

AN ANALYSIS
OF
CONSCIOUSNESS

by
Milo Schield

Presented at the
Augsburg Philosophy Colloquium
May 13, 1993

ABSTRACT:

The primary purpose is to illustrate some methods for analyzing processes involving unobservable steps. These methods include the classification of processes into steps or parts, the definition of processes based on their observable characteristics, and the classifications of processes based on the unobservable parts. Since most arguments concern unobservables, these methods per se do not settle arguments such arguments, but hopefully they can clarify the issues involved.

This paper compares various schools of philosophy concerning consciousness. Consciousness (or being conscious) is viewed as a process and is defined by reference to its observable outputs: ideas. Consciousness is then classified based on its unobservable inputs and methods. Some arguments are given supporting the positions named as Aristotelian and Contextualism.

ACKNOWLEDGMENTS:

I am grateful to the members of the Augsburg Philosophy Department. Without their participation in these colloquia, I might not have been challenged to take on this topic. I am particularly thankful to Dr. David Appolloni for organizing these colloquia. His enthusiasm and energy have motivated me to work harder to support this project.

I gratefully acknowledge the ongoing influence of Dr. Richard Connell, University of St. Thomas. Dr. Connell is the author of *The Human Intelligence -- the Human Empirical Mode, Substance and Modern Science*, *Matter and Becoming*, and his text book entitled *Logical Analysis: A New Approach*. I have found his books worthy of continuing study and reflection over the past 15 years. Dr. Connell has staunchly championed the importance of understanding unobservables in both philosophy and science.

I gratefully acknowledge the ongoing influence of Dr. David Kelly, author of *The Art of Reasoning*. His text book helped me develop a better sense of how to define and classify.

Most importantly, I gratefully acknowledge the work of Dr. Harry Biswanger, author of *The Biological Basic of Teleological Concepts*. This presentation is *substantially* based on his presentation of this topic. I have found his style to be methodologically valuable in reasoning on complex issues. Dr. Biswanger has consistently defined unobservables by using observables, related characteristics to entities, classified processes in terms of inputs, methods and outputs, and introduced binomial classifications of the unobservable steps of a process. Since his taped lecture entitled "Consciousness and Identification" is not yet published, I am unable to provide a review or commentary. Thus, I have written and expanded some of his arguments in my own style. I have attempted to follow Dr. Biswanger's choice of classifications.

Any shortcomings should first be directed to me. If there be credit, that can be better allocated once Dr. Biswanger publishes his materials on this subject.

INTRODUCTION:

This paper assumes the reader is generally familiar with

- the distinction between observables (sensibles) and unobservables (insensibles).
- describing and defining unobservables in terms of their observable features
- the analysis of processes into parts: the inputs, the method of transformation, and the outputs.
- the nature of continuing processes (life, work, digestion, a business, an economic system)
- the distinction between an activity and a state of being.
- the classification of the members of a concept into classes based on some principle of division

The following is a brief review of some of these items.

1. Let's review the definition of unobservables

In Physics, we define geomagnetism (an unobservable geological phenomenon) in terms of its effect on the behavior of an iron needle (an observable phenomenon).

In Geology, we infer the existence of Pangea (an unobservable historic event when all lands were formed into a single continent) from such observables as similarities between the east coast of South America and the West Coast of Africa.

In Space Physics, we infer that the sun is the cause of the aurora by noticing a correlation between sun spots (an observable) and the average frequency and intensity of the aurora (an observable).

In Zoology, we define health (an unobservable phenomenon) in terms of observable characteristics such as the inputs (a good appetite, drinking lots of fluids) and the outputs (healthy urine, good skin color, healthy hair, strong nails, etc.)

2. Now let's review the definitions of various processes:

In Botany, we define photosynthesis (an unobservable zoological phenomenon) in terms of its inputs (sunlight) and its outputs (green color in plants).

In Biology, we first define pregnancy (a contextually unobservable phenomenon) in terms of its observable output: the birth of a child. With additional knowledge we may learn of the partially observable inputs (insemination). We may even learn about the unobservable process (the meeting of the sperm and ova, etc.)

