

The Human Soul

Introduction

What is the soul? Is there anything to a human beyond a large group of atoms which are organized in such a manner that man can breathe, eat, dispose of waste, communicate with others, and perform a variety of other functions? It is argued here that pain and pleasure experienced by humans is a result of physically induced phenomena with actual physical responses but that the actual perceived feeling of pain and pleasure is beyond physics. Pain and pleasure are metaphysical phenomena experienced only by living beings.

Some animals, and especially humans, are able to exercise free will. The ability to sense pain and pleasure along with the ability to exercise free will are characteristics possessed by humans and arguments are presented here that these phenomenon are beyond physics. These attributes, more generally, are believed to separate inanimate objects from living organisms.

Pain and Pleasure

A human experiences pain and pleasure. Most often there is a physical input to the human and a subsequent physical response with the associated pain. For example, when a carpenter's thumb is hit with a hammer his thumb is deformed, electrical impulses run along the nerves to the brain and the carpenter feels pain. When does he not feel the pain? If his thumb were anesthetized so that the nerve would not transmit the signal he would not feel the pain. If he were in a coma (presumably) he would not feel it and, of course, if he were dead he would not feel it.

What if a mannequin's thumb were hit by a hammer? The thumb deforms (or shatters), electrical impulses originate at the thumb and traverse outward, and heat is generated and transmitted outward. But the mannequin feels no pain when the hammer hits.

What if we build a robot to simulate a man? Let us make the parts from metal and other materials. We use electrical wires to simulate the nerves and we make a computer to simulate the brain. When we hit the robot's thumb with a hammer, electric impulses would go to the brain but (we believe) the robot would not feel pain.

Let us now assume we have a super craftsman with skills we imagine scientist in the 23rd century might have. Let the craftsman build a robot using the same molecules that are in a healthy athlete. Would this robot feel pain from a hammer hitting his thumb? We would say that if the robot were alive (and conscious) it would feel the pain. That answer actually begs the question. We are saying that being alive means being able to feel pain. It seems safe to assume that pain can only be experienced by living organisms.

Do all living (and conscious) organisms experience pain? We know dogs, cats, hogs, and many animals experience pain. Does a rat, snake, insect, or spider experience pain? We assume that all animals experience pain for the following two reasons:

1. We will present arguments later showing that the will to live is derived from the pain-pleasure sense and we believe all animals have a will to live.
2. We see no reason to distinguish pain-sensing organisms from non-pain-sensing ones. We extend the assumption of pain-sensing to plants and all living entities, including bacteria.

If an organism senses pain it probably also senses pleasure. A living organism has processes taking place continually within its body. The continual pulsing produced by these processes in a properly functioning organism, most likely are sensed as pleasure. I know that is true with my body.

Now even though we recognize that pain and pleasure are the result of physical inputs there is no physical reason that they must be sensed. Pain-pleasure sensing is assumed to be a characteristic only of living (conscious) organism and its not derivable from the laws of physics.

Memory

A human experiences an event and then remembers the event.
Just what is an event and what is the mechanism of memory?

We need to think of the human brain as an agglomeration of chemicals immersed in a fluid. The fluid is continually flowing, electric currents are continually flowing, and chemical bonds are continually being made and broken.

An event external to the human occurs -- such as an auto horn blowing. The sound is picked up by the ear, transmitted to the brain, the brain responds (even some proteins in the brain may get folded differently) and much of the whole body senses the horn blowing.

At a later time something reminds the human of the horn blowing event. The reminder must be a portion of the environment to the brain of the actual horn-blowing event. As an example of a reminder, every time I smell freshly sawed masonite (a form of building material consisting of pressed and glued wood sawdust) I recall an event 70 years ago where my father was building a travel trailer with masonite covering.

