Philosophy and Law
George Cheatham

One of the great divisions in legal theory is that between proponents of natural law and proponents of legal positivism. Briefly, proponents of natural law hold that law should reflect what is morally right. Positivists, on the other hand, hold that law is law and that while there is an absolute moral imperative to obey it the law itself has no necessary connection with morality. Both of these views have been argued persuasively by intelligent legal thinkers and each side has offered arguments containing both strong points and problematic areas.

One of the most prominent proponents of natural law has been St. Thomas Aquinas, on whose account law is given two natural bases. Aquinas draws largely from Aristotelian teleological concerns in defining law, saying, “it is by law that man is directed how to perform his proper acts in view of his last end.” Thus, the law is to help citizens achieve self-realization. However, Aquinas does not make his plea for natural law on Aristotelian grounds alone. Aquinas is also a distinctly Christian thinker. Thus, law is given a second natural base, not only helping citizens achieve self-realization but also making provisions for the enforcement of the divine law.

While acknowledging that not all the laws of God could possibly be enforced by secular authorities, Aquinas believes that law receives its legitimacy largely from partaking in the divine law. Aquinas posits, “all laws, in so far as they partake of right reason, are derived from the eternal law.” Thus, the law of God consists not only in the statutes of the Bible but also in the dictates of reason. Though Aquinas does not explain this point in detail, the most probable explanation would be that God gave human beings reason so as to best order their affairs. Aquinas quotes St. Augustine in support of this point as saying, “in temporal law there is nothing just and lawful but what man has drawn from the eternal law.”

This idea of right reason allows Aquinas to argue that human law is connected to morality and is not simply an arbitrary set of social rules. Genuine laws are, in his view, created according to the dictates of reason. Thus he says, “human law has the nature of law in so far as it partakes of right reason.” However, he acknowledges that not all actual laws are based on reason. Aquinas holds that “even an unjust law, in so far as it retains some appearance of law, through being framed by one who is in power, is derived from the eternal law; for all power is from the Lord God.” Aquinas supports this assertion with scriptural justification, “Let every soul be subject unto the higher power. For there is no power but of God; the powers that be are ordained of God.”

The opposing view is that of legal positivism. Positivism holds that whatever is law is law and has no necessary connection with what should be. Positivists believe that all citizens have a moral duty to obey the law simply because it is law. They hold that failure to do so would erode the basis of ordered society. In other words, law is a factually, historically, and socially real thing that can be studied without any reference to moral standards. This does not relieve citizens of a moral obligation to obey
laws, since law is the bulwark of a well-ordered society. Positivism does not necessarily hold that law and morality are completely unconnected. It merely holds that there is no necessary connection between the two. Most positivists will freely admit that laws are often made because they are what people feel is right.

In conclusion, there are two basic approaches for dealing with the authority of law. One is the natural law approach that claims morality as the source of law. The other is the positivist approach that holds there is no necessary connection between law and morality.

Notes

2 Ibid., 115.
3 Ibid.
4 Ibid.
5 Ibid.
A Short Guide to Marx’s Theory of Alienation
(with contemporary example)
Timothy Appel

In the essay “Estranged Labor,” Karl Marx writes, “Conscious life activity distinguishes man immediately from animal life activity.” This consciousness is one’s ability to choose his/her actions with the means to employ them towards an end, not just towards a necessity. Therefore, according to Marx, the mark of the human species is the freedom of human activity and the ability to creatively act upon all that is nonhuman. However, it is also Marx’s belief that in a capitalist society, the work most humans participate in may appear to be a willful act, but in fact, this work separates or alienates people from their possible glory. To illustrate this point I will use Marx’s theory of estranged labor to as a guide to examine the following subject: a Dallas Cowboys cheerleader.

Marx states that there are two components to estranged labor. The first is the result or product of the labor. In a capitalist system the end result of one’s labor is not a product for the laborer him/herself, but a product that is to be sold primarily as a means of obtaining subsistence. This process is the objectification of labor; the product now exists as an object, a quasi-entity, alien to and outside the self of the laborer. Since the laborer must continue to create products in order to survive, the object of his labor gains a command over the laborer: the laborer’s free will is bonded to the alien object. Marx states, “the more the worker spends himself, the more powerful becomes the alien world of objects which he creates over and against himself, the poorer he himself--his inner world--becomes, the less belongs to him as his own.” That is, the laborer lives less for him/herself and more for producing and perfecting the objects of his/her labor.