In electrical engineering, we define electric power (an unobservable potentiality) in terms of its observable effects: the ability to generate motion, heat, sound, light or signals in electrical devices. The inputs are generally unobservable to the consumer as is the process by which electric power is generated and distributed.

In automotive engineering, we define the power (an unobservable) of a car engine (an observable entity) in terms of observable features. The most observable features pertain to the process: the number of cylinders, a V-body or an I-body engine, the use of fuel injection, etc. Less observable features of the process include the displacement per cylinder, the maximum RPM, etc. While the outputs are sensible (the rate of acceleration is evidenced by

your perception of effective acceleration), they are not readily measured (you can't see the horsepower, draw power, etc.)

In Economics, we define inflation (an unobservable process) in terms of the most observable feature -- the outputs: a rise in prices of goods and/or a fall in the value of money. After some study, one might define inflation in terms of the observable inputs or causes: additional money or near money in circulation without a corresponding increase in goods and services. The process of inflation is not readily observable and thus the subject of great controversy.

3. Let us review the relation between a state and a continuing action.
An action would seem to be active or dynamic; a state would seem to be passive or static. Thus running and talking are actions while lethargy and sleep are states. But some things can be both. Consider those actions that are continuing processes such as being awake. Is being awake a state or an action? Being awake does not entail any overt behavior so it seems different than active actions such as running or talking. Thus we could say it is a state. But being awake has some internal activity (a continuing flow of sensations into perceptions, etc.) so it seems similar to an action. Thus we could say being awake is an action.

In those processes which involve observable inputs, methods or outputs, the process is viewed most fundamentally as an activity. Thus day-dreaming, going to sleep by counting sheep, and meditating are thus best viewed as actions rather than as states of awareness.

In those processes where neither inputs, methods or outputs are readily observable, the process is best viewed as a state. For example, the greenhouse effect is a process involving doubly-reflected sunlight which heats the surface of the Earth. The specific contribution of this effect is not directly observable. Thus, we speak of the state of the atmosphere.

4. Let's review the process of classifying the members of a concept.
A proper classification is mutually exclusive (all members belong to no more than one class) and jointly exhaustive (all members belong to no more than one class). A binomial classification in terms of contradictories is automatically mutually exclusive and jointly exhaustive. For example, the classification of people into female and non-female is a proper classification.

A good classification involves a principle of division which is fundamental or essential. Classifying people based on whether they are left-handed, right-handed or ambidextrous is a proper classification [provided all the people have at least one functional hand], but it does not entail anything which seems to be fundamental or essential about human beings.

With this brief review, let us turn to the topic of consciousness.

CONSCIOUSNESS:

What is consciousness? This certainly is one of the great questions of Philosophy. Different philosophers have given different answers to this question. The answers given effectively determine how one views human beings. And since consciousness is not entirely observable, there is no empirical method for selecting the correct answer. To organize our thinking on this subject, we must proceed carefully and deliberately -- seeking first what is most commonly and readily accepted and understood.

What can grammar teach us about 'consciousness'? 'Consciousness' is a noun; it is related to the adjective 'conscious' (as in "Consciousness is the state of being conscious" or "He was conscious of his achievement"). The word 'conscious' is the root in other words such self-conscious and unconscious. By their forms, it appears that self-consciousness is a species of consciousness, while being unconscious is a contrary (a privation) in relation to being conscious. The noun 'consciousness' is often used in philosophy, but the predicate adjective 'conscious' seems more fundamental.

What are examples of consciousness? To be conscious is to be aware, knowledgeable, or cognizant. Obviously consciousness is not externally observable. But as human beings, we are intimately aware of ourselves as being self-conscious -- internally aware of some of our thoughts and feelings. We infer that others are conscious because we observe behavior in others that we presume reflects a similar capacity or activity. *Whenever an object of study is unobservable, we look for its relation to an observable; whenever an object of study is a characteristic of selected entity, we look for which kinds of entities are so related.* Once such entities are identified, it may be easier to define the associated property or behavior. For example, caring is an unobservable. We observe certain behaviors that appear altruistic and would be signs of caring. Caring is a characteristic of animals. Thus caring could be defined as the ability of animals to offer values for others at some cost to themselves. Thus, we can immediately eliminate trees, coats and houses as being caring.

