Chapter 1
Nature of Learning: Recognition of Different Perspectives

Fig. 1.1 Road to Nicholson Hollow, Shenandoah (Library of Congress)

1.1 Ideas of Interest from “The Nature of Learning”

1. How is philosophy defined in this chapter? In what ways does the study of philosophy differ from the study of other disciplines?

2. Explain what John Dewey means when he points out, “The ideal of using the present simply to get ready for the future contradicts itself.”

3. Samuel Scudder writes, “[W]hat I had gained by this outside experience has been of greater value than years of later investigation.” Specifically what are some of the things that he learned by studying with Professor Agassiz? What do you think were Agassiz’s reasons for requesting that Scudder observe without instruments or any other kind of aid?

4. When we seek an explanation for a state of affairs, how do we select the relevant facts of the situation? Why or why not does an explanatory theory need to be based on all of the facts in order to be true?
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5. Explain how Samuel Scudder’s experience illustrates the view that philosophy begins when “we don’t know our way about?” How did he learn what to do when he was not given instructions on how to observe?

6. Discuss whether or not Tycho Brahe and Nicolaus Copernicus see the same thing at dawn. Analyze in some detail how apparently contradictory statements can accurately describe the same event.

1.2 The Role of Facts In Understanding

Our introduction to philosophical inquiry is designed to illustrate some of the basic methods of thinking about different modes of understanding. Its purpose is not only to present some of the most profound ideas from thinkers of the past but also to suggest specific methods of analysis and to encourage the use of creative thinking. Philosophy is an investigation of the fundamental questions of human existence. Such questions include wondering about such things as the meaning of life, what kinds of things the universe is made of, whether there can be a theory of everything, how we can know what the right thing to do is, and what the beautiful in life and art might be. Other disciplines are concerned with these sorts of questions also, but philosophers, more often than not, either attempt to provide adequate reasons and justifications for their beliefs or attempt to clarify and examine the basis for those beliefs.

An attempt has been made to select readable and enjoyable essays to help develop these approaches, even though many of the constitutive philosophical sources require slow and careful reading, and some passages are notoriously difficult to interpret. Beginning a study of philosophy involves a steep learning curve. Even so, there is little doubt that if we do not find doing philosophy interesting now, we are unlikely to employ these methods in the future effort to make sense of our lives and careers. As John Dewey accurately notes:

> “Only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future.”

The ideal of using the present simply to get ready for the future contradicts itself. It omits, and even shuts out, the very conditions by which a person can be prepared for his future. We always live at the time we live and not at some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing.
in the future. This is the only preparation which in the long run amounts to anything.

Even though it is sometimes tempting to memorize established, useful ways of solving problems, in philosophy it is often counterproductive to do so. Learning by doing is far more interesting and rewarding than applying standard methods by rote and is far more likely to enable us to solve different problems in the future.

In this regard, Henry Hazlitt provides a useful insight into the dangers of rote learning:

I remember the story in some educational treatise of an inspector who entered a school room, asked the teacher what she had been giving her class, and finally took up a book and asked the following question, “If you were to dig a hole thousands and thousands of feet deep, would it be cooler near the bottom or near the top, and why?” Not a child answered. Finally the teacher said, “I’m sure they know the answer but I don’t think you put the question in the right way.” So taking the book she asked, “In what state is the center of the earth?” Immediately came the reply from the whole class in chorus, “The center of the earth is in a state of igneous fusion.”

The techniques provided in this introductory text can help us avoid such a dreary educational scheme.

Solving problems involves more than just formulating or devising possible solutions or hypotheses and then seeking facts or ideas to either support or falsify those proposals. Far more important is the realization that often the nature of a fact depends upon one’s worldview or conceptual framework.

Many times when differing beliefs appear to be factually different, they actually differ only because of the different points of view from which they are understood.

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Oftentimes, the opposition of philosophies is not fundamentally logical but is instead persuasive. Usually an individual’s philosophical beliefs have not been consciously derived from logical reasoning but have evolved from latent assumptions from family, society, and culture. If new disputing evidence challenges this world view, these data are routinely accommodated within the belief structure, sometimes with byzantine ingenuity. Henry Johnstone explains:

When two men disagree over fundamental philosophical issues, however, neither is quite entitled to be able to imagine what it would be like for his opponent’s statement to be true, even though one or the other may be under the illusion that he can. For each, in stating his own systematic position is in effect claiming that this position includes all the relevant evidence and therefore no statement adducing evidence against it is possible.

