IDENTITY THEORY: A CRITICAL ANALYSIS

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IDENTITY THEORY: A CRITICAL ANALYSIS

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ABSTRACT

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This thesis is about the identity theory in philosophy of mind. The identity theory is an important position in the discipline, proposing unique solution to the mind-body problem. It reduces the mental to the physical and holds that mental events are identical with physical events. The identity theory emerged as a result of the decline of the dualist and behaviorist approaches. Since its inception, it was intensely debated. The views of philosophers swing in both opposite directions. Looking at these conflicting viewpoints, the thesis's objective is to examine both the arguments for and against identity theory (as far as possible), to see if some kind of summary can be drawn. Moreover, I would strive to contribute some conclusions of my own, based on my own understanding of the literature with respect to the arguments of identity theory. Therefore, I hope that I would be able to contribute something useful to the literature.
ABSTRAK

IDENTITY THEORY: A CRITICAL ANALYSIS

ANNABEL ANAK KATEK

CHAPTER 1

INTRODUCTION

1.0 The Historical Roots of Identity Theory

It all happens with the attempt to resolve an issue that is commonly referred to as the mind-body problem, where the main idea is explaining how our minds, mental processes are related to our bodies that is our physical states and processes. Some of the questions asked by Cahn (2000, p.18) includes “how can a physical object, a body, think, feel, have desire, believe or hope? To put the question differently, are you identical with your body, your mind, or some combination of the two? And if you are a combination of the two, how are they connected?”

According to Solomon (1990, p. 165), the mind-body problem is the identification or the location of the self in consciousness, as opposed to the identification of the self in our physical body. This rises tantalizing and very difficult metaphysical and scientific questions like – ‘What is the relationship between our minds and our bodies and how do they interact?’ In solving the mind-body problem, there exists a range of philosophies proposed by philosophers.

1.1 Dualism

The dualist approach is a stance of philosophy which believes that mental and physical events are wholly separate. Being one of the traditional philosophies of mind used to solve the mind-body problem, dualism is one of the first theories to resolve the mind-brain dilemma.
Conceived in the 17th century, the dualist theory is an approach which holds that the concept of the mind is a nonphysical substance (Castell, Borchert & Zucker, 1994, p. 52). Dualism has been criticized for its failure to account adequately for mental causation. Philosophers question, for instance, "how the nonphysical can give rise to the physical without violating the laws of the conservation of mass, energy and of momentum?" and "how can our mental give rise to our behavioral effect that has position in space?" (Cahn, 2000). Solomon (1990, p. 166-167) also claims that the causation questions makes Descartes looks clumsy and obscure.

1.2 The Rise of Materialism

The shortcomings of the dualist theory have led to the birth of the materialist philosophy of mind. Materialism claims that only physical entities exist. This concept of materialism leads to the belief that mind-body problem can be solved by reducing the mental to the physical thus simplifying the approach in solving the mind-body problem.

The materialist approach is a common view among scientists which believe that only physical entities exist as oppose to the dualist beliefs. According to Castell, Borchert and Zucker (1994, p. 55-56), the emergence of materialism has led to the rise of an important materialist theory of mind in the aftermath of World War 2, called behaviorism which believes that in order to resolve the mind-body problem, we should emphasize on the overt and observable movements (behaviors) of organisms.
1.3 Behaviorism

According to Sharer & Tarpy (1993, p. 35), the behaviorism era prompted many 19th century scientists to undertake researches and studies on animal behaviors and abilities. One of them was E.L Thorndike, who employed experimental methods to study animal learning (especially cats) which later led to the study of human abilities and behaviors (Sharer & Tarpy, 1993, p. 35-37). Besides that, Thorndike had also explicitly formulated The Law of Effect, where he claimed that "the strength of behavioral responses was a function of the number of times the responses had been associated with the stimulus" (Spear, Penrod & Baker, 1998, p. 9-10). It was also claimed by Baker, Penrod and Spear (1998, p. 10) that during the same time, a Russian physiologist named Ivan Pavlov was also conducting research on animal learning since.

