



## Carbon-Based Brain, Consciousness and Cognition: Understanding Cognitive States in the Context of the Kk Thesis

### KEYWORDS

Cognition, Epistemic Awareness, KK Thesis, Mental States, Brain States

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### ABSTRACT

*This paper examines the nature of epistemic awareness, or cognitive states, in the context of the KK thesis and defines the relationship between cognitive states and neural states. The paper begins with examining what this indubitable epistemic awareness entails and ends with understanding when and why beliefs can be held as 'true' with, without, against or regardless of empirical evidence. Cognition is an existential mode of being accompanied by epistemic content. As such, 'to know' entails the following: to know is to know that we know; know what we know; know how we know (what we know); and know that what we know is either true or false. In addition, to know is to be cognizant of why beliefs are considered basic or non-basic; when epistemic justification for belief is considered internal or external; when we have control over beliefs and when we do not; when evidence can provide the basis for beliefs; and when evidence cannot guarantee beliefs. It is noted that we do not choose to possess epistemic awareness, nor can we choose to negate epistemic awareness — we cannot choose not to know that we know though we may or may not choose to know what is known. From Gettier, we learn that TAK (JTB) can only prevent guessing but cannot prevent 'lucky truth.' Many authors have questioned what makes beliefs true or false, and how beliefs can be affirmed or falsified. Knowing what we know of the basis, process, content and truth of cognitive states, this paper endeavors to understand why our carbon-based brain allows us to hold beliefs with, without, against, or regardless of evidential consideration. Ideas from the following authors are examined: Plato, Gettier, Goldman, Searle, Rosenthal, Chalmers, Lehrer, Block, Pojman, and Sartre.*

### INTRODUCTION: UNDERSTANDING COGNITIVE STATES IN THE CONTEXT OF THE KK THESIS

Cognition,<sup>1</sup> like consciousness, is a brain process.<sup>2</sup> To understand human nature is to determine how cognition occurs and why epistemic awareness is a fundamental part of our carbon-based brain. The epistemic awareness that we know is the basis for the KK thesis -- to know is to know that we know.<sup>3</sup> Knowing that we know<sup>4</sup> implies not only knowing what, how, and whether what we know is true or false, but also knowing when and why we choose to believe with or without; against or regardless of evidential consideration.<sup>5</sup> How do we account for such a given? Volitionists, like Kierkegaard, argue that some of our beliefs can be held without evidential consideration.<sup>6</sup> Non-volitionists, like Clifford, resist the notion that we can acquire beliefs independent of evidential considerations. Knowing why what is known is held as true or false is perhaps the most interesting aspect of the nature of cognitive states. We may or may not choose to know, but once we know that we know, we cannot choose not to know that we know, nor choose the veracity or falsity of what is known. The acceptance of the veracity or falsity is not a matter of choice if what is known is an empirical (verifiable) given.<sup>7</sup> As Russell would say, "we cannot make them true or false."<sup>8</sup> However, if what is known is not observable or verifiable as true or false, then we must know why we choose to accept it as true or false independent of evidence. From Hume's time we know that we hold beliefs as true by observation, hold beliefs as true by comprehension or definition, and still hold other beliefs as true by faith.

### THE BASIS OF COGNITION: BEING CONSCIOUS OF COGNITIVE STATES

How insentient neurons turn sentient or conscious is a difficult question to address.<sup>9</sup> However, epistemic awareness (of cognitive states) is made possible because of, what Rosenthal calls, "state consciousness."<sup>10</sup> It is state consciousness -- being conscious of being aware