So if an opponent were to point out a state of affairs which is extraneous or conflicting, the defendant either reduces this situation to irrelevancy or to an aspect implied by his own viewpoint. In effect, the defendant’s arguments for a philosophical position become of such a nature that any opposing position is automatically ruled meaningless by those arguments. These kinds of theoretical disagreement are what make doing philosophy so frustratingly difficult—there never seems to be a neutral court of appeal for the resolution of such difficulties: seemingly, neither observational evidence nor logical reasoning alone entirely solves philosophical problems.

This rather abstract presentation of the nature of a characteristic kind of philosophical disagreement can be simply illustrated by an example drawn from the works of Sigmund Freud:

The contradiction of my theory of dreams on the part of another female patient, the most intelligent of all my dreamers, was solved in a simpler fashion, though still in accordance with the principle that the non-fulfilment of one wish signified the fulfilment of another. I had one day explained to her that a dream is a wish-fulfilment. On the following day she related a dream to the effect that she was travelling with her mother-in-law to the place in which they were both to spend the summer. Now I knew that she had violently protested against spending the summer in the neighbourhood of her mother-in-law. I also knew that she had fortunately been able to avoid doing so, since she had recently succeeded in renting a house in a place quite remote from that to which her mother-in-law was going. And now the dream reversed this desired solution. Was not this a flat contradiction?

Fig. 1.3 Sigmund Freud, 1884 (Allgemeines Krankenhaus der Stadt Wien)

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of my theory of wish-fulfilment? One had only to draw the inferences from this dream in order to arrive at its interpretation. According to this dream, I was wrong; but it was her wish that I should be wrong, and this wish the dream showed her as fulfilled.

The question that one would like to put to Freud is “What evidence could possibly conflict with such a theory of dreams?” Freud’s theory rejects the thesis that some dreams do not fulfill wishes. He rejects it on the grounds that such an objection must itself be a fulfillment of a wish—the wish to prove his theory mistaken. Consequently, for Freud, there can be no alternative point of view and any possible counter-example is facilely assimilated to his theory.

Even though people speak about seeking facts, collecting facts, or “sticking” to the facts, the word “fact” proves philosophically difficult to define precisely. Facts are sometimes assumed to be in the world and therefore to be present for everyone to experience. However, facts are not usefully thought of as physical objects occurring in space-time. For example, the earth being about eight thousand miles in diameter is not an eight-thousand-mile thick fact. An American football field is one hundred and twenty yards long, but that length is not a shorter fact than the longer one just mentioned about the diameter of the earth.

Consequently, unlike things or objects in the world in which we live, facts do not have colors either. Many interior doors are brown, but the color of the door is not a brown fact. Facts are not colored. We can reasonably ask, if facts do not have size, shape, weight, color, taste, and so forth, what, then, are they? If we do not know what they are, how can it be said that we have or know the facts? How then is it possible for us to find or seek the facts? What is meant by these expressions?

Let’s first look at an extended example of ”fact finding” and then attempt to relate this process to how we learn. In the next section, Samuel H. Scudder recounts his problems with factual observation when he first began study at the Harvard Museum of Comparative Anatomy under Professor Agassiz.

From the reading...
“... if facts do not have size, shape, weight, color, taste, and so forth, what, then, are they?”

1.3 In the Laboratory With Agassiz

It was more than fifteen years ago that I entered the laboratory of Professor Agassiz, and told him I had enrolled my name in the Scientific School as a student of natural history. He asked me a few questions about my object in coming, my antecedents generally, the mode in which I afterwards proposed to use the knowledge I might acquire, and, finally, whether I wished to study any special branch. To the latter I replied that, while I wished to be well grounded in all departments of zoology, I proposed to devote myself specially to insects.

“When do you wish to begin?” he asked.

“Now,” I replied.

This seemed to please him, and with an energetic “Very well!” he reached from a shelf a huge jar of specimens in yellow alcohol. “Take this fish,” he said, “and look at it; we call it a hæmulon; by and by I will ask what you have seen.”

With that he left me, but in a moment returned with explicit instructions as to the care of the object entrusted to me.

“No man is fit to be a naturalist,” said he, “who does not know how to take care of specimens.”