What things are not conscious? Inanimate objects are not conscious. Although Aristotle may have seen final causes at work in the motion of rocks rolling down hills, we do not believe that inanimate objects are conscious. Plants are not conscious. Although vegetative life is certainly sensitive to external stimuli, we would never say that morning glories are conscious by day and unconscious by night.

What things are conscious? Humans -- normal adults -- are definitely conscious in the sense of thinking. Animals and humans are both conscious in the sense that each can be rendered unconscious by anesthetic. Thus being conscious or unconscious is a characteristic of all animals. Now if consciousness is a feature of each animal, is this feature localized as are sight, hearing and taste or is it diffuse as is health and happiness?

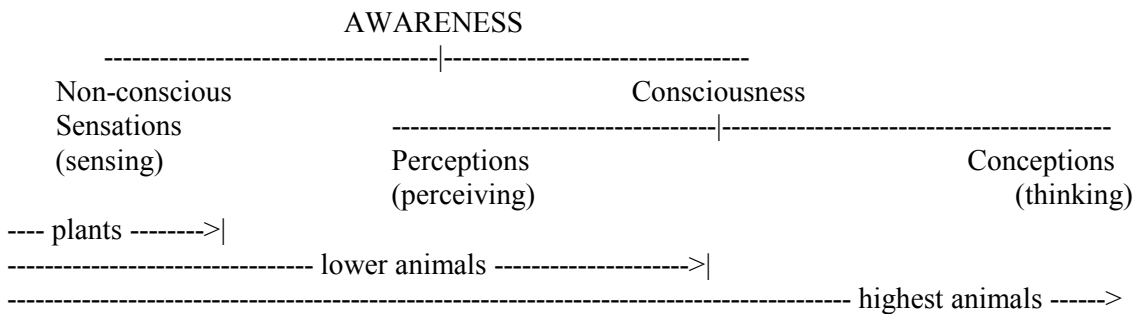
To what is consciousness most closely linked? In The Empirical Intelligence, Connell repeats Piaget's observation that children at age 6 view thinking as localized in the actions of the mouth. Physically we know that consciousness is intimately linked to our brain and our nervous system. Yet we commonly speak of consciousness as a mental activity -- as an activity of our minds. As adults, we know that mind is distinct from brain. Psychologists deal with our minds (e.g., mind games), physicians deal with our brains (brain surgery), and psychiatrists can deal with both. But while brain is a physically observable, mind is a different matter entirely: *mind is an*

unobservable. Thus defining consciousness as a property or function of a mind is not as helpful as we had hoped. We have simply related one unobservable (consciousness) to a second unobservable (mind).

What activities are examples of consciousness? As humans, we first encounter our consciousness in being awake (as opposed to sleeping). Thus we could define being conscious as the state of being awake. But consciousness is more than simply being awake. In unfocused day-dreaming, or in trance-like meditation we are awake, yet we are virtually unconscious. Being awake is a sign of being conscious -- just as a smile is a sign of being cheerful. Indeed, we may conclude that being awake is a necessary condition for being conscious. Still being conscious and being awake have differences as well as similarities.

Since consciousness is a psychological function, what psychological concepts can assist us in defining consciousness? Beginning with Aristotle, those who study the psyche -- the principle -- of living things have noted their common capacity for awareness. The awareness common to all organisms is generally classified into three members: sensations, perceptions and conceptions. Vegetative organisms possess only the awareness of sensation. The lower animals possess the additional awareness of perception -- the awareness of entities as things. The highest animals possess the additional awareness of conception -- the awareness of concepts as things. By sensation, organisms sense that something is; by perception, organisms perceive that some thing is; by conception, organisms conceive of what that thing is.

So how does consciousness relate to sensation, perception and conception? When we sleep we say we were unconscious. But we were not totally unaware. Our sense organs still functioned; we could be awakened by a loud noise. But we do not form percepts of things from these sensations while we sleep. We must be awake to integrate the sensations of touch, sight and sound to identify the cause of our distress as a long needle stuck into our arm. Thus, consciousness is more than apprehending simple sensations. Plants are certainly aware of simple sensations, yet we do not assert that plants are conscious. To summarize, we classify the capacity of awareness common to all living things into non-conscious awareness (the awareness of sensations) and conscious awareness (the awareness of percepts and concepts). Conscious awareness can be classified into perceptual consciousness and conceptual consciousness (thinking). The following tree diagram summarizes these relationships.