-- that provides the basis for cognitive states, which in turn entails the KK thesis. The importance of cognition is not the content of cognition, but the fact that we are conscious of cognition. It is because of this that we can give a phenomenological account of what is entailed in cognition. What are cognitive states -- are they brain states or mental states? We know that all mental states are related to brain states, but that does not mean all brain states are cognitive states. Only certain brain states become mental or cognitive. Property dualists would argue that cognitive or mental states are non-physical properties of brain states.<sup>11</sup> The process of knowing and cognition can be understood as two aspects of brain states. While the process of knowing is a brain process, cognition is a mental state, which with Functional Magnetic Resonance Imaging (fMRI) mapping, is a detectable brain state. Supervenience theorists would argue that mental states are related to brain states and can even be understood as duplicates of brain states. The question then would be whether duplicates of brain states are different brain state. Non-reductive materialists, like Searle, would argue that consciousness is an emergent, like liquidity is a characteristic of water. The advent of fMRI enables us to observe images that correlate with neural activity in human subjects, allowing us to study human cognitive processes,<sup>12</sup> provided that appropriate data analysis methods are used to make sense of the imaging data.<sup>13</sup> This, in turn, allows us to understand which, how, and why certain brain states become cognitive, or mental. Cognitive states are both brain states and mental states. They are brain states, in that they are neural processes; they are mental states in that certain registered neural processes become sentient, intentional and phenomenal.

Explaining the nature of cognitive states in the context of the KK thesis is similar to Rosenthal's attempt to explain consciousness. From Gettier, we learn that traditional analysis of knowledge (TAK) can only prevent guessing,

but it cannot prevent 'lucky truth.' Many authors have questioned which cognitive states should be considered as knowledge. Still, others have asked what makes beliefs true or false and how beliefs are affirmed or falsified. Instead of dealing with the ontological status of beliefs, an attempt is made to define the epistemic awareness of the basis, content, process, and truth of cognitive states and note the relationship of belief states to neural states. It can be argued that the best way to explain cognitive states is to explain them in the context of the KK thesis. This enables us to give a phenomenological account of what is entailed in epistemic awareness. Knowing that we know implies the following: knowing what we know; knowing how we know what we know; knowing whether what we know is true or false; knowing why beliefs are considered basic or non-basic; knowing when epistemic justification for belief is considered internal or external; And, knowing when we do or do not have control over beliefs. It is only the conscious self that can know when we have to believe and when we must choose to believe. The conscious self is aware when justification is directed towards what is true and when justification is directed towards why we choose to believe in what is known.

Both state consciousness and the KK thesis contain two levels of consciousness.<sup>14</sup> Knowing and being cognizant is essentially being conscious of cognitive states. The acceptance of state consciousness is vital in understanding the universe we find ourselves in. Consciousness can be understood as being reductive (Place), non-reductive (Searle), immaterial (Sartre), or intentional (Brentano). Whatever consciousness is, it must be accepted as fundamental as time, space, and matter. The KK principle of knowing that we know is an extension of the two levels of consciousness that humans possess. The process of knowing is a brain state; being conscious of cognition is an emergence of a brain process. As fMRI imaging helps detect when the brain is cognitive, it also establish correlates. While it is generally held that there is no place or location for consciousness,<sup>15</sup> fMRI data suggests that we can now know when the brain is conscious or cognitive by understanding the correlates between neural sensory experience and cognitive states.<sup>16</sup> So cognitive states are sentient states of certain brain states. Cognitive states are explainable in that cognitive states are a result of neural processes. Cognitive states are detectable or (image-able) co-occurrences of corresponding mental and neural states, in that fMRI can tell us if and when we are cognitive. So both the first and the second level of consciousness -- being conscious and being conscious of being conscious -- are associated with brain states.

#### **CONTENT OF COGNITION: KNOWING WHAT WE KNOW**

To know is to know what we know. Only the conscious self can know what one knows. We cannot claim to know that we know and not know what we know. Knowing what we know is to be aware of the content of cognition. This is made possible because of what Block calls 'access-consciousness,' which allows us to access and report cognitive states. Accessibility and reportability are fundamental if what is known is to be communicated. Access consciousness deals with the ability to recollect, reflect and report on the content of cognition. Can we change what we know? Just as we cannot undo what happens, we cannot 'unknow' what is known. In other words, we may or may not choose to know (what is known), but once we know something we cannot choose to 'unknow' what is known nor revise what is known. It is possible that we may forget

what is known, but once we are reminded, the content can once again be ascertained.