I was to keep the fish before me in a tin tray, and occasionally moisten the surface with alcohol from the jar, always taking care to replace the stopper tightly. Those were not the days of ground-glass stoppers and elegantly.

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5 Ed. These “antecedents” are elaborated by another former student of Agassiz which might be of interest. We often underestimate the educational processes of the past in comparison to our own. Professor Shaler writes “The examination Agassiz gave me was directed first to find that I knew enough Latin and Greek to make use of those languages; that I could patter a little of them evidently pleased him. He didn’t care for those detestable rules for scanning. Then came German and French, which were also approved: I could read both, and spoke the former fairly well. He did not probe me in my weakest place, mathematics, for the good reason that, badly as I was off in that subject, he was in a worse plight. Then asking me concerning my reading, he found that I had read the Essay on Classification, and had noted in it the influence of Schelling’s views. Most of his questioning related to this field, and the more than fair beginning of our relations then made was due to the fact that I had some enlargement on that side. So, too, he was pleased to find that I had managed a lot of Latin, Greek, and German poetry, and had been trained with the sword. He completed this inquiry by requiring that I bring my foils and masks for a bout.” Nathaniel Southgate Shaler, The Autobiography of Nathaniel Southgate Shaler, (New York: Houghton Mifflin, 1907), 93-100.
shaped exhibition jars; all the old students will recall the huge neckless glass bottles with their leaky, wax-besmeared corks, half eaten by insects, and begrimed with cellar dust. Entomology was a cleaner science than ichthyology, but the example of the Professor, who had unhesitatingly plunged to the bottom of the jar to produce the fish, was infectious; and though this alcohol had a “very ancient and fishlike smell,” I really dared not show any aversion within these sacred precincts, and treated the alcohol as though it were pure water. Still I was conscious of a passing feeling of disappointment, for gazing at a fish did not commend itself to an ardent entomologist. My friends at home, too, were annoyed when they discovered that no amount of eau-de-Cologne would drown the perfume which haunted me like a shadow.

In ten minutes I had seen all that could be seen in that fish, and started in search of the Professor—who had, however, left the Museum; and when I returned, after lingering over some of the odd animals stored in the upper apartment, my specimen was dry all over. I dashed the fluid over the fish as if to resuscitate the beast from a fainting fit, and looked with anxiety for a return of the normal sloppy appearance. This little excitement over, nothing was to be done but to return to a steadfast gaze at my mute companion. Half an hour passes—an hour—another hour; the fish began to look loathsome. I turned it over and around; looked it in the face—ghastly; from behind, beneath,
above, sideways, at a three-quarters’ view—just as ghastly. I was in despair; at an early hour I concluded that lunch was necessary; so, with infinite relief, the fish was carefully replaced in the jar, and for an hour I was free.

On my return, I learned that Professor Agassiz had been at the Museum, but had gone, and would not return for several hours. My fellow-students were too busy to be disturbed by continued conversation. Slowly I drew forth that hideous fish, and with a feeling of desperation again looked at it. I might not use a magnifying-glass; instruments of all kinds were interdicted. My two hands, my two eyes, and the fish: it seemed a most limited field. I pushed my finger down its throat to feel how sharp the teeth were. I began to count the scales in the different rows, until I was convinced that that was nonsense. At last a happy thought struck me—I would draw the fish; and now with surprise I began to discover new features in the creature. Just then the Professor returned.

“That is right,” said he; “a pencil is one of the best of eyes. I am glad to notice, too, that you keep your specimen wet, and your bottle corked.”

With these encouraging words, he added, “Well, what is it like?”

He listened attentively to my brief rehearsal of the structure of parts whose names were still unknowns to me: the fringed gill-arches and movable operculum; the pores of the head, fleshy lips and lidless eyes; the lateral line, the spinous fins and forked tail; the compressed and arched body. When I finished, he waited as if expecting more, and then, with an air of disappointment, “You have not looked very carefully; why,” he continued more earnestly, “you haven’t even seen one of the most conspicuous features of the animal, which is plainly before your eyes as the fish itself; look again, look again!” and he left me to my misery.

I was piqued; I was mortified. Still more of that wretched fish! But now I set myself to my tasks with a will and discovered one new thing after another, until I saw how just the Professor’s criticism had been. The afternoon passed quickly; and when, towards its close, the Professor inquired, “Do you see it yet?”
“No,” I replied, “I am certain I do not, but I see how little I was before.”