Works of researchers like Thorndike and Pavlov have made their ways to the United States and had made a big impact on other psychologists there. One of the psychologists was John B. Watson of the John Hopkins University – who almost all would say, single-handedly found the most influential schools of modern psychology: behaviorism (Spear, Penrod & Baker, 1998, p.10). According to Spear, Penrod and Baker (1998, p.10), in 1913, Watson published a short paper entitled "Psychology as The Behaviorist View It", which had profoundly revolutionized the field. Watson adopted a radically behaviorist approach to behaviorism whereby he strongly rejected the introspectionist approach to psychology, and argued that there exist only direct behavior observations, which is the proper subject for psychological studies. As Watson points out, "the time seems to have come when psychology must discard all reference to consciousness: when it need no longer delude itself into thinking
that it is making mental states the object of observation” (Sharer and Tarpy, 1993, p. 36). In
other words, Watson viewed conscious experience as something very subjective and could not
be observed and studied objectively, hence could not be studied scientifically. This also meant
that consciousness; the mind and the mental activities are the wrong things to study.

Hence, description and explanation of states and contents of consciousness were to be
replaced by the prediction and eventually the control of behavior (the observation is based only
on behaviors that are external and can be seen). According to Sharer and Tarpy (1993), the
works of Watson had embraced a large number of American psychologists who began to study
the relationships between stimuli and responses. One of them was Skinner, who had strongly
endorsed the basic tenets of Watson’s behaviorism. Skinner has emphasized the importance of
observable behavior and the role of learning in behavior, especially the principle of operant
learning since.

As the behaviorists are primarily interested in overt behaviors rather than mental
operations that cannot be observed, far too much of the mental states (such as the mental
processes that triggered the behaviors) in human behavior was denied by the behaviorist
approach (Spear, Penrod & Baker, 1998). The price paid by the strict adherence to behaviorism
was too costly – whereby questions regarding the nature of human language, planning, mental
activities, problem solving and the likes could only be approached with difficulty and
limitations (Gardner, 1987). Gardner (1987) also claimed that all of these have led to the
speculations and questions regarding the effectiveness of the behaviorists’ theory where even
some members of the American Psychological Community began to have doubts regarding
According to Gardner (1987), Lashley’s paper has crystallized a growing awareness on the part of thoughtful scientists that adherence to behaviorist canons was making a scientific study of mind impossible. This is one important factor contributing to the decline of the behaviorism era. Later, more and more skepticisms emerged regarding the shortcomings of the behaviorist theory that eventually led philosophers to give more concern to the importance of mind and mentality.

As the same time as the behaviorism is declining, there emerge another theory attempting to solve the mind-body problem, i.e., the identity theory. The identity theory provides a relatively satisfactory account of what the mental terms in psychological explanations refer to, therefore it is favored by psychologists and philosophers who were dissatisfied with behaviorism then (Castell, Borchert & Zucker, 1994, p.56). They also claimed that one of the main disadvantages of behaviorism is that it maintains that mental terms refer to nothing or that they refer only to the parameters of stimulus-response relations, both indicating that the existence of mental entities is only illusory.

1.4 The Emergence of Identity Theory

On the other hand, the identity theorists argued that mental terms refer to neuropsychological states being identical with physical states. As we can see, the mind-body problem has played a big part in the development of the mind philosophies. Attempts to resolve the mind-body problem helped in making the identity theory a theory that was once believed as the theory that provides a straightforward solution to the mind-body problem (Heil, 1998, p.72), though criticisms of the theory led to its downfall eventually. The identity theory’s
dominance was short-lived as it was subjected to a lot of powerful and batteries of objections (Cain, 2002, p.45). The downfall of identity theory has led to the emergence of a recent approach in solving the mind-body problem, i.e., functionalism. It believes that our mind is similar to the computer. Solomon (1990. p.170) claims that with recent discoveries about the workings of computers and artificial intelligence, a new solution to the mind-body problem is offered by functionalism (replacing the identity theory).