Having related consciousness to perception and conception is a step forward. Although percepts and concepts are not externally observable, we have direct internal awareness of our percepts and concepts.

Since consciousness is in part unobservable, we should try to identify that part which is observable. For example, we define hearing in terms of sounds and seeing in terms of light. In

both cases the subject is a process and in both cases, the observable characteristic is the input (light or sound).

In most general terms, what is consciousness? When we note that consciousness is an ongoing mental or psychic activity, we are saying that *consciousness is a process*. [Consciousness may also be categorized as a state of awareness. The term state generally connotes a static thing -- a position, a place or an unchanging condition. While a particular mode of action can be designated as a state (just as a verb can be transformed into a gerund), the activity is the more fundamental of the two.]

All processes can be divided into three parts: inputs, processes or goals, and outputs. This is the IPO model commonly used in business management. Since consciousness is a process -- a continuing activity--, it can be analyzed in terms of its parts. Let us consider each part of the process and see which parts are observable.

- (1) What are the inputs common to all conscious awareness? Sensations -- events which generate biochemical responses in our nervous system. Are these inputs observable? No! Try again.
- (2) What are the processes common to all conscious awareness? This question is difficult to answer. We cannot readily see inside our mind. We have difficulty reflecting on our own thinking. We recognize signs of this process: anxiety and mental fatigue when our thinking is confused; happiness and inner satisfaction when our thinking is productive. Even if we conclude that somehow differences are being categorized into similarities, this process is very abstract. So given that our understanding of the process is vague, consider the central question. Is this process itself observable -- either externally observable in others or internally in ourselves? Not really! Even with our limited understanding, we are quite confident of this.
- (3) What are the outputs common to all conscious awareness? The output of perception is the percept -- the idea of something as some thing; as a unified thing. The output of conception is the concept -- the idea of a particular thing as a kind of thing. Are either of these observable in others? No; not directly. Are either of these observable in ourselves? Yes; by reflection we become aware that we have and form ideas.

Let us summarize. Our goal is to define consciousness essentially and objectively. We could define consciousness as the awareness common to animals. This clearly identifies the entity involved as a necessary condition, but it gives no clue about any aspect of the process. We could define consciousness as an animal's response to sensations. But this definition is not very fundamental or useful. In order to define consciousness essentially we must remember that *consciousness is a process*. And in order to define consciousness objectively, we must remember that *the outputs of consciousness are the most observable part of this process*. Thus a definition of consciousness that is both essential and objective would be that *consciousness is the mental process of forming ideas; consciousness is the action of mind while forming ideas*.

Now, this may not seem earth shattering. But, by starting with only what is most observable, we avoid building in any predisposition to a particular theory of the unobservable aspects of consciousness.

Classification of Consciousness.

Our goal is to clarify different views on consciousness. The first step was to define consciousness in a way that did not preclude these different views. The second step is to investigate alternative classifications of theories of consciousness. Classifications force our thinking to be efficient. And efficiency is the handmaiden of effectiveness. But more importantly, classifications force us to think hierarchically. For these reasons, we turn to classifying consciousness.

It would appear that we have already classified consciousness into forming either percept or concepts (thinking). And so we have. These are the outputs of the process. The disagreement lies beneath each of the two members. We need to consider each branch separately but first we must identify a systematic approach.

Recall that in the IPO model of consciousness, consciousness is a three-step process having inputs, procedures and outputs. Within a given classification of the observable outputs, we can classify theories of consciousness by making distinctions within and among the unobservable parts of the process (e.g., volition versus determinism).

Outputs: What kinds of outputs are formed by consciousness?

As mentioned, previously, the primary distinction is between percepts and concepts.