“That is next best,” said he, earnestly, “but I won’t hear you now; put away your fish and go home; perhaps you will be ready with a better answer in the morning. I will examine you before you look at the fish.”

This was disconcerting. Not only must I think of my fish all night, studying, without the object before me, what this unknown but most visible feature might be; but also, without reviewing my discoveries, I must give an exact account of them the next day. I had a bad memory; so I walked home by Charles River in a distracted state, with my two perplexities.

The cordial greeting from the Professor the next morning was reassuring; here was a man who seemed to be quite as anxious as I that I should see for myself what he saw.

“Do you perhaps mean,” I asked, “that the fish has symmetrical sides with paired organs?”

His thoroughly pleased “Of course! of course!” repaid the wakeful hours of the previous night. After he had discoursed most happily and enthusiastically—as he always did—upon the importance of this point, I ventured to ask what I should do next.

“Oh, look at your fish!” he said, and left me again to my own devices. In a little more than an hour he returned, and heard my new catalogue.

“That is good, that is good!” he repeated; “but that is not all; go on”; and so for three long days he placed that fish before my eyes, forbidding me to look at anything else, or to use any artificial aid. “Look, look, look,” was his repeated injunction.

This was the best entomological lesson I ever had—a lesson whose influence has extended to the details of every subsequent study; a legacy the Professor had left to me, as he has left it to many others, of inestimable value, which we could not buy, with which we cannot part... [T]o this day, if I attempt a fish, I can draw nothing but haemulons.

The fourth day, a second fish of the same group was placed beside the first, and I was bidden to point out the resemblances and differences between the two; another and another followed, until the entire family lay before me, and a whole legion of jars covered the table and surrounding shelves; the odor
had become a pleasant perfume; and even now, the sight of an old, six-inch, worm-eaten cork brings fragrant memories.

The whole group of *haemulons* was thus brought in review; and, whether engaged upon the dissection of the internal organs, the preparation and examination of the bony framework, or the description of the various parts, Agassiz’s training in the method of observing facts and their orderly arrangement was ever accompanied by the urgent exhortation not to be content with them.

“Facts are stupid things,” he would say, “until brought into connection with some general law.”

At the end of eight months, it was almost with reluctance that I left these friends and turned to insects; but what I had gained by this outside experience has been of greater value than years of later investigation in my favorite groups.

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6 Samuel H. Scudder, “In the Laboratory With Agassiz,” *Every Saturday* 16 (April 4, 1874), 369-370.
1.4 Facts and Theories

And we may add to Agassiz’s statement, “General Laws are ‘stupid’ things until brought into connection and interrelation with philosophical theories.”

Usually when we seek facts, we are not looking for objects in the world, instead we are genuinely attempting to discover what is true or what is the case about an event or an object. In other words, much of the time, “fact” is used as a paraphrase for “true statement.” Nevertheless, a fact is not quite the same thing as a true statement. Some of the time, however, facts are supposed to be independent of a particular world view since newly proposed theories not only should conform to well-established facts but also should imply the existence of hitherto unknown facts. Whether such a view is entirely true or not, it is true that many facts are dependent on theories for their existence. Hence, it is somewhat simplistic to suppose one must always seek facts in order to explain some puzzling feature of the world because what is the case or what is true is often dependent upon the theory used to describe those circumstances. Somewhat surprisingly, we will discover that our view of the facts can change as the theories that imply them change.

Another way to appreciate the inadequacy of limiting our efforts just to fact-finding in order to account for some phenomenon is to recognize that in any situation, we simply cannot collect all the facts, even though our initial presumption might be that no stone should be left unturned. This is one of the lessons learned from Professor Agassiz: no matter how thorough the investigation, there are still more facts to be found.

To explain how this page got to be placed in this book, we would not seek every possibly relevant fact before we construct a possible theory of how this page-event occurred. The number of facts related to this page is limitless. Specifically, it is a fact that each letter of each word on this page is a specific distance from any given letter of any other word. Moreover, each letter is a measurable distance from each and every other object in the universe—for example, a ballerina on a New York stage. The facts relevant to our state of affairs increase and change over time as the ballerina moves, and, of course, facts “change” as we uncomfortably fidget while considering the implications.

From the reading... “In inquiry, facts are normally theory-dependent.”