1.5 Literature Review

1.5.1 Introduction

In the following section on literature review, we would be looking at the past work done on identity theory and the concept of the theory itself. It is hoped that this analysis would help to put the work in proper context later.

1.5.2 The Background of Identity Theory

We can see that the emergence of identity theory is due largely to the downfall of other theories like dualism and behaviorism. The Identity Theory is proposed by J.J.C Smart (after World War II). He had many publications in philosophy of science and philosophy of mind as well as works on ethics (Castell, Borchert & Zucker, 1998, p. 46). Besides that, there are other important proponents of the theory, like U.T Place who published “The Consciousness a Brain Process?” in 1956. According to Beakley and Ludlow (1994, p. 4), Place attempts to defuse arguments made against identity theory. It is argued by Place that “two things can turn out to be identical even if the definitions are different: ‘lightning’ for example does not mean the
same thing as 'electrical discharge', but we can discover that lightning and electrical discharge
are identical. Likewise, though 'body' and 'mind' may have different definitions, it can be
discovered that they are actually identical" (Beakley & Ludlow, 1994, p. 4).

Meanwhile, based on the thinking of Smart in the "Sensations and Brain Processes,"
Rosenthal (1991, p. 169-179) claims that for two events which is $a$ and $b$ to be identical is for
them to have all their properties in common. This means that according to the identity thesis,
for every mental state, there is also a physical state. Based on this, Rosenthal (1991, p. 161-163)
points out that since states are counted as mental or physical in virtue of them having
properties that are mental or physical, mental states would have both mental and physical
properties.

1.5.3 Arguments for Identity Theory

One of the main arguments that support the identity theory is the simplicity of the
concept. The concept of identity theory simplifies the way we think and is non-complex.
According to Cahn (2002, p. 112-125), simplicity claims that simpler theory is preferred if
there exist two theories equal in terms of explanation and evidences. Even Smart (who played a
major role in establishing the theory) claimed and emphasized that simplicity is the ground for
accepting the identity theory. It is also known as Occam's razor (the principle of parsimony)
where the principle states that one should not make any assumptions than the minimum needed
(Heylighen, 1995). Hence, identity theory is a theory that enables us to understand something
based on simpler description that is non-complex.
Besides that, Heil (1998, p. 72) claims that identity theory provides a straightforward solution to the mind-body problem. If mental events are nothing but neurological events, then there is no special difficulty in understanding the causal relations that hold between mental and material events. Hence, another argument that supports the identity theory would be the Causal Concept, where according to MacDonald (1989), is a concept advanced by Armstrong and Lewis indicating that the causal role identifies the mental state with respect to the physical state and behavioral responses that is based on internal state. An example of this is that pain is the concept of an internal state that is typically caused by tissue damage followed by winces and groans of that particular person. Armstrong points out that empirical research on the causal-role showed that C-fiber activation is precisely the internal state, which is typically caused by tissues damage and followed by typically winces and groans of that particular person cited in MacDonald (1989). This indicates that the pain felt is actually the activation of C-fibers.

1.5.4 Arguments against Identity Theory

According to Cain (2002, p. 45), the theory's dominance was short-lived, as it was subjected to a lot of powerful objections. One of the most well-known arguments against the theory would be the claim that it violates the Leibniz's Law (also known as the Law of Identity). The identity theory is criticized have because two events are identical only if they have all of their properties in common. Mental states cannot be identical with physical states because mental states have certain properties that physical states do not have.
The next argument against the theory is the criticism from Putnam in 1967, where according to Cain (2002, p. 45-46), Putnam has accused identity theory of being chauvinistic (denying mentality to systems physical besides humans, be they the earthly creatures, inorganic machines and other living creatures). Cain (2002, p.45-46) adds that this thought of Putnam has led to the suggestion that mental states are actually multiply realizable (various implementations). This means that any given type of mental state can be realized (implement) in many different ways. Therefore, if pain is identical with a physical state, then it must be identical with some tokens of physical state (though there exist indefinitely many physical states that can be implemented).

