

# Knowledge, Consciousness, and the External World

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### Consciousness of the External World

One key issue connected with the scope and limits of human knowledge and human belief systems is the ontological relationship between human consciousness and the physical world. In particular, the question has arisen in the history of both the philosophy and psychology of perception whether our perceptual consciousness is actually *of* an external physical world, or whether perceptual consciousness is limited and trapped within a inner, subjective reality. Since perception is the foundation of human knowledge and the most primordial form of consciousness of the world, if perception is subjective and cut off from the world, then so are all other forms of knowledge and consciousness (Hirst, 1959, 1965).

The perspectival and selective nature of consciousness is one justification used to support the idea that consciousness is inherently subjective; indeed the term “subjective” can mean perspectival, or relative to a point of view. Conversely, the term “objective” can mean not relative to a point of view. As the argument goes, through perception we never apprehend the objective world—the world independent of perspective—but rather just a limited, selective, and skewed perspective on it.

Theories that consciousness is an inner state of the brain, or caused by inner states of the brain (Blackmore, 2004), provide another justification for viewing consciousness (including perceptual consciousness) as subjective, for whatever are the objective properties of the physical world, consciousness does not envelop such realities. Consciousness is an inner and private reality, grounded in the brain, and separate from the external physical world. This “private” quality of consciousness is another meaning that has been given to the term “subjective.” The objective physical world is beyond this subjective “private” reality.

Kant argued that we can not know anything about the “thing-in-itself” since we are only acquainted with our phenomenal experience that is structured by the categories of human understanding (Lombardo, 1987, 2006a, Chapter Four). Along similar lines, many modern theorists and researchers argue that our perceptual experiences are structured in terms of our concepts and theories, and hence are not strictly speaking direct apprehensions of the world. Many lines of research and thinking in the psychology of perception further reinforce this view that perceptual consciousness is a mentally fabricated (or constructed) reality, and not really of the objective external physical world, since our biases, emotions, personal tastes, attitudes, cultural frameworks, and motives all color and contribute into our perceptual experiences (Gregory, 1966, 1970; Arnheim, 1969; Wade and Tavis, 2003).

The realm of consciousness also seems “private” since from the perspective of an outside observer, one can never apprehend or observe the content of the

consciousness of another mind. We can not “observe” the thoughts, emotions, or even unique perceptions of another. We can not even observe them if, opening up a person’s skull, we look at the ongoing workings and activities of another person’s brain. In this sense, consciousness is private and cut off from the external physical world.

All these arguments support the general view that the subjective conscious realm and the objective physical realm are distinct realities, and our sphere of awareness is inherently limited to the former. The former sphere is our own private realm of personal consciousness, in which we are inextricably trapped. This conclusion leads to the solipsistic quagmire, that all we really know is our own subjective, conscious existence.

In critical response to such an extreme subjectivist view of consciousness and human knowledge, we can question both the absolute separation of the subjective and the objective, as well as the related dualistic notion separating an inner realm of consciousness and an external realm of physical reality.

Does it necessarily follow that because consciousness is inextricably subjective—perspectival, selective, conceptually-theoretically interpreted, and colored by emotions, motives, and personality—that it does not also have access to objectivity, at least to a degree? Moreover, is it true that consciousness is an entirely private reality separate from the external physical world?

- First, we should note that our perceptual abilities are investigative, active, and exploratory, and we can move through multiple points of view (or pathways), and in so doing, expand our perspectives on reality; as active explorers we move away from narrowly circumscribed perspectives.

Instead of thinking of perception as a passive and receptive process, following Gibson (1966, 1979), we can view perception as an active and exploratory process that engages the world and searches out relevant facts about it. Perceptual consciousness is not a private theatre. The process of selectivity is an active and intentional “digging into things.” In this sense, perceptual consciousness can be viewed as a reaching out (guided of course) toward the world. The perceiving animal contributes into the experience of the world but the contribution involves an active and selective engagement, the teasing out of relevant facts.