Defining cognitive states in a given language becomes necessary when we want to communicate the content of cognitive mental states to each other. According to Fodor, mental language is different than spoken or written language.<sup>17</sup> Mental language is referred to as "mentalese," or natural language. That is why the symbols in the mind are different than symbols on paper.<sup>18</sup> Hence, we can perceive objects and or conceive ideas independent of a given language, but we cannot communicate our thoughts or knowledge without a written or spoken language. We can define what we know through the use of language — words, sentences, semantics, and syntax. Words have meaning so that communication can be made possible between minds. Words have references to real objects, people, and concepts. Words connote and denote. Denotation implies using words to define words (intension), and connotation entails using examples to define words (extension). Words represent both meaning and reference. Language continuously develops as we continue to communicate. To know is to be aware that the content of cognition is always through a given language. The content of cognition becomes linguistic only when content is defined with the intention to communicate what is known with others. Reportability is possible only if verbal and/or written language is used. To understand the content of cognition is to understand the nature of access consciousness.

The content of cognition is either theoretical, practical, or propositional. Access consciousness permits us to distinguish between these three types of knowledge. Theoretical knowledge is abstract and conceptual. Here, what is known can be either abstract and verifiable or abstract and unverifiable. Abstract ideas, such as freedom, the self and the soul, can be discussed but are not verifiable. On the other hand, calculus, for example, is abstract and conceptual but also has grounds for verification and application. Practical knowledge is 'know-how' knowledge. Here, what we claim to know has meaning only if we can demonstrate what we do with our knowledge. All claims to knowledge must be demonstrable. Propositional knowledge is sentential; what is known is stated in a sentence. We can put the emphasis on either the sentence itself or the claims of the sentence. The sentence is understood as a statement when the statement purports a claim.

To know that we know is to be aware of what is known in the context of what there is to know. Acknowledging the gap between what we know and what there is to know is humbling. Yes, truth (reality) can be understood as being absolute. But what we know of reality cannot be absolute. For what we know of reality is limited and can be erroneous. What is known is subject to addition or revision. We are aware that truth can be defined as an epistemic or a non-epistemic matter. What we know is an epistemic matter. What there is to be known can be considered as being a non-epistemic matter. However, while truth (what there is to know) can be considered as absolute, but what we know about the absolute cannot be absolute.

#### **THE PROCESS OF COGNITION: KNOWING HOW WE COME TO KNOW WHAT WE KNOW**

Armstrong's definition and distinction of perceptual and introspective consciousness provide the basis of understanding how we come to know what we know. He argues that to be conscious we have to perceive/know and to perceive/ know we have to be conscious. If we do not

perceive anything we are not conscious, but if we perceive we are conscious.<sup>19</sup> To know is to be conscious of how we come to know what is known. To understand how we come to know what we know is to understand the perceptual and conceptual nature of consciousness. This aspect of explaining cognitive states is knowing how we come to know what we know. The process of cognition -- of how we come to know what we know -- can either be sense-evident (empirical) or self-evident (rational). To know something a priori is to know something as being self-evident. To know something a posteriori is to know something as being sense-evident. The process of knowing how we come to know what we know and the justification for what we accept as knowledge -- both internal and external -- is important to note. However, it does not matter how one justifies what one knows. Epistemic justification can be either internal or external. Internalists argue that justification is an epistemic matter, whereas externalists argue that it is a non-epistemic matter. Nonetheless, we must justify what is known before it can be accepted as knowledge. How we know and how we justify what is accepted as knowledge does not change the fact/truth of what is known. Accepted justification is required before cognitive states are understood as knowledge. No particular epistemic justification can dismiss or guarantee what we know as knowledge.

On a perceptual level, we can phenomenally perceive what is as is; i.e. primary qualities such as size, shape, and solidity. We can also perceive what is not as is; i.e. secondary qualities such as sight, smell, sound, and touch. This is because transducers send transductions to the mind and the mind interprets the transductions as color, sound, taste, etc. Furthermore, we can perceive what is phenomenally a given as what is not. For example, we cannot perceive sourness and sweetness when we are sick. This happens when transducers are not functioning properly. A mirage is an example for perceiving something that is not as is. While we have access to reality, we do not have access to objective reality -- we have access to objective reality only subjectively. So in a phenomenal sense, we can perceive what is real as real, perceive what is not real as real, and perceive what is real as not real; but we cannot perceive what is not real as not real.