The second component of the theory of estranged labor is the act of production. Marx argues that acting to produce objects in the capitalist market “is not voluntary, but coerced; it is forced labor.” Again, the labor is done only to obtain money for subsistence, and thus it is no true form of human expression. He writes, “labor is external to the worker, i.e., it does not belong to his essential being, that in his work, therefore, he does not affirm himself but denies himself...does not develop freely his physical and mental energy but mortifies his body and ruins his mind.” Hence, this labor is estranged from man because it is not labor he/she would willingly choose to conduct nor needs to conduct for his/her personal development.

Indeed, the two components of estranged labor can be found in the job of a Dallas Cowboys cheerleader. The end product of a professional cheerleader is crowd motivation, with the related product of physical appearance. Crowd motivation and the very specific standards of a cheerleader’s physical appearance are unlikely things a woman would want for herself. Rather, the ends of her labor must meet the expectations of her employers, the owners of the Dallas Cowboys, and the crowd. She can not cheer how she would like to because her idea may differ from what her employers and the crowd would like it to be. Likewise, she must take on a physical appear-
The object of her labor is alien to her, and her end product is alienating to her personal being. She must train, practice, and engage in extensive cosmetic upkeep—all far beyond what any person would do in their everyday life—in order to produce the end product. Her labor is therefore estranged from her.

As one can see, the labor of a Dallas Cowboys cheerleader gives no chance to press or develop oneself and its end is only to provide physical subsistence. As Marx would say, a woman in this profession is conducting labor that is alien to her being and desires and it is therefore dehumanizing her.

Notes


2 In regards to the chosen subject, a Dallas Cowboys cheerleader, it was the occupation assigned for examination—they were ‘in vogue’ at the time.

3 Marx specifically addresses the implications of one using materials from the world—materials that could otherwise have been used by the laborer for their own purposes—to creating an actual physical product, an object. However, I believe the point of objectification, where the laborer becomes a slave to his/her product, is the more general and more important point. Based on that premise, it is contemptible to interpret objectification as the creation of a ‘quasi-entity,’ facilitating examination of labor in a service industry.


5 Ibid., 110-111.

6 Ibid., 110

7 Noteworthy comment from this essay’s grader: “Yeah, but they say they like it way.”
Descartes’ Radical Doubt:
Why Descartes’ Radical Doubt Needs His Scientific Method
RJ Donovan

Contrary to the opinion of Bertrand Russell, Descartes’ method is not that of radical doubt but is rather that of the scientific method as outlined in the Discourse on Method. However, if the method is truly what Descartes as a philosopher espouses, then why does he delve into the process of radical doubt at all? Is this superfluous blather, or rather is it a calculated maneuver? Descartes relies upon radical doubt because he needs it to establish a world in which his scientific method is true without question.

In order to show this, first we must look at the scientific method and that which accompanies it, namely analytic geometry and Cartesian physics. This will be accompanied by a brief look into Descartes’ motivations as a scientist and as a philosopher/metaphysician. A careful examination of radical doubt will follow, showing what is lost and what is gained by such a method. This examination will lead directly to why Descartes needs radical doubt. Finally, the implications of radical doubt will be discussed, both in terms of his effects on philosophy and on society in general.

In part II of the Discourse on Method, Descartes outlines a new scientific method with which he says he has made tremendous progress. He has done so to embrace “the advantages of [logic, algebra, and geometry] ... yet [remaining] free of their defects.” This revolution comes about largely in reaction to the schooling in Aristotelian philosophy that he received at the hands of the Jesuits. Descartes had been told that he would find knowledge and certainty in his schooling, but after his entrance he found himself only more confused and disillusioned than ever; he had found no certainty, only ever-increasing doubts. So Descartes left school, and traveled the world, learning about different people and different customs. This only further complicated his search for truth. Eventually, he lunged for clarity and decided to call all his former beliefs and opinions into doubt, holding on only to certain guiding principles and certain moral maxims that he knew would not fail him in. He had great success in applying these principles to algebra and geometry, thus inventing analytic geometry. From this follows the scientific method, which is a systematic approach of posing hypothesis, doubting them, isolating variables, and breaking down problems into their most basic components, all with the goal of finding truth. And because he is always seeks truth, Descartes establishes the method of radical doubt. He builds truth from the ground up, by accepting nothing until it is proven true.