The third argument against identity theory that I reviewed was considered as a technical objection to the identity theory. In this argument, Chalmers (1996, p.146-149) have looked into Kripke’s argument. In the argument, Kripke points out that according to the identity theory, certain mental states such as pains and brains states such as C-fibers firing are identical, even though ‘pain’ and ‘C-fibers firing’ do not mean the same thing (Chalmers, 1996, p. 146-149). Based on this statement, Chalmers (1996) claims that Kripke argued that all identities are necessary, if X is Y, then X is necessarily Y, as long as the terms X and Y designate rigidly, picking out the same individual or kind across the world. This means that X is Y if they are identical, in the sense that they have the same properties.

According to Chalmers (1996, p.146-149), an example of this argument was used by Kripke in 1971. If pain is C-fibers firing, then pain is necessarily C-fiber firing, as long as pain and C-fiber firings are designated rigidly and pick up the same properties. But according to Chalmers (1996, p.147), it is possible for us to feel pain without the brain state (C-fibers firing)
and vice-versa. This is because Chalmers claims that as humans, we have the sensations of pain without having any notion of C-fibers. In other words, human have the sensation of pains in many other form besides the C-fiber firing (an example would be the sensation of pain caused by physical objects). Therefore, he argues, based on the Kri uphe's argument (Chalmers, 1996, p.145-149), mental states are not identical to brain states.

1.6 The Problem Statement

The identity theory has been widely debated amongst philosophers. As seen from the literature review, studies and arguments have been done in order to argue for and against the identity theory. Some philosophers believe that the identity theory provide good solution to the mind-body problem, though there are still a handful that believe otherwise. These arguments have led to the debate of the validity of identity theory in its contribution to resolving of the mind-body problem. Besides that, the different views of philosophers indicate there exist no consensus in the views of philosophers as the arguments tend to swing in both directions.

1.7 The Objectives of Thesis

The identity theory is important and has contributed significantly to the mind-body debate. Hence, the objective of this thesis is to analyze and explore how identity theory has contributed to the debate of the mind-body problem, especially in terms of the responses that other philosophers have given. As we have seen from the brief account of the literature review, philosophers disagree among themselves on the issue.
These have led to another objective of the study that is to examine the arguments both for and against the theory. Analyses will be made through the existing works, other materials available and weighing which of these arguments is more relevant and reasonable according to my understanding of them. Hopefully, through the above, the shortcomings of the theory could be more clearly understood, and hence help shed light on its downfall.

1.8 Scope and Limitations

As a whole, this thesis is limited by a few factors. Firstly, sources of the identity theory are limited and difficult to find in the library as only a few books containing some parts related to identity theory could be found. This has led me to use materials from websites to get the information needed for my thesis. Another limitation is the limited time which significantly reduces the breadth and scope of my study.

1.9 Conclusion

This chapter has shed some light on the emergence of identity theory due to the downfall of dualism as well as behaviorism that fail to provide a satisfactory answer to the mind-body problem. Besides that, we have also seen that the identity theory is widely debated amongst philosophers. This chapter has also delineated the literature review, objectives, and problem statement among other which would form the bedrock to the discussion in subsequent chapters.
CHAPTER 2

WHAT IS IDENTITY THEORY?

"The concept of identity theory contends that the mental properties are identical with the material properties which is also the physical properties" (Heil, 1998, p.77)

2.0 Introduction

According to Heil (1998, p. 72-78), identity theory claims that our mental states are quite literally identical with the physical states. This means that according to the identity theory, each and every mental state is identical with some state in the brain. According to Castell, Borchert & Zucker (1994, p. 46), identity theory reduces the mental state to the physical state and is also a famous and significant attempt to solve the mind-body problem. It asserts that the mental states are nothing other than the neurophysiological states; the mental is just the brain. This also means that the identity theory holds the idea that mental events, states and processes are identical with neurophysical events in the brain (Castell, Borchert & Zucker, 1994, p.46). The identity theory also claims that as a matter of synthetic and empirical fact, mental states are identical with the states of the brain and of the central nervous system.