On a conceptual level, we can conceive what is as is and conceive what is not as is; our minds can envision (conceive) a BMW as we have seen it. We can also envision an idea of something (i.e. invention) and leave it at a conceptual level; we can think of making a pen completely out of gold and decide not to. Furthermore, we can conceive what is as is not. We can conceive of a time when there were no cars and imagine times when there were only buggies on roads. We can also conceive of what is not as is not. We can conceive of siblings we wish we had and then negate them out of our minds. It is only on a conceptual level that we can conceive of something that does not exist as not existing.

#### THE TRUTH OF COGNITION: KNOWING WHAT IS KNOWN AS TRUE OR FALSE

On an epistemic level, what we know is either true or false. What is real either is, or is not. What we know of the real is either true or false. As such, every statement made is either true or false.<sup>20</sup> We can know something as true or false, but it does not mean we can choose what is true or false. As Russell argues, we cannot make knowledge true or false. The mind creates beliefs, but it cannot be responsible for its truth. Beliefs depend on the mind for their existence, but they do not depend on the mind for their

truth.<sup>21</sup> We can choose to know but we cannot choose the veracity or falsity of what is known; we can only know what is as true or false. As mentioned previously, we are not interested in establishing what cognitive states are to be considered as knowledge. Instead, we want to know why what is known is considered as true or false. This is an important question because consciousness can rightly know what is true as true, but it also can wrongly know what is false as true and what is true as false, or willfully know what is false as false (as in the case of lying). Is truth an epistemic matter or a non-epistemic matter? This depends on the meaning of the word 'truth.' If truth is defined as what we know of reality, then truth is an epistemic matter. On the other hand, if truth is defined as reality, then truth is not an epistemic matter. We are completely responsible for our beliefs. Descartes argued that we are responsible for our beliefs, especially for our false beliefs. If we are held responsible for our true beliefs, then we are also responsible for our false beliefs.

Understanding what we know as true or false is a given. That is why foundationalists state that beliefs are either basic or non-basic, depending on whether beliefs are supported by other beliefs. Justificationists argue that evidence for beliefs are either internal or external. Beliefs are either directly justified or indirectly justified as true or false. Positivists argue that evidence should be verifiable before we can argue for the veracity or falsity of certain claimed knowledge. Does the mind care to know what the difference is when we say we have evidence or say there is evidence (internalist/externalist debate)? Why do we ask whether beliefs are basic or non-basic? Because we are aware that beliefs are either supported or not supported by other beliefs. We are aware that we know whether what we know is true or false. If we cannot verify whether what we know is true or false, then we are aware of why we choose to believe what we claim to know as being either true or false. While epistemic truth is either true or false, existential truth is an either/or matter, which is why our carbon-based brain allows us to hold beliefs with, without, against, or regardless of evidence. On an existential level, we can believe with, without, against and regardless of evidence because while evidence is the basis for establishing epistemic truth, no evidence can guarantee existential truth. Hence, it is an existential decision to believe or disbelieve what is known.

Are cognitive or mental states different depending on whether beliefs are held with, without, against, or regardless of evidential consideration? We can know with or without evidence and we can also believe with or without evidence. However, while we can know without believing, we cannot believe without knowing. That is why 'knowing is believing' in empirical matters<sup>22</sup> but knowing is not necessarily believing in non-empirical or existential matters. What part does willingness have in belief acquisition? Do we believe willingly or do we willingly believe?<sup>23</sup> One suggestion is that belief acquisition is a fiat of the will. If direct volitionalism purports that evidence is not a necessary part of belief, then one can have beliefs with or without, against and regardless of evidential consideration<sup>24</sup>. If we have control over belief acquisition then evidence is not the basis for belief. Knowing is a result of perceiving or conceiving, but believing is a result of accepting something as true or false. That is why we can know and not believe, but we cannot believe and not know. In empirical matters, it is imperative to believe. In non-empirical or existential matters, knowing is not necessarily believing. Hence, we have to choose to believe. The conscious self