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7 Willard Van Orman Quine, Word and Object (Boston: M.I.T. Press, 1960), 44.
8 Newton’s law of gravitation holds, “Every object in the universe attracts every other object with a force directed along the line of centers of the two objects, that is proportional to the product of their masses and inversely proportional to the square of the separation of the two objects.” Florian Cajori notes in his appendix that Newton’s writings only approximated this statement. See Isaac Newton, Principia (Berkeley: University of California Press, 1968), 670-671.
of this example. The initial response to this example is that it is silly to suppose that these kinds of facts are relevant to how this particular page got to be placed here. But how can the difference between relevant and irrelevant facts be known prior to the investigation of determining what these facts are? Furthermore, as many facts as we please are discoverable and still more remain to be recognized.

In order to make sense of a given state of affairs, we must select only some of the facts—the most relevant and important ones. But how can we know beforehand which of the facts are relevant and important? We need a criterion or rule for such a choice. More precisely, in order to identify the relevant facts we need a theory or at least some theoretically ruling assumptions as to the pertinent facts in situations similar to this one. Specific relevant facts are selected by applying a theory in order to determine what facts should be considered in our explanation. We do not just randomly amass facts in order to explain a puzzling state of affairs. Consequently, the process of discovery normally involves interplay between the discovery of facts and the applications of theories.

Perhaps, at this point, an extended specific example can clarify what is meant by saying “In inquiry, facts are normally theory-dependent.”

1.5 Facts Are Often Theory-Dependent

Suppose you and your astronomer-friend are camping along the Appalachian Trail in the Blue Ridge Mountains of Virginia. As you awake at dawn from the first sound of stirring wildlife, you sleepily notice a rosy, picturesque sunrise. With a bit of alarm you anticipate rain showers and a muddy hike ahead. As you rouse your friend you comment, “Look at that sunrise; we’re in for trouble.” Assume, moreover, your friend dimly responds with a slow yawn, “I see the sun, but there is no sunrise today or, for that matter, any day.”

What do you say? Is your friend’s statement sensible? Presumably her eyesight is just as good as yours, and evidently she is seeing what you are seeing. Yet, your friend is apparently claiming she does not see what you see. You see the sunrise; she apparently is stating she does not. Now, is there any chance you could be mistaken? Let’s pause just a moment and see if this exchange makes any sense.

9 “Red sky in the morning is a sailor’s sure warning.” Richard Inwards, Weather Lore (London: W. Tweedie, 1869), 41.
1.5 Facts Are Often Theory-Dependent

You do see the sun rising today, and you have seen it rise countless times in the past. Your friend, however claims not only is there no sunrise today, but there has never been a sunrise. Is this disagreement a misunderstanding over the meaning of words, a misunderstanding due to personal feelings, or a misunderstanding concerning the relevant facts at hand? In sum, different specific techniques are appropriate for the resolution of different specific kinds of disagreements. Verbal disagreements are resolved by either the use of conventional connotations of key terms or, if necessary, the use of precis-ing or theoretical terms. Differences in attitude are notoriously difficult to resolve; often even after various means of rhetoric and persuasion are employed, disagreement remain. Disagreements over questions of fact are most straightforwardly resolved through the application of the methods of logic and science.

You would have to be a gentle person to think this far without suspecting, perhaps in some exasperation, that your friend is half-asleep, does not know what she is saying, or has some other kind of brain-trouble. However, in order to make this disagreement a bit more interesting, let us further suppose that your friend is beginning to warm up to the strange looks you are giving her and proposes a bet. If you can convince her that the sun is rising

From the reading... “I see the sun, but there is no sunrise today...”
when all is said and done, she will prepare all meals and wash all utensils for the remainder of the camping trip; if not, then you will prepare all the remaining meals and wash up.

Would you take the bet? Only a cursory look at the remains of the previous night’s repast might be sufficient to convince you to accept the wager. After all, everybody knows the sun rises every morning whether we see it or not. It is difficult to resist the payoff; you accept the bet and begin thinking about proving your case.

On the one hand, how do you go about proving such an obvious and well-known truism? If you proceed somewhat systematically, you might first begin by getting clear and obtaining agreement about the meaning of any key terms in the dispute. Most important, what does “sunrise” mean? Once the significant terms are defined, then facts can be sought to verify the hypothesis. Let us suppose your friend replies “sunrise” means “the usual daily movement above the eastern horizon of the star which is the center of our solar system.” Second, you might seek to show her that the facts correspond exactly to her definition. That is, while eagerly anticipating her fixing breakfast, you simply point out the observation of the sun rising about the horizon, as expected. Third, hopefully, you can note that no undue feelings or attitudes have shaped your position on this issue and cloud the observations or judgment of either you or her.