More broadly, base on an ecological theory of consciousness, instead of viewing consciousness as an “inner display of representations,” consciousness can be seen as an active process of reaching outward into the world—of engagement and relationship with the world. Consciousness, at the level of perception, is not a metaphorical “bubble of awareness” but an interface between the self (or mind) and the world. Following from the principle of reciprocity, the conscious self inextricably interfaces with the physical world.

- Second, theories and concepts guide us in the selection of what is important to attend to: Although theories and concepts can contaminate and distort our

consciousness of reality, the construction of them is geared to facilitate deeper and more encompassing understanding. Through theoretical knowledge we perceive the world better. And we can and do evaluate our theories to determine their applicability and validity with respect to observable reality.

Feyerabend (1965, 1969, 1970) argues that theories facilitate more penetrating understanding, rather than creating subjectively distorted (or biased) representations. Theories (as well as component concepts) tell us what facts are important in the indeterminately immense array of potential facts to focus on. Theories guide attention; theories guide experimentation. Theories make our investigation into the world more intelligent and encompassing. Theories are observational instruments or technologies of the mind. Of course, theories can blind us, but their positive function is to facilitate increasingly deeper exploration and understanding of the world. Theories move us toward the revelation of more encompassing invariants or ubiquitous structures within nature and the world.

- Third, as an ongoing evaluative process, in science and other disciplines concerned with accuracy in observation, we are continually on the lookout for personal biases and contaminations, and attempt to systematically eliminate them from our observations and descriptions of reality. In such spheres of conscientious inquiry we strive toward increasing objectivity.
- Next, inspired by Gibson's theory of perception, we can argue that objectivity is progressively realized in perception through the isolation of invariant properties across perspectival transformations. Objectivity is not a separate category or reality from subjectivity; the objective is embedded within the subjective. Within a framework of expanding subjectivity we work toward progressive objectivity. What we perceive are actual qualities of the physical world, rather than mental representations of those qualities (Lombardo, 1987).
- Although the consciousness of a person is relatively opaque to another person, it is not absolutely so. We can be aware of the consciousness of another, and to some degree the content of their consciousness. We can observe emotions and desires, and most notably, in intimate direct communication and interpersonal engagement, we seem to make direct contact, person to person, of one conscious self with another conscious self. We can see into "the soul" (and resonate) of the other and vice versa.
- Finally, as the cosmological scientist Lee Smolin (1997) has argued, there is no such thing as a detached, purely objective observer, or a world that could be observed or understood independent of all possible perspectives. As the noted twentieth century philosopher Bertrand Russell argued a hundred years ago, when we examine what physical science studies and describes, it is always "relational properties," rather than anything absolute or intrinsic. Indeed, following from the principle of reciprocity, there is no "thing-in-itself" independent of its relationships with other things. There is no meaningful world (an absolute objectivity) independent of the universe of

relationships and perspectives (Lombardo, 1987, 2011e). Hence, the idea of an absolute objective physical world which we postulate in dualistic opposition to our conscious subjective reality does not make any sense. We perceive the physical world but this world perceived is a relational and perspectival reality.

We are embedded as observers within the world and our perceptions and our theories will always be contextualized within such a relational and perspectival framework. The best we can come up with is an understanding of the world encompassing all possible perspectives and relationships, as an asymptotic limit, out of which abstract and invariant laws and principles are revealed, but there is no meaningful “objective” world beyond this reality.

### **A Brief History of Western Epistemology**

Within the study of human knowledge there has been ongoing inquiry and debate regarding the methods that should be used to acquire and validate human knowledge. The growth of human understanding about the world has been strongly and inextricably guided by philosophical (and even theological) principles regarding how to acquire and validate knowledge (Tarnas, 1991). Knowledge and understanding are normative or prescriptive processes in humans, with various standards and ideals purposefully used to guide both the development and assess the credibility and validity of knowledge claims.

Throughout history, various theories of knowledge have been developed, with prescriptions regarding how the proposed principles contained in each theory should be followed in the acquisition and assessment of knowledge (Solomon and Higgins, 2010). Independent of such intellectual endeavors, humans in their everyday interactions with the world have articulated and practiced various strategies and rules of thumb in the acquisition of knowledge, and many of the more intellectual versions of knowledge acquisition and justification in philosophy and science are just refinements of everyday practices and principles.

