

A person relates to the world through many different physical and mental experiences. Physical experiences are bodily activities such as breathing, digesting, walking, and eating. Mental experiences are of the mind, including feeling, wishing, deciding, and remembering. Philosophers have argued the interpretation of these feelings and experiences for ages. Cartesian Dualism was a popular interpretation for a long time, but the Mind/Brain Identity theory is a scientifically stronger argument of how thought is processed.

Before one can understand why the Mind/Brain Identity Theory is superior to that of dualism, he must have a basic knowledge of what dualism is thought to be. Cartesian Dualism is the brainchild of the French philosopher Rene Descartes, Cartesian being derived from Descartes' name.¹ His theory, modeled after Aristotle's, is that humans possess an entity called the soul, which is entirely independent of the body. For the purpose of this discussion the soul can be translated to what today is called the mind. The Dualist principles state that the mind is completely separate from the body, and thus is responsible all of our conscious thoughts, feelings, intuitions, etc. The brain however is still considered to as much a part of the body as any other physical thing found within it². These same principles state that the brain is part of the body. There is also a spiritual connection the soul has, as Descartes claims that it could exist independent of the body.

"The soul by which I am what I am – is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist"³ expresses the distinction Descartes gives to his soul. Descartes says that all the thoughts, feelings, and conscious activity of the mind is called 'mental

¹ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 266

² Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 266

³ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005. pg 9

substance'. The reason the name dualism came to be was because the theory of dualism has always maintained that the mind and body are not only separate, but dually independent of each other's processes⁴.

It should be noted that dualism has a distinct connection to the belief of God. Dualists believe that a soul is immortal. Elliot Sober states "If you believe in the doctrine of the immortality of the soul but also hold that the body disintegrates at death, you may be attracted by dualism."⁵ I believe this is the main reason why dualism continues to be accepted as a possible explanation of how we process thoughts. Although I question dualism, and for that matter God, it must be acknowledged that Descartes proposition of "I think, therefore I am"⁶ gives Dualism some arguably irrefutable credibility.

The intrinsic value in "I think, therefore I am" states that if you are capable of recognizing that you have thoughts, you are proven to exist. Although this argument relates to the dualist perspective, it does not completely verify that these thoughts come from the mind/soul or the brain. Interesting to note, of credible substance, Elliot Sober backs Descartes by saying "a surgeon could divide my brain into pieces. My mind, however, doesn't have spatial parts. From, this, dualism follows by Leibniz's Law."⁷

Leibniz's Law, or the indiscernability of identicals, states that "if you can find even one property that (the mind) has and (the brain) lacks, then you will have shown that (the mind) and (the brain) are distinct entities."⁸ Leibniz founded this theory on the basis that the mind and brain are separate entities because the mind is immortal and the brain is

⁴ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 266

⁵ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 267

⁶ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 162

⁷ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 272

⁸ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 268

not. This concept adheres to Leibniz's Law and is deductively valid⁹, providing some proof that dualism may work. The Mind/Brain Identity Theory does not work on this principle because it does not follow the belief of immortality, let alone a mind.

The Mind/Brain Identity Theory(s) [MBIT] is quite rudimentary, but very sound. A more modern theory than that of dualism, the MBIT seeks to prove that mental process is merely a function of neurons firing in the brain causing a reaction within the body. The MBIT treats the mind and the brain as one whole entity whose processes are identical. A time tested proof of this principle is Occam's Razor.

Occam's Razor states: "do not multiple entities beyond necessity."¹⁰ The meaning of this principle is to say that one should postulate an explanation from the most simple and direct axioms, disregarding unnecessary entities. Essentially the dualist suggestion that the mind and brain are two separate entities does not follow Occam's 14th century rule¹¹. Given that Occam's Razor has withstood nearly 700 years of scrutiny, with great success, proves in a more direct manner the MBIT.

During Philosophy's Age of Enlightenment¹², a radical called Julien Offray de Le Mettrie argued that man is simply another robotic instrument of nature on earth. He supported his argument by saying that animals have the same capabilities for thoughts as those of humans. De le Mettrie contended that the only reason animals can not formulate complex mental complexities is not because their brains aren't as large, but because they have simply not been taught, or have the posteriori experience.¹³

⁹ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 268

¹⁰ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005. pg 24

¹¹ "Occam's razor". Wikipedia. Online. Retrieved March 20, 2007, from www.en.wikipedia.org/wiki/Occam%27s_razor

¹² The late 1800's

¹³ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 26

Along with other ancient postulators Le Mettrie attempted to render the dualist's theories of the mind no more factual than the Greek's theories of how Zeus throws lightning bolts when he is angry. This Greek prophecy is as sound as the dualist justification of mental process; both ignorant.