Solomon (1990, p. 168-169) claims that specific mental events are exactly correlated with specific brain events and there exist strict correlations between mental events and certain processes in the brain. According to Solomon, examples of this strict correlations between the mental events – of simple pain to human raging ambitions – and certain processes in the brain (1990, p.168). However, the identity theory takes the relationship between the mind and
material entities one step further because it argues that mental properties and brains are the same. By saying that mental events (pain for example) and brain processes are the same thing, we have also answered the questions of how the mental and the physical events cause one another (Solomon, 1990, p. 165-170). This claim by Solomon has shown that both the mental events and the brain processes have the same properties. An example of this is the belief that water is \( H_2O \). According to Solomon (1990, p. 169), the description of water can be in the form of ‘wet’, ‘cold’ and even as ‘filling the basin’ – which is quite different from the description of the two hydrogen and one oxygen atoms combined in forming the water molecule. But it makes good scientific sense to claim that water is \( H_2O \) even though superficially the properties of water seem different from the properties of molecules.

2.1 The Concept of Identity Theory

The identity theory claims that it reduces the mental states to the physical as well as asserting that the mental properties are identical with the physical properties (Borchert, Castell & Zucker, 1994, p. 46). Heil (1998, p. 72-78) claims that the identity theory is also known as selfsameness, which is useful as it is common to think of a single object in different ways. Example of this selfsameness would be that any object can be given multiple names as well as being described in different ways.

Meanwhile, Blocker & Stewart (1992) state that the meaning of “identity” in identity theory has a meaning that is strict and totally identifies the mind with the body. This means to say that given “x” and “y”, “x” and “y” fulfill the identity criteria if both are really one and the same thing. This means that the person must be willing to assert of (X) anything whatever
that he asserts of (Y) and vice-versa (Blocker & Stewart, 1992). Besides that, Stewart (1992) also claims that this relationship follows simply as a consequence of their identity, for if there is anything whatsoever that can be truly asserted of any object (X), but cannot be truly asserted of some object (Y), then it logically follows that (X) and (Y) are two different things and most obviously not the same.

Besides that, an identity theorist would also believe that it is a good bet that research on the brain will lead to the eventual discovery that certain properties that we can designate using mental states are properties of the brain (Heil, 1998, p.71 -81). Example of this statement is that pain might actually have been the firing of C-fibers in the brain whereby the property of being in pain would be identified with the neurological property of being a C-fiber firing. This indicates that if pain is actually an event of C-fiber firing, thus both the pain and the C-fiber firing are the same event and hence supports the selfsamness concept (Heil, 1998, p.72-78).

According to Braddon-Mitchell and Jackson (1996, p. 91-93), the identity claims of the identity theory is reinforced by the way in which science expresses many of its discoveries in terms of identity. In other words, the claims of identity theory find strong support in scientific phenomenon. And like the virtues of other scientific explanations, it possesses the advantage of explanation that is simple and easily understandable to us. Consider lightning. Braddon-Mitchell and Jackson (1996, p.91-93) claim that science do not tell us that lightning and electrical discharges between clouds are correlated, but they are actually the same thing (identical).
Diagram 1: The Concept of Selfsameness in Identity Theory

The Identity Theory is the theory that claims that the mental states and events are identical to particular brain processes and events even tough it is viewed from two different perspectives and described in different ways.

2.2 Conclusion

The identity theory is a theory which claims that the mental state is identical with the physical state, the mind is identical with the brain. In other words, the mental states are reduced to the physical state. And this constitutes one important position in the philosophy of mind attempting to resolve the mind-body problem. Hence, enabling the solution of the mind-body problem (how the mind and body are related).