The first stage of radical doubt is relatively simple—even if everything else is thrown into question, and we doubt everything, we cannot doubt that we are doubting. Hence, “I think, therefore I am.” The second stage, however, is crucial. Descartes asks if perhaps he is dreaming—that is, if everything he thinks he is experiencing is a figment of his imagination. However, even in dreams, “two plus three makes five, and a square does not have more than four sides. It does not seem
possible that such obvious truths should be subject to the suspicion of being false." Thus Descartes concludes that although he can doubt composite things, he cannot doubt the simple and universal parts from which they are constructed like shape, quantity, size, time, etc. While one can doubt studies based on composite things, like medicine, astronomy, or physics, one cannot doubt studies based on simple things, like arithmetic and geometry or those that can be expressed mathematically and quantifiably.

Finally, in the third stage of radical doubt, Descartes confronts the idea that God, in whatever shape or form it inhabits, is actually an "evil genius" whose entire function is to deceive and trick. Could this evil god not deceive people into thinking that their sensory experiences were real when they were actually total illusions or dreams? Descartes comes to the conclusion that even simple things can be doubted. Concluding here would mean that nothing in the world could ever be proven completely, making a mockery of science and mathematics.

So, this process of radical doubt is outlined in the first meditation, and if read alone, the conclusions reached are cut and dry. Meditations two and three talk about God, and build up to the beginning section of meditation four. The fourth meditation though, changes radical doubt completely. In the fourth meditation, Descartes concludes, "that it is impossible for God ever to deceive me, for trickery or deception is always indicative of some imperfection." This statement changes everything! Because God can no longer deceive, and is no longer the evil genius, the third stage of radical doubt is irrelevant. The last stage of radical doubt is effectively thrown away, allowing us only as far as the second stage. Descartes begins by doubting everything. He then establishes that we can doubt everything except ourselves as thinking beings. Next he establishes that we can doubt everything except that which is mathematical. Finally, he establishes that we could doubt everything if God were an evil genius but, God is not, so we cannot doubt everything.

It should now be apparent why Descartes needs the process of radical doubt. In the language of Thomas Kuhn, Descartes is causing a "paradigm shift." He is essentially causing a radical change in the worldview of his time. The old paradigm/worldview was that of Aristotle and Aristotelian scholasticism. Science, in this older worldview, is a matter of taking the immediate evidence of sensory experience and deducing certain conclusions from it. The sensory experience is indubitable, and the deductions are logical, so all scientific knowledge is based on absolute certainty. Descartes' re-conception of the mind shakes the foundations of Aristotelian scholasticism. If sensory experience is no longer self-evident, then we can no longer deduce scientific truths from these observations, making the methods of the previous 2,000 years unacceptable. Consequently, the modes of science and philosophy of the ancient world are left behind, creating the modern era. Another way of expressing this is to say that the doctrine of final causality, embraced by Aristotelian scholasticism and the Christian church, has been discarded in favor of efficient cause. This is because there is no room for final causality in the math and physics that Descartes unounds. And when the world has been reduced to only mathematical components, the scientific method becomes the essential tool in the quest for mathematical, scientific, and absolute certainty. The process of radical doubt ensures that the process of the
scientific method is completely valid.

The scientific paradigm that we have today owes a great deal to Descartes. Today, we have taken Descartes’ method further than he ever did. In contemporary sciences we conclude that we can never have absolute certainty in—even by observing something, says the Heisenberg uncertainty principle, we alter what is observed. All we can hope for are sound theories that are supported by careful observations.

Descartes himself does not reach this conclusion; he wanted to reach certainty and find it absolutely. His search for certainty, beginning with the famous line "I think, therefore I am," has largely defined the course of a great deal of philosophy since his time. We can debate whether Descartes is right in having found certainty in this claim, and we can debate what kind of knowledge this is, but it seems clear that it is not a kind of knowledge that is applicable to science as a whole. In finding this certainty, Descartes hopes to rebuild science in the Aristotelian method of deduction from certain first principles.

In conclusion, we can say that Descartes writes with the hope of changing the way people view the world. He creates the process of radical doubt not as an end in itself. Rather, radical doubt is a means with which to establish the paradigm of the world as quantifiable, thus paving the way for the scientific method. The scientific method is the tool used to find truth and certainty. It is this method that ultimately allows us to tame sciences like medicine and to render us “masters and possessors of nature”. In reading the Meditations without reading the Discourse on Method, any student of philosophy is doomed to finding only misunderstandings and misrepresentations in the doctrine of Radical Doubt.