is aware when we have to believe and when we have to choose to believe. The Christian belief in creation is not only a belief that does not have evidence, but it is also a belief that cannot have evidence. If Christians believe in *ex nihilo* creation then, by definition, creation is 'out of nothing.' There is no factory in outer space where one can find the templates for atoms, ants, antelopes, or Adam. Belief in God -- in any religion -- can be held regardless of physical evidence. Evidence for the physical existence of God cannot be evidence for the essence of God. It is only reason and faith that can provide the basis for belief in God. According to Kripke, names are given with identity in mind. We have no 'known ID' for God. If we could see God, there is no way we would be able to identify him. That is why belief in God can be held without evidential consideration. We can also hold beliefs to be true against evidence as exemplified in the Biblical story of Jonah and the Great Fish. The evidence we have should a great fish swallow anyone is that no one would survive inside its belly for three days. If evidence is the only basis for establishing the truth or falsity of beliefs, then what is known can be considered as either true or false only if there is evidence. Three questions can be raised with reference to evidence: (1) is there evidence, (2) is the given evidence verifiable, and (3) is there evidence that can guarantee belief? With epistemic truth evidence can provide the basis for the acceptance or rejection of beliefs, even though Kuhn pointed out that the principle of confirmation and falsification cannot be the only basis for establishing truth. But with existential truth, no evidence can guarantee belief; that is why we can believe with, without, against or regardless of evidential consideration, because reason and faith gives us reasons to know why we choose to believe.

We can ascribe notions of truth and falsity only to what we know. When we state what is known as a statement, then what is stated is either true or false. The laws of thought, regarding statements of thought, is such that every statement is either true or false. No statement is both true and false; if it is true it is true and if it is false it is false. Aristotle states that "to say what is as is and to say what is not as is not is truth—to say what is not as is and to say what is as is not is falsity."<sup>25</sup> As we have noted, only declarative statements are either true or false; non-declarative statements are neither true nor false. Other statements such as self-assertions ("I am proud"), promises ("I will come"), moral statements ("abortion is wrong"), and paradoxical statements ("this sentence is false")<sup>26</sup> were, until recently, understood as neither true nor false. However, since Tarski introduced the notion that veracity is a dis- quotation,<sup>27</sup> we can now argue that any statement can be understood as true or false. For example, "x" is true if and only if x is true. The acceptance of sense-evident truth is not an option because of its verifiable status. The acceptance of self-evident truths can be either verifiable or non-verifiable. Mathematical truths are verifiable, but moral truths are not verifiable; hence, we must choose to believe or disbelieve. Religious and existential truths are not verifiable and, therefore, can be held with, without, against, or regardless of evidence. The conscious self is aware when we have to believe and when we have to choose to believe.

### NEURAL BASIS FOR COGNITIVE STATES

Is there a neural basis of cognition? What is the link between cognitive states and neural activity? Transducers send transductions to the brain, as such, the conscious self or mind is aware of the content of cognition. Current research in neural sciences suggests that mapping can be done between cognitive states and brain states. The

advent of fMRI gives us the ability to observe correlates of neural brain activity in human subjects to study human cognitive processes, provided we develop appropriate data analysis methods to make sense of this volume of data.<sup>28</sup> Within this decade, cognitive neuroscience is rapidly demonstrating the potential of relating psychological states to neural states.<sup>29</sup> Decomposing the process of virtual perception into different psychological processes has already begun.<sup>30</sup> If this is the case, then we can assume that all mental states are related to brain states even though all brain states do not become mental states. So we could argue that any variations in mental states are variations of brain states. Hence, all cognitive states can be considered brain states and all variations of cognitive states can also be understood as variations of brain states. If every change in consciousness is accompanied by a corresponding change in brain activity, we may say that it is impossible to change the content of consciousness without changing the content of brain activity. If sense-evident truth can have a neural base -- and if all knowledge, as Kant argued, begins with experience -- then one can assume that self-evident truths must also have a neural base.