On the other hand—let’s say you are beginning to be hungry—no telling how long your dim-witted friend will wait before admitting that she actually does see the sun rising in the sky. O.K., the sun does move rather slowly. Why not put the burden of proof on her? Let her prove that the sun is not rising. We often take the approach of assuming we are right if our beliefs cannot be disproved. Thus, here in the Blue Ridge Mountains you put the question directly to your friend. “What could you possibly mean by saying,

Fig. 1.9 Tycho Brahe (University of St. Andrews)

10 Note the fallacy of *argumentum ad populum*: the fact that everyone or almost everyone believes something does not deductively entail that conclusion follows.

11 Note how this presumption, as well as the friend’s original bet could be viewed as an example of an *ad ignorantiam* fallacy. If a statement or a point of view cannot be proved beyond a shadow of doubt, then it does not logically follow that the statement or point of view is known to be mistaken. The *ad ignorantiam* fallacy occurs whenever it is asserted that if no proof of a statement or argument is given, then that statement or argument is incorrect. The error in reasoning is seen when
1.5 Facts Are Often Theory-Dependent

‘The sun doesn’t rise and isn’t rising right now’? Just look!”

Your friend sleepily replies, “Do Kepler and Tycho see the same thing in the east as dawn?”

Alas, you probably remember that Tycho Brahe, as well as most other people in the 14th century, assumed the earth was the center of the heavens. Johannes Kepler was one of the first natural philosophers to regard the earth as revolving about the sun. If the earth moves around the sun, then it looks as if your friend is correct. The sun does not really rise, it’s the earth that turns. Additionally, she’s apparently right when she says the sun has never risen.

Doesn’t it seem that by now our culture would have this simple fact entrenched in ordinary language? But even so, apart from language, didn’t you actually see the sun rise; didn’t you believe the sun was rising as you were observing it? And isn’t this the normal way to “find” the facts? Accordingly, we realize nothing can be validly concluded from the fact that no proof is given for something.

12 For an analysis of this question, see Norwood Russell Hanson’s Patterns of Discovery (Cambridge: Cambridge University Press, 1958), 5.
the only way to begin resolve this disagreement is to recognize both you and your friend do not have the identical corresponding experiences since your conceptual interpretation of what you see differs from her interpretation of what she sees. Even though the patterns of light and color are, for all intents and purposes, the same for you and her, what you experience is largely dependent on the theoretical perspective from which you view the event. Just as we cannot know a foreign language only by listening, so also we cannot know the sun rises only by seeing. The perceived sounds require interpretation; the perceived light and color require comprehension. “[I]t is not at all unusual for two skilled investigators to disagree about their observations if each is interpreting the data [or “facts of the case”] according to different conceptual frameworks.” Just as your mind-set affects what you see, so also your awareness of other mental perspectives can affect what you know. The learning of new perspectives is what, in large measure, philosophy is all about.

Fig. 1.11 Nicholas Copernicus, De revolutionibus Orbium Coelestium, 1543 (NOAA) The sun is “SoL”—note the moon circling the earth.

1.6 Related Ideas

[The Project Gutenberg EBook of Louis Agassiz as a Teacher] This compilation by Lane Cooper offers descriptions of Agassiz’s teaching methods by several well-known former students.


[Arthur Schopenhauer, “Thinking for Oneself”] Schopenhauer contrasts the person who thinks to the person of learning, to the disparagement of the latter. “Reading is thinking with someone else’s head instead of one’s own... there is no happiness on earth like that [of which] a fruitful mind finds in itself,” he argues.

[Kevin Mulligan, “On the History of Philosophies of Facts”] This entry from the Stanford Encyclopedia of Philosophy briefly discusses various philosophical analyses of facts as propositions, true ideas, exemplifications, states of affairs, and so forth—illustrating the rich history of this essential expression.

[Andrea Borghini, “How to Read Philosophy”] Guidance on how to study philosophy is summarily discussed in ten basic instructions.