Dualists, particularly Descartes, are guilty by the association of claiming that God does exist, even though we have no concrete evidence of his existence. This guilt, coupled with no proof of the existence of a mind, or soul for that matter, renders dualism false. Le Mettrie furthers this proof by maintaining humans do not have a separate mind, but are merely a machine made of matter, as is an animal, as is any living thing. Matter in its different modifications can be made to look as different things, but remain matter nonetheless.¹⁴ This argument is valid because it has been proven that everything must be made of matter if it is composed on earth.¹⁵ This suggestion involving matter is not the only way to prove the MBIT theory though.

There are many different ways of proving the MBIT. One of the oldest methods is logical behaviourism. The major proponents of logical behaviourism are Gilbert Ryle and U.T. Place. The theory of logical behaviorism maintains, as Place said, that "consciousness is a brain process"¹⁶ or perhaps more famously in the words of Ryle, the mind is "a ghost in the machine."¹⁷ What these ancient philosophers are trying to convey, in regards to the relationship between consciousness and the mind, is that consciousness itself is nothing more than one of many brain operations.

¹⁴ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 26

¹⁵ "Matter." The Catholic Encyclopedia. Volume 10. Published 1911. New York: Robert Appleton Company

¹⁶ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 26

¹⁷ Sober, Elliot, Core Questions in Philosophy. Pearson Education Inc.: New Jersey, 2005. pg 275

The trickiest concept to explain in regards to the mind/brain is mentalist concepts, such as consciousness. What makes mental concepts tricky is that they are very subjective in nature. When one individual beholds that he is feeling pain within himself, nobody around them will know. Conversely, another individual can pretend to feel pain, and may evoke sympathy from every person they come into contact with. Logical behaviourism is not exempt from explaining this phenomenon and does account for it. “Statements about some apparently mental phenomenon can be translated into statements about our dispositions to behave in a certain ways”¹⁸ said Place. This is a behaviourist’s loophole to making mental concepts into physical behaviours. Take for example the phrase “Rudager’s wish is to gain knowledge from his philosophy class.” This is how a dualist attributes Rudager’s desire for knowledge from his Philosophy class. A logical behaviorist takes a more direct approach that attributes Rudager’s will to learn from a physical process by saying “if presented with the opportunity to learn from his philosophy class, Rudager will likely engage this opportunity.” By presenting the opportunity for Rudager to learn in this manner a behaviorist does not have to lean on mentalist concepts and thus can have a more objective proof than a subjective dualist. Instead of Rudager going through the mental process of learning, as suggested by Dualists, he goes through the physical process of acquiring knowledge. To clarify, the behaviourist’s explanation of Rudager acquiring knowledge with his brain is no different that Rudager acquiring air with his lungs; they are both the essential function.

Behaviorism took a step forward in 2004 when J.J.C. Smart wrote his paper “Sensations and Brain-Processes.” Smart’s intrinsically favours comparing how everything in existence can in some form or another be explained scientifically. Smart

¹⁸ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 27

argues the increasing number of advancements in modern time all organism, especially humans, can be explained using scientific methods. Smart's argument is additionally sound for justifying behaviourism through its explanation of nomological danglers.

A nomological dangler is a term coined by the late Herbert Feigl of Austria¹⁹. Feigl describes the nomological dangler as "loose ends which cannot be fitted under the normal laws of physical science."²⁰ Before Smart, nomological danglers were rendered impossible to avoid without committing a fallacy, rendering arguments involving them invalid. The beauty in how Smart proves that nomological danglers are impossible to avoid without committing a fallacy is quite simple. Smart argues that if every single thing in the universe can be explained by science and to think that nomological danglers, or mental phenomenon, are unexplainable is "frankly unbelievable."²¹ Smart's philosophical argument in this case sets out not to prove favour to behaviourists/materialists, but rather "to show that there are no philosophical arguments which compel us to be dualists."²² Smart further acknowledges that a person of an educated, operant mind should trust in science as opposed to, what I believe is, a dualist hoax.

A man who defused many hoaxes was Saul Kripke, a 20th century American philosopher. He claims that states of the conscious mind have are identical to brain processes. His prominent example of heat clarifies this definition by saying that heat is to the motion of molecules as mental states of consciousness are to functions of the brain. This analogy is a much simpler and straightforward method of explaining how thought

¹⁹ "Herbert Feigl." Wikipedia. Retrieved March 24, 2007, from www.en.wikipedia.org/wiki/Herbert_Feigl

²⁰ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005. pg 30

²¹ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 30

²² Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 31

process works, rather than the cloudy transitions between the mind and body used in dualism. Furthermore by saying the brain's states of consciousness are identical to brain processes. This association is called a rigid designator.