It appears that there is a conscious self that knows, a neural self that perceives and conceives, and a genetic self that determines what can be perceived or conceived. It is becoming more and more certain that cognitive states are related to brain states. Property dualists purport that certain brain states gain mental status, which makes cognitive states possible. Current research suggests that consciousness is a brain process, and if that is true, then its cognates -- cognition, choice and conscience -- should all also be brain processes. If EEG, fMRI and other tests can ascertain whether the brain is sleeping or awake, dead or alive, conscious or unconscious, then this should be a promising step towards ascertaining many other processes in the brain, such as cognitive states.

Do we have control over belief formation or its analysis? Current research suggests that the brain is understood as a "decision-making organ"<sup>31</sup> and an analyzing organ. Decision-making and analysis--a vital human trait or condition,<sup>32</sup> is also evident in belief formation. While Libet might not agree that the conscious 'I' decides what we do or say, he would agree that the neural 'I' makes decisions,<sup>33</sup> which the conscious 'I' is aware of. In any case, either the conscious 'I' or the neural 'I' analyzes cognitive states. Both cognitive and analytical states can be understood as neural exercises. The conscious self is not only aware of what and how we come to know what we know but is also aware of why we have to believe in sense-evident truths and why we must choose to believe in self-evident truth, if what is known is not verifiable. We are aware that we can know without believing but we cannot believe without knowing. The conscious self is aware when 'seeing is believing' and when seeing does not imply believing. That is why justification, or warrant for what we have to believe, is directed towards what is ontological, while justification for what we choose to believe is directed towards what is existential --the decision as to why we choose to believe. As such, verifiable beliefs are considered as true or false, and non-verifiable or existential beliefs are considered as an either/or matter.

### CONCLUSION

The conscious 'I', or neural 'I', is aware that we are cognizant of what we know, how we know what we know, and whether what we know is true or false.<sup>34</sup> The conscious 'I'

is aware that we cannot choose the veracity or falsity of what is known. However, if what is known is not verifiable, we are aware of why we choose to believe or disbelieve what is known — with, without, against or regardless of evidential considerations. We are also aware that we may not choose to know, but once we know that we know, we cannot choose not to know that we know. What is known can be caused (perceived), chosen (intentional) or innate (like mathematical truths). What is believed can be considered basic or non-basic, depending on whether beliefs are supported by other beliefs or not. We are cognizant that there is a distinction between what is real and what is known of the real, and know that what we know is part of what there is to know. Finally, we are cognizant that what is known can be recalled (remembered) or reminded, for we may forget what is known, but when reminded, acknowledge its veracity.

Being cognizant of knowing the basis, process, content, and neural connections for cognitive states, we can conclude that the nature of our carbon-based brain is such that it is accompanied by mental states. Mental states are sentient states, which are cognitive states. Cognitive states have content and the content is believed to be either true or false. The conscious self is aware of cognitive states, which is made possible by the genetic or neural self. Differentiation can be made between what, how and when what is known is true or false by the conscious self. 'Introspective consciousness' differentiates data from 'access consciousness' and tells us when evidence

is required to believe and when it is not necessary to believe. It is because of this that beliefs can be held as 'true' with, without, against or regardless of evidential considerations. If to know is to be conscious of knowing and, if being conscious is a brain process, then the content of cognition must also be a neural process and state. Cognition is an existential mode of existence accompanied by epistemic content. We now know that fMRI mind mapping tests can detect conscious and cognitive states. The question is, can we detect when cognitive states become belief states? Can we differentiate beliefs based on evidence from beliefs held regardless of evidence? Even if decoding subject-driven cognitive states<sup>35</sup> collected from fMRI data can differentiate beliefs held with or without evidential consideration, we may still have to address the phenomenological concern as to why and when our conscious self (our decision-making carbon-based brain) decides to believe with or without, against or regardless of evidential consideration.