If we are asked to determine if we should believe in an idea or knowledge claim, what methods or principles should we use to ascertain the credibility of an idea? Moreover, how do we comparatively assess multiple knowledge claims (or ideas) that appear to address the same phenomenon and yet seem incompatible? In line with King and Kitchener’s (1994) third stage of cognitive development, how do we determine the best idea? If it is our moral responsibility to assess the credibility of our beliefs, how do we go about doing this?

If we were a complete relativist, skeptic, or nihilist such questions would have no significance or meaning, since, within the above mindsets, all ideas are equal, and equally without real validity. But even though there are individuals who explicitly profess such epistemological viewpoints, it seems to me that everyone has beliefs and conducts

their lives in accordance with their beliefs, and in some manner or form, using some type of standards, has made decisions about what to believe in and what not to believe. Functionally speaking I do not think that there are any real absolute skeptics, nihilists, or relativists.

There are certain key influential epistemological principles and methods that show up throughout human history. First, there is the principle of authority. We should believe in what authoritative figures state is true. As one version of this view, we should believe what our ancestors (including parents) believe. As another version, we should believe in what our sacred texts state, since such texts were presumably inspired by some absolute authority figure, such as God. Although this type of epistemology may sound groundless, arational, and archaic, we could argue that it makes good sense to follow the ideas of our ancestors since their ideas have stood the test of time. A similar position can be taken regarding the validity of ethical claims: Follow authority. Yet, the authoritative view of assessing knowledge claims cuts off further advances in human knowledge, creating dogmatism. On what grounds can we dispute the claims of authority? A greater authority? And then, of course, if we have conflicting authorities, which authority should we accept? If we say a supreme authority, such as God, then what if we have different and competing notions of God?

A second epistemological principle (or philosophy) that has taken many forms through history is rationalism. Beliefs should be evaluated on their logic or reasoning. And new beliefs should be developed through sound reasoning. A line of thought that seems muddled or contradictory should be rejected. Logic can mean consistency of meaning in a line of thinking, such as in logical deduction, where conclusions should be consistent with starting premises. For example, if all men are mortal and Socrates is a man, then it logically follows that Socrates is mortal. The philosophy of rationalism though does not provide a guaranteed method for developing knowledge or assessing knowledge claims, since the validity of any logical conclusion depends on the validity of the premises in the logical argument, but how are we to determine the validity of the premises? With another logical argument, in which the premises of the first argument are conclusions based on other premises? But we are then in an infinite regress.

Rationalism can be connected with the coherence theory of truth. A complex idea of many parts, such as a scientific theory or world view, can be judged on the grounds of whether the component parts fit together into a consistent whole. Do the parts logically entail and support each other? A complex idea in which the parts stand disconnected or even contradict each other is not coherent and consequently can be viewed as (at least to some degree) deficient or erroneous. Yet, coherence can not be taken as a reliable indicator of the truth; one can have a coherent and logically consistent psychotic belief system with no correspondence with reality.

With the rise of modern science, the epistemological theory of empiricism came more to the forefront of thinking regarding how to create new knowledge and assess existing knowledge claims. Empiricism is the philosophy that knowledge arises through observation (perception) and if we are going to assess some knowledge claim then we

should determine if there are observable facts that support (or confirm) the knowledge claim. As a psychological hypothesis regarding how beliefs, concepts, and ideas develop in the human mind, empiricism seems to make sense, in that we seem to learn and develop a body of knowledge (what we believe is knowledge) through perception and interacting with the environment. The epistemology of empiricism argues that our beliefs need to be evaluated relative to perceptual experience. Does the belief correspond to anything we can observe through the senses? Even if our ideas frequently originate in perception, it is noteworthy that people also seem to create lots of beliefs that go beyond what is observable. The epistemology of empiricism would argue that such beliefs can not be considered knowledge since there is no observational evidence (facts) to support the beliefs. The dictum of epistemological empiricism is: Check the facts. Empiricism advocates for a correspondence theory of the truth: Does the belief correspond (or align) with the facts?

