive side we can include as conscious events the various sensations elicitable by a local electric current applied to the unanesthetized brain, or the pain of a phantom amputated limb, as well as most of our waking subjective experience, including self-consciousness.

I want to emphasize, however, that I shall not be concerned particularly with self-consciousness any more than with the conscious-
AN EMERGENT THEORY

MENTAL PHENOMENA AS CAUSAL DETERMINANTS
The way in which mental phenomena are controlled is in terms of the brain's physiology. This can be understood very simply in terms of the idea that the brain is a complex network of neurons and synapses, where various patterns of electrical activity are generated and transmitted. These patterns are the basis for perception, thought, and behavior.

A SIMPLE APPROACH

There are no single events that can be traced to the properties of the parts in isolation. The properties of the parts in a system are always related to the way they are organized and interact with each other. When the parts are organized in a particular way, they can give rise to new properties that are not present in the individual parts alone. This is known as emergent property, which is a characteristic of complex systems.

For example, think of a computer network. Each node in the network has certain properties, such as processing speed and memory capacity. However, when these nodes are connected, they can form a new property that is not present in any individual node: the ability to communicate with other nodes and process information in parallel.

The same is true for the brain. Each neuron has specific properties, such as its ability to generate electrical impulses and communicate with other neurons. However, when these neurons are organized in specific patterns, they can give rise to new properties, such as the perception of color or the ability to remember information.

In order to understand how these properties emerge, we need to consider the way in which the brain is organized. The brain is not a simple collection of isolated parts, but rather a complex network of interconnected regions. Each region has its own specialized function, but these functions are not isolated from each other. Instead, they interact with each other in a dynamic and emergent way.

For instance, the visual cortex is responsible for processing visual information, but it is not isolated from other regions of the brain. Instead, it is connected to other regions, such as the motor cortex, which is responsible for controlling movement. This connection allows the brain to integrate information from different modalities, such as vision and touch, to create a more complete and accurate representation of the world.

The idea that mental phenomena emerge from the interactions of these parts is not new. It is a fundamental tenet of modern neuroscience. However, it is only recently that we have begun to understand the complex mechanisms that underlie these interactions. With the help of advanced technologies, such as functional magnetic resonance imaging (fMRI) and electroencephalography (EEG), we can now observe the brain in real-time and study the way in which it processes information.

In conclusion, the brain is a complex network of interconnected regions, where emergent properties emerge from the interactions of these parts. Understanding these properties is essential to our understanding of how the mind works and how we can use this knowledge to improve our lives.
Mental phenomena as causal determinants

As the case for most of all pan-psychic formulations, a

By the philosophical route in which the consciousness of the

In respect of these phenomena, a much more complex

Some of the dynamic holistic principles that come into

Any voluntary choice above that observed in traditional materialism
Any self-consciousness is present in the unconscious mind. It is determined by the amount of attention paid to conscious processes. The self-consciousness is based on the awareness of one's own existence in the world, and on the ability to reflect on one's own existence. The self-consciousness can be experienced in various forms, such as introspection, reflection, and self-awareness. The self-consciousness can also be influenced by external factors, such as social interactions and cultural influences.

The bilateral brain and unit of consciousness

The bilateral brain and unit of consciousness are closely related. The bilateral brain is composed of two hemispheres, which are responsible for different functions. The left hemisphere is responsible for language and logic, while the right hemisphere is responsible for emotions and creativity. The unit of consciousness is a continuous stream of awareness that connects the two hemispheres. It is a dynamic process that is constantly changing, and it is influenced by various factors, such as emotions, thoughts, and physical sensations.

The unit of consciousness is not a static entity, but rather a dynamic process. It is influenced by various factors, such as emotions, thoughts, and physical sensations. The unit of consciousness is also influenced by the environment, and it can be altered by external stimuli.

The bilateral brain and unit of consciousness are interconnected, and they work together to create a sense of self-awareness. The bilateral brain and unit of consciousness are essential for the functioning of the human mind, and they are crucial for the development of consciousness.
Mental Phenomena as Casual Determinants

Their respective roles in the generation of conscious experience and the neural mechanisms that give rise to them are not yet fully understood. However, some of the primary factors that influence the generation of conscious experience are:

1. **Neural Correlates**
   - Neural correlates are the neural mechanisms that underlie conscious experience. They encompass the functional integration of information across different brain regions.

2. **Neuronal Activity**
   - Neuronal activity refers to the electrical and chemical activity of neurons within the brain. This activity is thought to be a key component of conscious experience.

3. **Attention**
   - Attention plays a crucial role in the generation of conscious experience. It directs the focus of neural activity towards particular stimuli.

4. **Medical Conditions**
   - Medical conditions such as stroke, tumors, and infections can disrupt neural activity and affect conscious experience.

5. **Drugs and Drugs**
   - Drugs and other substances can alter neural activity and affect conscious experience. For example, drugs like alcohol and opiates can induce changes in consciousness.

6. **Neural Oscillations**
   - Neural oscillations are rhythmic patterns of neural activity that are thought to be involved in the generation of conscious experience.

7. **Neural Connectivity**
   - Neural connectivity refers to the patterns of neural communication across different brain regions.

8. **Neural Plasticity**
   - Neural plasticity refers to the brain's ability to adapt and change in response to experiences and stimuli.

These factors, among others, are thought to interact in complex ways to generate conscious experience. Understanding these interactions is crucial for advancing our understanding of consciousness.
Mental phenomena as causal determinants

Privacy of subjective experience

As a distinguishing mark, the mental experience component is often separable from other aspects of mental activity. It is the subjective nature of the perception and expression of mental activity that cannot be accounted for by a purely physical process. However, the influence of the physical environment on these mental processes is significant. The subjective experience is influenced by the physical environment, but the process is not solely determined by it. The subjective experience is not just a reflection of the physical process, but it also shapes the perception and expression of mental activity.
REFERENCES

Mental Phenomena as Causal Determinants

The description of the California Institute of Technology's research on the perception of the world's objects, whether or not mental actions and perceptions are in some way determined by the physical world's actions and perceptions.

Eyes and Subjective Properties

World views conditioned by the human visual system are determined by the critical components of the physical world's objects. These components are perceived in the way that they are perceived by the human visual system, and they are perceived in the way that they are perceived by the human visual system's perception of the physical world.