1.7 Topics Worth Investigating

1. Compare John Dewey’s observation that “The ideal of using the present simply to get ready for the future contradicts itself”\textsuperscript{14} with Marcus Aurelius’ advice:

   Be not disturbed about the future, for if ever you come to it, you will have the same reason for your guide, which preserves you at present.\textsuperscript{15}

   Does the truth of Marcus Aurelius’ injunction imply the truth of John Dewey’s statement and vice versa? How do these two philosophies differ?

2. What is a fact? What are the different kinds of facts? Can we be mistaken about the facts? (If so, how could they be facts?) Do facts change with

\textsuperscript{14} John Dewey, Experience and Education (New York: Macmillan, 1938), 51.

new discoveries? Are facts discovered or are they constructs of theories? Are facts by nature neutral or can facts be favorable or unfavorable? If it is false that “7 + 5 = 11,” is this equation a false fact?

3. Explain in some detail how this description of education drawn from a novel by Charles Dickens is flawed:

   Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else. And root out everything else. . . . [N]othing else will ever be of any service to them. This is the principle on which I bring up my own children, and this is the principle on which I bring up these children. Stick to Facts, sir.

   And, similarly, explain how this conception of science is flawed:

   I answer that “science” implies knowledge, and thus it is a demand of science to stick to the facts and not to hunt phantasms.

   Is it, in general, possible to understand a state of affairs by “sticking only to the facts”? (Note: Alan White argues states of affairs exist and have a beginning and an end, whereas facts do not exist and do not have a beginning and an end.)

4. In the *Philosophical Investigations*, Ludwig Wittgenstein indicates the aim of philosophy is “To shew the fly the way out of the fly-bottle.” In what ways is this precisely the same problem facing Samuel Scudder when he sits before *Hæmulon elegans*? State the relations among Wittgenstein’s statement, Scudder’s experience, and Arthur Schopenhauer’s observation:

   The thinker . . . speaks from direct knowledge of his own. That is why all those who think for themselves come, at bottom, to much the same conclusion. The differences they present are due to their different points of view; and when these do not affect the matter, they all speak alike.

   Analyze to what extent Kepler and Tycho come to the same conclusion based on their different points of view as to the event occurring in the eastern sky at dawn? Explain the radically different aspects involved in finding a method to solve these problems as opposed to using a method to solve these problems.

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5. The treatment of the elderly differs from culture to culture. Suppose that both of the following reports of how the elderly are cared for are accurate:

(a) The Eskimos of Baffin Island have great respect for the aged and treat them well. But when a woman becomes so old that she is a burden, she may calmly resign herself to death, allowing herself to be walled into a snowhut and left to die. She thinks it is better; the tribe agrees.  

(b) Ju/'hoansi elders do not see themselves as burdens. They are not apologetic if they are no longer able to produce enough to feed themselves. They expect others to care for them when they can no longer do so. Entitlement to care is naturalized within the culture: Elders do not have to negotiate care as if it were a favor, rather, it is perceived of as an unquestioned right.

Discuss whether or not it is possible that these two different cultural practices might both be ways to implement within each culture this same general aim: the goal of the greatest good for the greatest number. Explain whether or not factually contradictory practices can accomplish the same theoretical goal in differing environments.

6. The Lund-London Guidelines for International Human Rights developed in association with the International Bar Association define "fact-finding" as "a mission or visit mandated by an NGO [non-governmental organization] to ascertain the relevant facts relating to and elucidating a situation of human rights concern, whether allegedly committed by state or non-state actors." Yet the guidelines state fact-finding reports should include the reason for the visit, sufficient background information to enable readers to contextualise evidence, identification of unverified third part evidence, as well as any circumstances relevant to the mission. Examine to what extent the objectivity of this aim to relate only facts is possible in practice by analyzing any one of the UN Refugee Agency’s reports.

7. A. Conan Doyle in the story “A Scandal in Bohemia” has Sherlock Holmes state:

It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.
Investigate thoroughly to what extent Doyle’s observation conflicts with the statement that normally facts are theory dependent. Or are these two different views actually mutually interdependent? Evaluate the possibility that the term “theory” is being used in two different senses in the quotation above from Doyle and explain what those senses might be.

8. Common sense usually implies that only physical or sensible evidence is convincing: seeing is believing. Yet there is evidence mental imagery affects visual perception. For example, Joel Pearson explains:

> We found that imagery leads to a short-term memory trace that can bias future perception. This is the first research to definitively show that imagining something changes vision both while you are imagining it and later on."\(^{26}\)

His group writes, “These findings are important because they suggest a potential mechanism by which top-down expectations or recollections of previous experiences might shape perception itself.”\(^{27}\) In light of this research, explain how sensory knowledge of facts still might become possible.