- a. In all animals, consciousness generates percepts -- ideas of something as being a particular, unified some thing. Percepts could be classified into whether they are pro-life (food) or anti-life (fight or flight). Percepts could be classified into friend (caretaker for cats) or foe (mail carrier for some dogs).
- b. In higher animals, thinking generates concepts. In logic we study propositions as relations between concepts and arguments as relations between propositions. Thus, we could classify conceptual consciousness based on whether the outputs are concepts, propositions or arguments. In Metaphysics, we study the existential status of the referents involved. Does the referent exist in reality (this paper) or does it exist in our minds (concept of unicorn). We could classify the conceptual consciousness based on the status of the referents in reality. Many other classifications are possible. Are the ideas descriptive or evaluative, particular or universal, concrete or abstract, opinions or facts, etc.?

Processes: What kinds of processes or actions are involved in being conscious?

In this area, we have more questions than answers.

- a. Are ideas formed volitionally or are they pre-determined?
- b. Are ideas simply the random product of a chaotic process or is the process determinate?
- c. Are ideas formed individually or must they be formed as part of a collective process?

Inputs: What kinds of inputs are involved in being conscious? What causes our percepts or concepts? Where do percepts or concepts come from? Here again we have more questions than answers.

- a. Do we have innate ideas? (Plato)
- b. Are we genetically disposed to certain concepts?
- c. Are we environmentally or socially disposed to form certain concepts?
- d. Are we reincarnated with attitudes which affect the formation of new ideas?

Obviously there are many ways to classify consciousness within each part. The number of inter-related combinations between these three parts is extensive. And if this were not enough, remember that the consciousness unique to the highest animals (conceptual awareness) is

different from that of the lower animals (perceptual awareness). In most general terms, we have a four-dimensional space: the three steps and the fourth dimension of perceptual versus conceptual.

Which classification is best? This is obviously determined by our goals, purposes or ends.

GOALS OF THIS CLASSIFICATION

The goals of this classification are

- to promote communication between those who hold alternative views
- to categorize different views based on fundamental similarities
- to promote conceptual clarity in dealing with this complex topic.

People seldom disagree on the observable aspects of things. People disagree most about the unobservable aspects of things. Physical scientists labor to eliminate such disagreements through controlled experimentation. Social scientists must use mental reasoning to achieve similar ends.

Since the unobservable aspects of things are the basis for disagreements, we should classify on these aspects. In the case of consciousness, the inputs and methods or nature are unobservable. Thus, if we can classify consciousness on these two bases, we may illuminate the perennial discussion of this topic.

Still, there are many ways to classify within the inputs and nature of consciousness. To simplify as much as possible, let us first select only one classification from each of these two unobservable steps or parts: one from the inputs or causes and one from the process or nature. And to simplify still further, let us force these classifications to be binomial or two valued. If we have two independent variables (causes and nature) and each has two values (binomial), then we can illustrate the result in a two-by-two table. Let us first attempt this classification for perceptual consciousness: the level of consciousness common to all animals.

PERCEPTUAL CONSCIOUSNESS

a. Inputs or causes

One way to classify perception is locate the origin of perceptions as either internal or external. This distinction is relative to the boundary of the sense organs. Views based on causal efficacy of genetics, innate ideas and reincarnation would locate the origin of perception internally --inside that boundary. Views based on the causal efficacy of environment, society, and personal experience would locate the origin of perception externally -- outside that boundary. Thus we locate the causes of perception are being either internal or external. Having made this distinction, it appears to entail the following as a corollary. If internal causes are held as a primary, then internal reality is primary and external reality becomes a secondary characteristic (an effect). Whereas, if external causes are held as a primary, then external reality is primary and internal reality becomes a secondary characteristic (an effect).

b. Process or nature

A common theme among the various issues raised earlier is whether the process is passive or active. Under this classification, predestination and determinism view consciousness as passive while free will view consciousness as active. Chaos or random determination would view consciousness as passive while self-determination would view consciousness as active.

Having selected two variables having two binomial values, we now form a two-by-two table classifying consciousness perceptually.

Consciousness Perception	Causes of Perception	
	Causes are Internal External reality is an effect	Causes are external Internal reality is an effect
Consciousness is passive		Name: Naive Realism View: Consc. is 'reproduction'
Consciousness is active	Name: Subjectivism View: Consc. is 'production'	Name: "Aristotileanism" View: Consc. is 'identification'

Since we are dealing with unobservables, there are good reasons to give for each of these positions and for the many variations on each. [As an exercise, what would you place in the upper-left-hand corner of this table?]