Notes

2 Ibid., Part IV, paragraph 32.
4 Ibid., Part IV, Sec. 53
The New Philosophy of Science
Joseph Cioni

In his seminal work titled *Perception, Theory and Commitment: The New Philosophy of Science*, author Harold Brown is highly critical of the logical empiricists' philosophy of science, which was so dominant in the twentieth century. In order to explore Brown's "new image of science," it is first necessary to enumerate three key stances that the logical empiricists take, as well as examine various flaws that Brown believes are inherent in them. After this is accomplished, Brown's own philosophy of science will be unveiled. My own analysis of Brown's theory will be interwoven with my presentation of its essential components. At the conclusion of this paper, it should be clear to the reader that Brown's philosophy of science is indeed superior to that of the logical empiricists.

Three crucial beliefs maintained by the logical empiricists are summed up nicely by A.F. Chalmers in his book *What is this thing called science?* Chalmers writes:

> If observation of the world is carried out in a careful, unprejudiced way, then the facts established in this way will constitute a secure, objective basis for science. If, further, the reasoning that takes us from this factual basis to the laws and theories that constitute scientific knowledge is sound, then the resulting knowledge can itself be taken to be securely established and objective.

This argument assumes, first of all, not only that unbiased observations are possible, but also that unbiased and scrupulous observations can provide individuals with unambiguously clear images of reality that are independent of theory. Secondly, it professes that, because these pure images are the substance out of which facts are derived, the facts themselves must be both objective and incorrigible. Since scientific knowledge is composed of theories and laws, and theories and laws arise out of facts, as long as one makes legitimate inferences from fact to theory, scientific knowledge itself will be "securely established and objective." A third belief encapsulated in the above argument, although it is more subtle than the other two, is that, since theories derive from facts, there is a clear separation between the two and the latter provides the foundation for the former.

These conceptions, of what scientific knowledge is, and of how one arrives at it, are completely unacceptable to Brown. One of the first ways Brown challenges the logical empiricist view is by trying to discover the sort of function that perception has in relation to our knowledge. Are one's perceptions and observations alone the source for obtaining pure facts?

To answer this question, Brown notes that just looking at things will not provide any useful information about them. If one is to attain any meaningful information from something, one must see it "as something" - for it must first be recognized. According to Brown, for one to be able to recognize something, one must originally possess some of the relevant body or bodies of knowledge. For example, if one was...
not familiar with Chinese language and opened a book written entirely in Chinese, one would of course be able to recognize that it is a book because of prior experience with books. Even if it was a simple children's book, however, this individual would not be able to recognize the Chinese characters, and would thus fail to discern even the title of the book, much less anything about its plot. What can account for the fact that a person fluent in Chinese would readily learn all about the story in the book? Both the person fluent in Chinese and the person who is not are seeing the same strokes that form the same characters, yet both are also having radically different perceptual experiences.

The answer of course lies in the fact that the two individuals have different degrees of knowledge in different areas. In addition to knowledge, one's beliefs, culture, and experiences can also shape what one perceives. This is why Brown maintains that "...my knowledge of the activity I am engaged in is epistemologically more fundamental than the data I observe, in that the demands of this activity determine what data I pay attention to and what data are ignored as meaningless." Perception, in which knowledge and beliefs predominantly regulate what one perceives, is said to be, depending upon the situation, either theory-laden or concept-laden.

To help elucidate this idea, Brown refers to instances of seeing objects or events "as something," for the sake of gaining information, as instances of significant perception. Moreover, items of significant perception are, for Brown, meanings. This is why different people can extract different meanings from any item of significant perception, precisely because perception is filtered by one's subjective experiences. The relevant body of information one possesses acts as a lens through which one identifies items and then derives information from them. The same holds when one recognizes facts about an object or an event, cases where one "sees that" something is the way that it is. To refer to my example of the two individuals looking at the Chinese children's book, only the individual literate in Chinese would be able to see that it is a children's book with a certain storyline and characters. The illiterate person would probably see that it is a book, but that would be the extent of that person's knowledge entering into the situation, and therefore the extent of information elicited from it.