9. Nietzsche writes:

> Against the positivism which halts at phenomena—‘There are only facts’—I would say: no, facts are just what they aren’t, they are only interpretations. We cannot determine any fact ‘in itself’: perhaps it’s nonsensical to want to do such a thing. ‘Everything is subjective,’ you say: but that itself is an *interpretation*, for the ‘subject’ is not something given but a fiction added on, tucked behind.—Is it even necessary to posit the interpreter behind the interpretation?\(^{28}\)

On this view, select a specific mathematical, moral, and physical fact and interpret how Nietzsche might regard each kind of fact.

10. In *Bose Corp. v. Consumers Union*, a product disparagement case, the magazine *Consumer Reports* was found liable for damages by district court on question of fact in its critical review. The author’s draft of the article stated that the individual instruments heard through the Bose 901 speakers wandered “along the wall” whereas the published article stated they “tended to wander about the room.” On appeal, the federal court

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\(^{28}\) Friedrich Nietzsche, *Writings from the Late Notebooks* (Cambridge: Cambridge University Press, 2003), 139.
agreed with Consumers Union that this factual difference was due to negligence not “actual malice.” On appeal to the Supreme Court, the case turned on whether the appellate court had reopened the factual question of actual malice or had just ruled on a question of law as to the meaning of “actual malice.” Develop an argument as whether a question of fact or a question of law is at issue here. Should the Supreme Court support or overturn the federal appellate court’s decision?

11. Some legitimate aims of art interpretation include “making a work relevant or significant to a certain sort of audience, identifying what is cognitively valuable in a work, or . . . enhancing the reader’s æsthetic experience of a work” Yet, acceptable interpretations which seek to highlight the value of the work must be “consistent with some facts about the work” which might be conflict with other facts Assuming different æsthetic theories have competing artistic interpretations, how then could artistic facts substantiate one theory’s interpretative superiority over another?

12. Use the analogy of the sunrise described in this chapter to give insight into and explain the controversy between realism and idealism as identified as outlined by Henri Bergson:

When we speak of external objects, we have to choose, in fact, between two rotation-systems. We can treat external objects, and the changes they exhibit, as a system of things or as a system of ideas. And either of these two systems will work, provided we keep strictly to the one we have chosen.

Let us, first of all try to distinguish the two systems with p. When realists speaks of things and idealism of ideas, it is not merely a dispute about words; realism and idealism are two different notation-systems, that is to say, two different ways of setting about the analysis of reality. For the idealist, there is nothing in reality over and above what appears to his consciousness or to consciousness in general. . . . The hypothesis of realism is the exact reverse.

Finally, explain in some detail how both of these examples exemplify Henry W. Johnstone’s analysis of the nature of philosophical disagreements.

13. Charles Darwin writes:

After my return to England it appeared to me that by following the example of Lyell in Geology, and by collecting all facts which bore in any way on

the variation of animals and plants under domestication and nature. Some light might perhaps be thrown on the whole subject. My first notebook was opened in 1837. I worked on true Baconian principles, and without any theory collected facts on a wholesale scale, more especially with respect to domesticated productions, but printed enquiries, by conversation with skilful breeders and gardeners, and by extensive reading. I soon perceived that selection was the keystone of man’s success in making useful races of animals and plants.

Evaluate to what extent Darwin could have collected facts relating to variation of plants and animals from breeders and gardeners without prejudice toward the hypothesis of the modification of species. Assuming Darwin’s theory of evolution were true, would it be fair to conclude that Darwin would not be able to find facts relating to variation of species which did not suggest species modification? Explain clearly whether or not Darwin could follow Bacon’s understanding of science (i.e., natural philosophy) described here:

No one acquainted with the history of natural philosophy would think it possible to form a collection of all the facts which are to be the materials on which any science is to operate, antecedently to the formation of the science itself. In the first place, the observation is necessary in order to the recognition of these facts would never have been made except under the guidance of some preconceived idea as to the subject of observation; and in the second, the statement which embodies the result of observation always involves some portion of theory.

Give reasons for the conclusion that Darwin might have been aware of this aspect of Baconian philosophy of science.

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