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It is this that distinguishes us from animals, for animals know but are unaware that they know. Furthermore, we know when have to believe and when and why we choose to believe what we know. John R, Searle "The Irreducibility of Consciousness," Heil, John. *Philosophy of Mind: A guide and anthology*. (New York: Oxford University Press, 2004) 701. The understanding that 'to know' "p" entails that the subject knows that he knows that p. Taking K to represent knowing, the thesis can be symbolized as "Kp→KKp". (Jaakko Hintikka) Jean-Paul Sartre, *Being and Nothingness*, Trans. Hazel E. Barnes. (Washington: Washington Square Press, 1984) 12 Louis P. Pojman, "Believing, Willing, and the Ethics of Belief." *The Theory of Knowledge: Classic and contemporary readings*. Wadsworth Inc.: Belmont (1993) 528. Louis P. Pojman, "Believing, Willing, and the Ethics of Belief." *The Theory of Knowledge: Classic and contemporary readings*. Wadsworth Inc.: Belmont (1993) 527, 525-544. Bertrand Russell, "Truth and Falsehood," *Contemporary Readings in Epistemology*, 174. The mind can create beliefs but cannot make them true or false. Truth is not an intrinsic matter but an extrinsic matter. Ibid. 174. Colin McGinn "Can we solve the mind-body problem?" John Heil, *Philosophy of Mind*, 785. How "Water of the physical brain is turned into the wine of consciousness" is mystery. (781) David M. Rosenthal, "Explaining Consciousness," Chalmers, David J. *Philosophy of Mind: Classical and contemporary readings*. New York: Oxford University Press. (2002), 407. Why does something physical have mental properties? Tom M Mitchell, "Learning to Decode Cognitive States from Brain Images" *Machine Learning* 57, 145. Ibid, 175. James L Fossage, "How Do We 'Know' What We 'Know?' And Change What We 'Know?'" *Psychoanalytic Dialogues* 21. (2011), 56. John Pickering and Martin Skinner, *From Sentience to Symbols*, (Toronto: Univ. of Toronto Press, 1990), 72. Benjamin Libet, *Neurophysiology of Consciousness*, (Boston: Birkhauser, 1993), 160-161; 164-195. Jerry Fodor, *The Language of Thought*. (Cambridge, Massachusetts: Harvard University Press, 1975), 55. Fossage, "How Do We 'Know' What We 'Know?' And Change What We 'Know?'" 62. D. M. Armstrong "What is consciousness," Heil, John. *Philosophy of Mind: A guide and anthology*. (New York: Oxford University Press, 2004) 609. Even the sentence "this sentence is false" is a statement. And it can be considered as true or false. That is why we should not read the sentence — "this sentence is false" as a sentence but as a statement. Only the claims of the statement can be considered as true or false. (The obvious paradox here is if we go by the sentence itself—it clearly states that it is false but if you go by the claims of the sentence then the sentence is either true or false.) Russell, "Truth and Falsehood." 174. Louis P. Pojman, 529 Ibid, 527 Ibid, 528 Alfred Tarski, "The semantic Conception of Truth", Michael F. Goodman and Robert A Snyder, *Contemporary Reading in Epistemology* (NJ: Prentice Hall) 189 Every statement is either true or false. Here if one looks at the sentence itself—it is false. But if one looks at the claims of the sentence then one can argue that it is true—hence the paradox. Alfred Tarski, "The semantic Conception of Truth", Michael F. Goodman and Robert A Snyder, *Contemporary Reading in Epistemology*, 187-188. Mitchell, "Learning to Decode Cognitive States from Brain Images" 145. William Bechtel, Jennifer Mondale, "Multiple Realizability Revisited: Linking cognitive states and neural states," *Philosophy of Science*, 66, (June 1999), 175. Ibid, 190-195. (here Bechtel and Mundale try to show the decomposing visual processes can help us understand cognitive decomposition). Herbert Gintis, "A Framework for the Unification of the Behavioral Sciences" *Behavioral and Brain Sciences*, vol. 30 (2007), 2-3. Lesley K. Fellows, "The Cognitive Neuroscience of Human Decision Making: A Review and Conceptual Framework" *Behavioral and Cognitive Neuroscience Review* (2004), 3, 159. Stanley Klein, *Libet's Research on the Timing of Conscious Intention to Act: A commentary: Consciousness and Cognition*, 11, (2002) 273-274 Only in what we know can what is known be true or false, for what we do not know is neither true nor false. Shiver W.R, Ryali S, Rykehevskaia E Menon V. Greicius M.D. Decoding subject-driven cognitive states with whole-brain connectivity patterns.3-8