The strength of Brown's argument against the empiricists' claim that observations and observation statements are free from theory, and that they provide the foundation for obtaining facts, comes out fully when it is applied to scientific observation. Brown rightly points out that a scientist does not observe every single detail around him, but only those details that are pertinent to what he is studying. If one was studying gravity, one would not observe fish or religious ceremonies, but only those events thought to be relevant to one's experiments. Moreover, and perhaps more revealing, consider what sort of explanation an empiricist would give when a scientist recognizes an observation to be problematic. Brown declares that "he is clearly observing its meaning in terms of the theories he holds, for he had no beliefs about what ought to occur... no occurrence could be perceived as being problematic."

As an illustration of this, consider that the retrograde motion of the planets was not perceived to be problematic until Plato introduced the theory that the motions in
the heavens are perfectly circular." Retrograde motion was only considered a problem because the theory that guided the observations was not in accordance with what was being observed. To suggest that the observations of retrograde motion taken by themselves were determined to be anomalous would seem to be incomprehensible. A natural question to ask is: "With reference to what are the observations of retrograde motion alleged to be problematic?" A possible answer one might provide to this question - and remain consistent - would be that the observations themselves are problematic with reference to nothing. In order for something to be problematic, however, there has to be a desired or postulated outcome that one is expecting, and this anticipated outcome is a product of a theory. Without this expectation, an observation could not rightly be said to be problematic because it has to be problematic relative to something that was previously accepted or expected.

Perhaps the "fatal blow" to the empiricists' claim that unbiased and uninterpreted observations are predominantly the source of facts occurs when Brown notes that observations of this sort must be completely devoid of meaning (which comes from theories). Without meaning, however, it would be impossible to recognize something. Or, in Brown's words, "...the pure observable must itself be an unrecognized object; it cannot even be an object which is recognized as being unfamiliar." Clearly this is not how scientific research is performed, nor is it how theories and facts are accumulated, because nothing would ever be able to be recognized!

The logical empiricists also maintain that the criterion for accepting or rejecting a proposed law or theory is how well it accords with the observed data. If a theory is proposed and it is incompatible with the observed data, one must jettison this theory and develop another one that fits better with the observations. This is the system that the empiricists subscribe to because they believe that there are independent observation statements that are isolated from theory and are universally true. But is his truly the method for scientific research?

Brown emphatically denies that this is the actual way that scientific research is conducted. One of the ways Brown undermines this conception is by probing different historical situations in which an anomaly was deemed to be a research problem at one time and then at another time determined to be a counter-instance of a given theory. He provides a cogent example. When, in the early 1800's, the orbit of Uranus was observed not to coincide with Newtonian calculations, it was viewed as a research problem that needed to be explained within the Newtonian framework. The only acceptable variable that could be considered to "affect the orbit of a planet" was the existence of an as yet unknown planet exerting a gravitational force. When Neptune was actually discovered, this was thought to greatly enhance the validity of Newtonian mechanics. Similarly, when this same discrepancy between Newtonian theory and observations was found with the orbit of Mercury, it was once again taken to be a research problem and it was again theorized that there was an unknown planet influencing Mercury's orbit. This time though, not only was this planet never found, but Newtonian mechanics never did successfully explain the irregular orbit of Mercury. The theory of relativity eventually did account for Mercury's orbit, and once it dethroned Newtonian physics, Mercury's orbit was suddenly viewed as a counter-instance of the Newtonian system.
Compared to the logical empiricists’ notion of scientific research, this example is quite illuminating. If observations are the basis through which theories are formed, why was there only one possible solution to the irregular orbits of those two planets? If the only criteria one has to justify a theory are observations, it appears that there could be an infinite number of causes of the anomalous orbits. Additionally, how could the anomaly of Mercury’s orbit change the meaning of the empiricists’ objective facts at different times? If theories are isolated from and preceded by pure facts, how could a change in theory alter the connotations of these facts?

Brown believes that the more accurate way of looking at scientific research is to begin by first looking at the accepted fundamental theory during any time period. It is this theory, not observations, which determines the meaning of observed events as well as indicates “which observations are relevant... which of the relevant ones pose problems, how the problems are to be attacked, and what counts as an adequate solution to the problem.”

To return to the example of the orbit of Mercury, Brown argues that it was originally viewed as a research problem because the observation was looked at through a Newtonian lens. Since different experimental practices and scientists repeatedly failed to explain the irregularities of the orbit, the anomaly became more serious and threatening to Newtonian physics. The shift from Newtonian theory to relativity theory explains why the mismatch between theory and independent reality can be viewed as a research problem in one context - and a counter-instance in another: namely, that relativity theory better accounts for the observed phenomena.