Rigid Designators are objects that will always be the same no matter what world you live in. An example of a rigid designator would be a square. A square must always be a four-sided figure, whose sides are all equal and connected at ninety degree angles. Kripke says pain is a rigid designator of certain neurons firing in the brain, claiming that it is not a feeling of the mind but rather a direct correlation to the brain process.

The study of the brain and its processes is called neurophysiology, a science that is the primary basis for the reductionist theory. The reductionist theory “attempts to show that the study of human mental life (psychology, for short) can ultimately be seen to be a branch of a more fundamental science.”²³ This aspect of the reductionist theory is that it tackles the problem of nomological danglers by translating them into processes of the brain. This process allows danglers to not lose value in their meaning.

The problem with psychology is that nomological danglers will lose value and clarity when one attempts to translate them. Partly because psychology is not an exact science but merely an attempt to unravel mysteries of a mind that does not exist beyond a doubt. Thus the theory of eliminative materialism came to fruition in recent years.

The objective of eliminative materialism is to do away with the field of psychology and all of its questionable theories and postulations. Eliminative materialism seeks to prove, as most Mind/Brain Identity Theories do, that every thought, feeling and every other action of consciousness is attributed to neuron activation in the brain. The

²³ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005. Pg 37

founder of eliminative materialism is Paul Churchland, who makes understanding the brain much less confusing than a dualist would make the mind:

“Eliminative materialism is the thesis that our common-sense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience.”²⁴

The ingenuity of eliminative materialism is more concise than that of behaviorism.

Churchland says that we must do away with attempts to identify feelings and states of consciousness, merely replacing them with the idea that there is no relation to feelings and the firing of neurons, but rather the pure firing of neurons themselves and nothing more. This concept is proven by the comparison Churchland draws to how Renaissance men viewed physics and how today’s dualists view the ghostly prophecies of psychology.

During the antiquated periods of the early 17th century, physicists were partial to believing that all things have natural tendencies to move in certain ways without the need for evidential proof. It was to say that humans walked on the ground because that is the nature of humans. Today this explanation would seem ludicrous and needs more proof of explanation such as: humans walk on the ground because gravity holds them there. This progression makes us inclined to believe in a more scientific way of explaining thought as an eliminative materialist, rather than crediting it to psychology as a dualist would do.

The arguments for neuroscience over psychology are direct and strong. Psychology fails to explain things in a decisive manner, crediting all unexplained thoughts and feelings to a conscious mind, which does not exist according to supporters of neuroscience. The study of psychology is circular, giving no means of gaining new knowledge to explain thoughts and behaviours. Although psychology is still used today it

²⁴ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005. pg 38

should be rendered useless by philosophers, seeing as how we essentially know nothing more about the foundations of human behaviour than we did 2500 years ago. Foremost, psychology does not hold the characteristics of a traditional science. Neuroscience seeks to explain the phenomena of the world in the same manner that biology seeks to explain the processes of the body.

A modern and conventional theory of explaining the mind is functionalism. Functionalism seeks to prove that feelings and sensations are not entities of the mind but rather “the causal role of the particular in the mental life of the organism”—Fodor.²⁵ Functionalism is a new alternative view of philosophy, it somewhat rejects materialism but still provides support for the MBIT. An example of functionalism would be hunger which is not derived from the mind, or the fact that one’s stomach has been empty for an extended period of time, back rather a deprivation from food.

The captivating aspect of functionalism is that by saying, using the hunger example that hunger is caused by being deprived of food making it fit for either dualists or supporters of the MBIT. This is because the deprivation from food is just cause for either the mind or the body to feel hunger.

The 20th century has brought forth an incredible amount of new information regarding neuroscience and thought process. Theories have circulated for centuries for how the mind/brain works. Dualism is dying a speedy death as more advancements in neuroscience are realized. New theories such as functionalism, or the abstract theories that humans are so complex that they can not be considered “ghosts in the machine” or a “machine without ghosts” for dualism and materialism respectively, are starting to combine both theories but are unproven and will be very hard to prove.

²⁵ Matthew, Eric. Concepts in Philosophy: Mind. London: Continuum, 2005 pg 42

The Mind/Brain Identity theory is a scientifically stronger argument of how thought is processed than Cartesian Dualism. There are different variations of the same basic principle: that the mind and the brain are one and the same. Each variation that has been presented here essentially circles back to this principle and proves it to be true. Dualism was at one time an acceptable means of explaining the phenomenon that is mental cognition. However, progressing science displays that dualism has become outdated. The psychology of dualism is the only science that doesn't follow scientific laws and principles; it is not able to be proven effectively. As all good things must come to pass, dualism must now fall by the wayside, becoming refuted as neuroscience makes headway and supports the arguments of materialists. It is only a matter of time before the Mind/Brain Identity Theory is the standard explanation of how we think.