Empiricism as a philosophy of knowledge can take different forms. Empirical induction, as a method of knowledge acquisition, states that general ideas (or generalizations) should be developed through observing a sufficiently large number of particular examples illustrating the general idea. The general idea that all robins have red breasts is inductively confirmed by observing a sufficiently large sample of individual robins and determining if they all have red breasts. Although undoubtedly we develop general ideas about the world (abstract generalizations) through observing samples of particulars, as the skeptical philosopher David Hume pointed out, no matter how many times the sun has risen in the east in the morning, we can never with certainty draw the inductive generalization that the sun will always rise in the east in the morning. The general idea does not logically follow from any finite number of samples of particulars.

One important modern development within empiricist epistemology is hypothesis testing through experimentation. If someone believes that if X occurs, Y will follow, then a way to test this hypothesis (a general idea) is to first produce X (the independent variable in an experiment) and then observe if Y (dependent variable) follows. Instead of just observing the world and drawing generalizations, in an experiment the world is actively manipulated in order to see if our beliefs can be confirmed. The problem of induction though shows up in experiments as well, since no matter how many times we observe that Y follows X, one can not justifiably conclude that Y will always follow X. Still, all things considered, the development of the experimental mode of inquiry and validation of knowledge claims, has evolved, incorporating statistical techniques, into a complex and sophisticated mode of inquiry and assessment in modern science.

Another version of empiricism, developed by the twentieth century philosopher Karl Popper, is falsificationism (Popper, 1959, 1963). Although we can never unequivocally confirm the validity of a general hypothesis through experimentation, we can falsify or refute the hypothesis with just one counter-example. If in an experiment, Y does not follow X, then the hypothesis that Y always follows X has been shown to be false. (Similarly if one believes that all robins have red breasts and we discover one robin that does not have a red breast, then the general idea has been falsified.) The philosophy of falsificationism at least allows us to eliminate erroneous general beliefs. Yet, the

conclusion that a general belief has been falsified rests upon the assumption that the reported results of the experiment are not open to question. Can we be sure that our observations are valid?

It is on this kind of question that we run into a problem with empiricism. Although it makes sense to build our ideas and check them through observations, including testing, it is a frequent psychological phenomenon that different people can look at the “same thing” and report different phenomena. Individuals may look right at something, and miss important features of it, or even misperceive what they are observing (illusions, for example). It is clear that people with different beliefs, theories of reality, and cultural values may perceive and describe features of reality differently, the mindsets coloring the perceptions. Facts are theoretical (Feyerabend, 1965, 1969), and people can be mistaken about their observations. Hence, we can't be certain that a general hypothesis has been falsified if we “observe” a counter-instance to the general hypothesis since we may be biased or mistaken in our observations. The observed “facts” can be self-serving.

Another influential approach to knowledge is intuitionism. Someone can say that in contemplating some idea, they directly intuit (or see with the mind's eye) the meaning and truth of the idea. The idea makes perfect sense to them. Artists and mystics, but also, at times, mathematicians, logicians, and scientists, have based their knowledge claims on intuitive insights, in which the truth seems to simply reveal itself to the mind. Indeed there may be no way to even put the insight into words; it is more like an inner perception. From a psychological point of view, the idea of intuition and insight makes sense, in which we see as a whole and all at once the meaning of an idea; such insightful understanding can be of the kind where all the parts are grasped as fitting together—the insight of coherence. Yet, as Descartes noted, even if it seems perfectly self-evident to the human mind that “One plus one is equal to two,” this direct intuition can possibly be wrong. In general, being convinced that one can simply “see the truth” is no guarantee of the truth, and often reflects wish-fulfillment or closed-mindedness, if not delusional thinking, in the one who has seen the “truth.”

Another important idea in epistemology is theoretical pluralism. In all the views of knowledge presented above, a single knowledge claim or theory is assessed relative to some standard. But humans are frequently exposed to multiple views or theories that conflict with or contradict each other, and the challenge is how to choose the best view among many. This is especially true in science. Perhaps the more realistic way to assess knowledge claims is in a framework of comparison; we may not be able to determine whether a belief is unequivocally true, but we may be able to determine which among a set of competing beliefs is the best (at least at the present moment in time). We can use any or all of the epistemological criteria listed above (as well as others) in making our evaluative comparisons (Lakatos and Musgrave, 1970).