Brown borrows the term paradigmic presuppositions from Thomas Kuhn to help explain this surprising concept. Brown defines them as “…propositions which are accepted as a result of scientific experience but which come to have a constitutive role in the structure of scientific thought.” The fascinating point is that these paradigmic presuppositions shape one’s sensory experience as well as the world that one is studying, but they are far from being universal or objective. Consequently, successive failures to account for an anomaly under one set of paradigmic presuppositions can induce one to manipulate the presuppositions themselves. This series of events is, for Brown, the precursor to a scientific revolution.

What exactly occurs during a scientific revolution? Brown believes that they involve transformations in the fundamental presuppositions and scientific concepts of a theory. Unlike the empiricists who believe that, at best, philosophical presuppositions play a marginal role in the development of theories and concepts, Brown likens scientific concepts to knots in a web that are intricately connected by strands that symbolize scientific propositions. To continue with this metaphor, the perceived meaning of a concept is dictated by where it is located in the web. Subsequently, the meaning of a concept is basically a dance between the concept, its philosophical presuppositions, and the network of scientific propositions.

When a scientific revolution does occur, the web that is superceded is not completely obliterated, so that a new web emerges composed of entirely novel features. Rather, as Brown asserts, “some of the strands which come into a particular knot are removed, others are redirected, and some new strands are introduced.” In other words, old scientific theories are renovated, as opposed to being completely razed...
and rebuilt. After all, the decision to adopt a new scientific theory would involve the use of standards that are common to both theories in order to demonstrate why it is a better candidate for accounting for a given phenomenon. I entirely agree with Brown that the basis for choosing between rival theories depends not only on how well a given theory explains the body of phenomena being studied, but also on the degree to which a newly accepted theory eliminates and thus accounts for anomalies related to a rival theory. Otherwise, I believe it would be impossible to assess whether a new theory is superior to a present one. These kinds of judgments have been made throughout the history of science, so it is safe to presume that Brown is correct.

The entire process of scientific change involves discoveries, and this process is embodied in what Brown calls dialectical change. One must first be aware of the fact that in order for something to be categorized as a discovery, it has to meet the requirements of the research situation. The logical empiricists incorrectly declare that there is a clear division between the context of a discovery and its justification in that the latter involves standards that are logically sound. Brown resolutely denies this belief as he contends that the context of discovery is intimately related with the set of justifications that are made to support it. A discovery usually comes about by adjusting one or more presuppositions, which, in turn, transforms the range of acceptable solutions. I think it would be an amazing coincidence that the context of a discovery was completely isolated from its set of justifications. Although there is not a strict mechanical set of rules that can yield a fruitful discovery, there is an intelligible pattern that guides the scientist trying to solve the problems. This pattern can be described because, as mentioned before, scientists, regardless of how revolutionary their theory is, necessarily appeal to the current accepted theory. That is to say that Newton would have been unable to develop his laws without being intimately aware of the findings of Kepler, Galileo, and Copernicus.

To return to Brown's concept of dialectical logic, Brown characterizes it as a "conceptual framework which will allow us to clarify the relation between new scientific discoveries and the existing body of scientific knowledge and problems in the context of which these discoveries were made..." The primary strength of dialectical logic is that it both examines the scientific research performed from the point of view of the researcher and studies the development of and relationship between successive theories. Thus, it makes sense of the history of science. Whereas deductive logic is concerned with form, dialectical logic is concerned with the content and the context of a theory. New discoveries and theories are both dialectical since there is a discernible continuity with that which precedes them, and is made possible by anomalies. They additionally both eventuate a change in the meanings of the research processes they helped create. I believe that the cohesiveness Brown cites between theories is unquestionably more viable than the logical empiricist theory explaining the history of science, because the practice of science suggests that we should give up the quest for eternal standards and to instead examine the shared standards in a given situation. How else would one attempt to comprehend a system where, at different points in history, scientists have held contradictory standards?

It is necessary to reiterate the critical point that, under different theories, one's
presuppositions and observations will have different meanings. This is certainly not compatible with the ideal of knowledge being infallible. Since nature is always changing, the best that human beings can do is to have an opinion about natural occurrences that is anchored by previous knowledge and thorough research. Brown candidly admits that “scientific knowledge in any era is what scientists actively take as such, and the scientific knowledge of one era may be rejected as an error in the next.” He further points out that even the rejection itself of a formerly accepted claim is shaped by views that are inherently prone to being unreliable. If scientific knowledge is merely a fallible body of accepted provisional truths, what expectations should one have about what science can do and what are the requisite steps for determining this?