Naive Realism: Consciousness is passive reproduction of the external world.

Strengths: It is reality based. The external world exists independent of our consciousness. This view is strongly supported by our model of vision. In seeing, our eye reproduces the shape of a tree on the retina. And in perceiving, our mind reproduces the idea of a tree.

Weaknesses:

1. Since our consciousness is passive, the quality of our ideas is determined by the quality of our senses. If our senses are fallible, then our consciousness is fallible. It appears that our senses can be deceived, thus our consciousness can be deceived. Furthermore, it may mean we have no way to decide how to correct any such errors.
2. If our consciousness has an identity, that that identity will interfere with the process of exact duplication. Thus, our consciousness must have no particular identity. But if it has no identity, then exactly what is it?

Subjectivism: Consciousness is active and omnipotent in creating our own reality.

Strengths: Consciousness has an identity; consciousness is independent of the senses. It may use some sense data but its process is not passively determined by the data it receives.

Weaknesses:

1. Reality -- external reality -- becomes nothing but a personal creation of consciousness. Thus, reality becomes a subjective and ephemeral experience. Nature no longer exists as something to be experienced and dealt with; nature is no more than an idea that some of us happen to share in common.

2. Validity -- the idea of a proper relationship between our internal ideas and external reality -- becomes totally meaningless. The notion that some ideas are invalid becomes a stolen concept.

Aristotelianism: Consciousness is the active identification of reality.

Strengths: Aristotelianism shares the positives of both Naive Realism and subjectivism. Reality exists independent of our consciousness and our consciousness is active. Aristotelianism avoids the negatives of both Naive Realism and Subjectivism. Our consciousness has an identity but that does not reality is not just a projection of our consciousness.

Weaknesses: The validity of the senses is somewhat relative. Do we perceive things as they really are (naive realism) or not (subjectivism)? Thus one wonders whether this middle ground is real or merely a great false hope.

CONCLUSION ON PERCEPTUAL CONSCIOUSNESS

While each of the three views has strengths and weaknesses, the primary debate has been between the two extremes: naive realism and subjectivism. In such a debate, the choice was either to sacrifice reality and adopt subjectivism (to avoid the problems on the infallibility of the senses), or to sacrifice consciousness and adopt naive realism (to avoid the problems of an unlimited mind trying to create reality).

Consider two the classic debates between naive realists and subjectivists:

1. On whether perceptual consciousness is valid:
 - a. On the affirmative, naive realists argue this follows given that consciousness faithfully copies reality by reproduction.
 - b. For the negative, subjectivists argue that perceptual consciousness can error. A classic example involves preheating the right hand and precooling the left hand of the same individual. Both hands are placed in the same water. The two hands 'reproduce' different sensations from the same external reality.
 - c. Conclusion: The subjectivists seem to have a stronger argument
2. On whether perceptual consciousness has value:
 - a. For the negative, subjectivists argue consciousness has no value since there is no special value in 'knowing' the reality which one has internally generated.
 - b. On the affirmative, naive realists argue consciousness has value as a direct consequence of our need to know reality. In fact, subjectivists might have to be silent on this issue, since without an external reality, the nature and standard of value becomes questionable.
 - c. Conclusion: The naive realists seem to have a stronger argument.

When faced with this dichotomy one could choose either validity (subjectivism) or value (naive realism) but never both. The consequences of this dichotomy are readily traceable throughout the history of philosophy.

The "Aristotelian" position has good strengths, but can it overcome the apparent weaknesses? The crucial issue is can we perceive reality. In what sense do we know reality as it is. Certainly our senses can be deceived (subjectivism), but our senses do give us valuable data about reality

(naive realism). How do we resolve this apparent contradiction involving the validity and value of the senses?

The classic answer to this dispute is the distinction between form and object. The assertion is that we always perceive the form of the object; we perceive external reality (objects) in various forms.