Let us now describe the mechanism of memory. When a particular reminder event occurs the brain responds by having some of the previous event's circuits flowing, synapses, and overall body response. The human assesses this second response as a memory – since part of the stimulus is not present. *A memory of an event occurs when part of the stimulus (of the initial event) causes part of the response of the initial event.*

The complete human response, called a memory, is the “feeling” produced by the immediate stimulus inside the brain followed by many circuits of flowing charges in the three-dimensional volume of the brain traveling the circuits of the original event – but not all of the circuits. The new event (i.e. the recall event) is recognized as partly being the result of a new stimulus followed by a partially real stimulus. Being a partially real stimulus it is recognized as a memory.

The intensity of a recalled stimulus decreases with time and that decrease in intensity with time dates the remembered event. The intensity decrease may be accommodated by decreasing the volume of the brain involved.

We use the term “feeling” in the above paragraphs. The “feeling” is produced by the physical circuits flowing and other physical changes taking place in the body. But again, the sensing of these physical phenomena may be beyond physics.

The Paramecium’s Will to Live

We know that a paramecium will eat another paramecium (or other animal) which is approximately its own size. As time passes starting just after eating, the paramecium would reach the threshold where its “switch” would say “seek food.” Based on human experience it is reasonable to assume that the paramecium sensed “fullness” which gradually changed to hunger and that the “switch” turned on somewhere during this time period.

The first time the “hunt food” switch was turned on the paramecium would not know to search and would probably “randomly drift” until it encountered food which, because of the food presence, it would engulf the food. The paramecium would “remember” the event and the next time the hunger switch was turned on it would actively seek food.

Our only basis for assuming the pain-pleasure sense for the paramecium is that humans behave in that manner. We know the human has the metaphysical phenomenon of sensing pain and pleasure and assuming the paramecium has those senses gives a uniform basis which hopefully can be applied to all organisms. Notwithstanding the above arguments we believe it would be possible for the paramecium’s response to be purely automatic, i.e., without the pain-pleasure senses.

The eating mechanism, including memory, is recognized as a part of the will-to-live. It is painful to be hungry and, when hungry, the paramecium tries to find food.

If the paramecium were exposed to a hot region of its “fluid” home again it would experience the pain of heat and by trial and error it possibly would re-locate to a milder climate (i.e. a cooler place). This again is a manifestation of the will-to-live and it comes from the pain-pleasure sense. Incidentally it is not known if a paramecium would swim away from a hot spot – but we do know higher animals would. We make the generalization that will-to-live comes from the pain-pleasure sense – and again we emphasize that the pain-pleasure sense is metaphysical.

Decision Theory and Free-Will

Decision theory is simple. A human encounters a situation where one of two different courses of action needs to be selected. Based upon memories of past events the person reconstructs a memory model for each course of action along with the anticipated pain or pleasure. The one minimizing pain (or maximizing pleasure) is selected.

How are the two possible events compared? One possibility is to mentally simulate one event followed by the other possibility. Simulate these at different intensities. Say event A at a low level followed by B at a high level – this is one combined event and a certain level of pleasure is associated with this combined event. Next event A is simulated at a high level, followed by B at a low level – making another

combined event and another level of pleasure associated with this combined event. The person remembers both and chooses the one with the higher pleasure (or lower pain).

The Spiritual World

A human has memories of events which have happened. The memory can be (nearly) exact or it can be fuzzy. As the time between remembering and when the event occurred is increased the memory will be less exact. Humans modify their memories (purposefully) to increase pleasure and begin imagining things which they have not experienced and, for that matter, events which violate the laws of physics.

Can events occur which are not derived from the laws of physics? Almost all scientists would say no to this question. However, we have seen one instance of an empirically observed effect which we believe is not derivable from the laws of physics, i.e. the pain-pleasure response of organisms. What is the origin of this response which only organisms have?

Does any organism (particularly a human) have a spiritual (non-physical) entity which affects its thinking and which feels its pain (or pleasure) and exercises free will. Is that the human soul?

The hypothesis here is that pain-pleasure sensing and the means of dealing with pain-pleasure, which in free-will, are characteristics possessed by organisms and these characteristics can not be derived from the laws of physics. These two characteristics may be the earmarks of the human soul