We can argue that without having competing views on a topic it is hard to see what may be the weaknesses (or strengths) of any particular idea; comparative evaluation, through the contrast effect of perception, brings into more vivid light the distinctiveness

and substance of a point of view. If we only entertain one point of view, attempting to repeatedly validate it, we run the risk of dogmatism, closed-mindedness, and the stagnation of knowledge, for we have nothing with which to compare our singular point of view. Pluralism facilitates growth and greater clarity of consciousness through comparison; critiques from opposing views help us to sharpen, assess, bring into relief, and at times change our own point of view.

Even this brief survey of different epistemologies illustrates that just as there are different theories of reality, and different theories of ethics, there are also different theories and approaches to the question of how knowledge is obtained and how it is validated. Moreover, throughout human history there has been competition among these different epistemologies; in our present day and age, authority-based epistemologies compete with scientific epistemologies (empiricism, experimentalism, and rationalism) (Anderson, 1990, 1995).

Embracing the ideals of flexibility and openness, we could adopt the view of the philosopher Paul Feyerabend who argued that (at least throughout the history of science) whatever principles of assessment have been proposed regarding separating true knowledge from error, meaningless speculation, or mere opinion, scientists have achieved notable advances in human knowledge in ignoring such principles. Within epistemology, involving methods for both creating and evaluating knowledge claims, “every principle is open to question, including this principle.” For Feyerabend, epistemology should be anarchistic. Anything goes, or nothing goes, depending upon how you see it. There is no guaranteed method for determining if some belief is knowledge; there is no guaranteed way to determine if a belief is false or without value (Feyerabend, 1970, 1995; Lakatos, Feyerabend, and Motterlini, 1999).

Given the pluralistic nature to epistemological theories, there has been throughout history, an evolutionary dimension to epistemology. There have been shifts in relative importance of different views, competition and mutual articulation, and the emergence of new perspectives and refinements on older doctrines. A psychology of the future which embraces evolution and the evolutionary trajectory of the future needs to embrace the open evolutionary nature of epistemology. How we should evaluate knowledge claims, and indeed how we should cultivate and enhance our present body of knowledge are open to further evolution. We are still evolving (and probably always will be) our self-reflective understanding of knowledge and understanding as natural phenomena within the human mind, both at the individual and collective levels, and equally we are purposefully evolving our standards for evaluating these psychological activities and their products.

It might seem desirable if there was some simple and self-evident process that could be learned and developed that would allow us to generate and validate knowledge and understanding within our minds. But it appears that no such “Royal Road to the Truth” exists, and it is a key feature of wisdom, that this lack of a guaranteed epistemological method is recognized and seen in a positive and constructive light. There does not seem to be any method or set of methods that guarantees certainty, and the need for

certainty in the quest for knowledge, carried to an extreme, is an expression of a defensive and rigid mind. Instead we need to be open to possibility, and yet at the same time optimistic. We seem to be advancing in our understanding of the universe, as well as our understanding of how to understand and evaluate our systems of belief.

Connecting together these points on epistemology with Kitchener's theory of cognitive development, it seems to be the case that we are neither privy to pure and perfect illumination of absolute truth nor entrapped in a solipsistic subjective cell with no possibility of achieving knowledge about the external world; these two alternatives align with stages one and two in Kitchener's theory of cognitive development and modes of understanding. Rather our consciousness and knowledge of the world is a contingent and subjective process that progressively moves in the direction of greater understanding and connection, empowered through the evolution of the human mind and methods of knowledge acquisition and assessment, without ever realizing perfection.

With a future-directional evolutionary vision of wisdom—a state of heightened future consciousness—it makes sense to adopt a proactive and optimistic approach to the development of knowledge and the means for acquiring and validating knowledge. Wisdom involves a complex and active process of self-reflecting on how to realize knowledge and ways to improve this process; as the history of epistemology reveals there is no simple or guaranteed formula for the truth, but there is ongoing thoughtful and purposeful evolution.

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