First, note what perception is not. Note that there is no right or proper form of perception. A blind person may 'see' by means of touch; an airline pilot may 'see' by means of radio waves (radar), a submariner may 'see' by means of sound waves (sonar). Perception is an analogy -- not a direct reproduction. But if we grant this, can't the Naive Realists say that the Aristotelian consciousness cannot know reality as it really is? (Now obviously they can say this) But they cannot assert this unless either the senses are always valid (or if they can be invalid, then there is someone else who sees the world as it is and communicates this knowledge to them).

Now note what perception is. Perception is analogous to the transformation of data that occurs in data processing. In processing data, we can preserve its content while changing its form. Alphanumeric character data can be encoded in Morse code, ASCII, EBCDIC, bar-codes or special OCR fonts. Consider the process of sending a fax. Light and dark reflection from a paper are translated to voltages, to tones, back to voltages and finally to inks which yield dark reproductions on a white paper. Yet at every stage, the information is carefully preserved.

In this 'Aristotelian' view, perception is perception of the form. We require the use of our consciousness -- our minds -- to determine the nature of the object being perceived. Thus, this Aristotelian view of perception might be labeled as intelligent realism or cognitive realism. The mind is neither totally dumb (as in naive realism), nor totally omnipotent (as in subjectivism). The mind, like everything else, has a nature, an identity and natural limits.

CONCEPTUAL CONSCIOUSNESS:

Having clarified the discussion on perceptual consciousness, we must repeat the process for conceptual consciousness.

First, what are the observable features of conceptual consciousness? Here an observable part of the IPO process is again the output: ideas (concepts, propositions and arguments). To simplify this presentation, consider only concepts. This reduces conceptual consciousness to just concept formation. Unlike perception, the inputs -- perceptions, memories and previously formed concepts -- are somewhat observable.

Secondly, what are the unobservable features of conceptual consciousness? The nature of the process is unobservable. Yet it seems that the process involves some perception of similarities. One related issue is whether real things have a universal similarity (a universal part) or are they just distinct particulars. And while the inputs per se are somewhat observable, their relationship to reality is not observable. Thus a related issue is whether the concepts have a basis in reality or not.

Here again, we create a two-by-two table of conceptual consciousness:

Consciousness Conceptual	Basis of Similarity in Reality	
	No basis in reality	Some Basis in Reality
Nature of similarity	No basis in reality	Some Basis in Reality
Real things have a universal part		Name: Realism View: Concepts are 'repros'
Real things are just particulars.	Name: Subjectivism View: Concepts are arbitrary	Name: "Contextualism" View: Concepts are contextual

Again, in dealing with unobservables, there are good reasons to support each of these positions.

Realism: **Concepts are mental reproductions of things having identical universals.**

Strengths: There is some basis in reality for concepts.

Weaknesses: No two things are exactly alike. Real things do not have identical universals.

Subjectivism: **Concepts are arbitrary (and ultimately meaningless)**

Strengths: Consciousness has an identity. Concepts are formed independent of the senses.

Weaknesses: Concepts simply disregard external reality. Validity is still meaningless.

Contextualism: **Concepts are contextually based on similarities between particulars.**

Strengths: Concepts have a basis in reality (like Realism)

 Thus consciousness is informed by external reality.

 There are no universals in real things (like subjectivism).

 Thus, consciousness has an identity and nature in forming universals.

Weaknesses: Contextualism may open the door for arbitrary subjectivism.

 Contextualism may open the door for reproductive realism.

CONCLUSIONS FOR CONCEPTUAL CONSCIOUSNESS:

In arguing for conceptual Contextualism, one must identify the exact process involved in concept formation. Exactly how do we obtain similarities (universals) without universal forms? How is consciousness limited by having a specific nature? How can concepts be validated if consciousness has a specific nature? But that is the subject for another paper.

SUMMARY:

The objective of this paper was to introduce methods for dealing with processes involving unobservables. There is room for strong disagreement on the characterization of the various cells; there is room for strong disagreement on the relative strengths and weaknesses of the various views. But hopefully, the methods used to obtain the two tables will prove useful to all concerned with this ongoing discussion. And more importantly, the methods used will be valuable in analyzing a wide range of problems involving processes.