In response to the latter half of that question, if one agrees that definitive rules cannot make a scientific claim more reasonable, then Brown feels that the best course of action is to individualise practical wisdom for this aim. Under the guidance of experience and prior knowledge, this individual should submit a candidate theory that ameliorates the unresolved problems of the previous theory, and still incorporates many of the prior theory’s results. A theory that is founded properly is one that is inter-subjectively supported by the scientific community. Although this might leave a sour taste in the mouth of the empiricist, it does follow from the arguments given. Brown is not suggesting that, just because scientific knowledge is uninterpreted in terms of well-supported opinion, no opinion can be qualitatively better than another. What he is professing is that we do not need universal standards to develop scientific theories. As with any discipline, science needs knowledgeable and circumspect individuals who are willing to make their findings more secure by offering them for investigation by others in the same discipline. To declare that science has established universal standards is merely a convenient fabrication that proves to be spurious under close inspection. This process of seeking a consensus among other scientists also coincides with the earlier notion of theory and concept laden perception, in that the individual who possesses more scientific knowledge will be able to extract more valuable meanings from a given observation.

In one sense, Brown’s definitions of scientific truth and knowledge could be humbling and perhaps even devastating to the romantic scientist whose discoveries were once thought to be ornaments on a timeless, universal, and infallible tree of knowledge. Brown’s biggest impact on the scientific community could very well be psychological, the exorcising of a misleading demon that has plagued the philosophy of science. Just because one’s theory might not be eternally and immutably true, does not strip it of its importance or usefulness. Scientific discoveries have left, and will continue to leave, indelible marks on the world. Brown is simply providing us with a better understanding of how these marks are left and of what they consist.

Alas, one cannot help empathizing with the logical empiricists. There is something invigorating and comforting in the belief that the unbiased execution of the senses yields pure facts about the natural world. Yet, contrary to what our senses might suggest, the Earth is currently not conceived as being in the center of the universe, and time is not estimated to be completely separate from space. Nor, as Brown magnificently demonstrates, can the views of the logical empiricists withstand
scrutiny. It appears to me, though, that a true scientist would be elated by the conclusions in Brown’s philosophy of science. For Perception, Theory and Commitment seems to be a profound step in focusing scientists’ attention in the right direction.

Notes

2 Ibid.
4 Ibid., 82-85.
5 Ibid., 90.
6 Ibid., 83.
7 Ibid., 85-87.
8 Ibid., 90.
9 Ibid., 99.
10 Ibid., 89.
11 Ibid., 97.
12 Ibid.
13 Ibid.
14 Ibid.
15 Ibid.
16 Ibid., 100.
17 Ibid., 97.
18 Ibid.
19 Ibid., 105.
20 Ibid., 109.
21 Ibid., 120.
22 Ibid.
23 Ibid.
24 Ibid., 130.
25 Ibid., 132.
26 Ibid.
27 Ibid., 134.
28 Ibid., 151.
29 Ibid., 149.
30 Ibid., 150.
Contributors

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Geroge Cheatham is a sophomore from Greensboro, NC. He is a Philosophy major with a particular interest in political philosophy.

RJ Donovan is a junior and comes to Washington College from the small town of Dorset, Vermont. He is a double major in Philosophy and International Studies with a Hispanic Studies minor, and he has lived in Spain. His senior thesis is about the evolution of political theory into international relations reality, and he strongly recommends that everyone read Lao Tzu’s Tao Te Ching and Gabriel Garcia Marquez’s 100 Years of Solitude.

Joseph Cioni is a senior Philosophy major and will begin working toward his doctorate in philosophy this fall. His current philosophical interests include: Marxism, ethics, the philosophy of race, and pretty much anything else other than ontology. Joe writes:
Dr. Newell: Thank you for teaching me the meaning of life... and for being my advisor too
Dr. Weigel: Since you have arrived at WC, you have been nothing short of a blessing to our community. Now if only I could grasp the meaning of the chestnut tree passage...
Dr. Brien: I cannot thank you enough for your time, effort, and sincerity. From the Tao to Stephen Hawking, it has been an unforgettable journey.
Dr. Anderson: As you retire, I have no doubts that you will remain in the hearts and minds of your students. You are a very special man. LONG LIVE NIETZSCHE!