**Ideas We Judge By: Truth, Goodness, and Beauty**

**The Liar and the Skeptic**

**IT IS POSSIBLE TO BE EITHER A LIAR OR A SKEPTIC, but not both. Of course, it is also possible, and quite preferable, to be neither.**

**The person who maintains that he knows nothing because nothing is knowable, or who declares that no statement can be either true or false, interdicts himself from telling lies. His extreme skepticism removes him from the ordinary world in which most of us live and in which, according to him, we live under the illusion that we can discriminate between statements that are true and statements that are false.**

**Illusion or not, the liar at least thinks that he knows the difference between what is true and what is false when he deliberately deceives someone about a matter of fact. If he were in total ignorance of the fact in question, or in grave doubt about it, he could not tell a lie.**

**Consider the dishonest jeweler who persuades his customer to purchase a ring that he claims is set with a diamond of high quality, aware that what he is offering is nothing but a relatively worthless imitation of the genuine article. He has told a deliberate lie, which he simply could not do if, like the skeptic, he were to think that the statement he made-- ”The stone in this ring is a diamond”-could be neither true nor false, because nothing is either true or false.**

**However, there is one lie that the skeptic can tell. Sincere in his adherence to skepticism, he can still deceive someone else by pretending not to be a skeptic. Instead of honestly confessing his skepticism, he can verbally declare the very opposite, saying that he thinks some statements are true and others false when he really thinks no such thing at all.**

**This pinpoints for us the essence of lying. It consists in putting into words the very opposite of what one really thinks—the opposite of one’s own state of mind. If your landlord thinks that rents are not going up and tells you in so many words that they are, he has lied to you. The lie must, of course, be intentional and with a deliberate purpose to deceive for the sake of gaining some advantage, regardless of the injury that may result to the person who is deceived.**

**The condemnation of lying as morally wrong or unjust presupposes that injury results from the deception. What we call a “white lie” and usually condone rather than condemn consists in a harmless deception or one that even may work to the benefit of the person deceived. But whether the false statement turns out to be injurious or beneficial, it remains a false statement because what its words say do not correspond to what the person who has made the statement actually thinks.**

**The truth of verbally expressed statements thus consists in their correspondence or agreement with the state of mind of the person making them or, if you will, with the statements he or she makes in the privacy of his or her own mind. A verbally expressed statement is false if the opposite relation obtains between it and what the person who makes it thinks, or says to himself-if the two do not agree or correspond, as is the case if I tell you that I have a toothache when I do not.**

**To speak falsely, it has been pointed out, consists in willfully misplacing one’s ontological predicates. That is a highfalutin way of saying that to speak falsely consists in putting “is” where one should put “is not,” or “is not” where one should put “is.” The dishonest jeweler asserted, “This is a diamond,” when he should have said, “This is not a diamond,” because he was aware that it was not what he asserted it to be.**

**When we characterize a person as a liar, implying thereby a condemnation of his or her moral character, we usually impute to that person a habitual disposition or inclination to speak falsely whenever some profit can be gained from the deception. We are put on guard to beware of what that person says. It is more likely than not to be false and result in an injury to someone.**

**Without being chronic or habitual liars, who among us would not confess to having told some lies, white or otherwise? By that confession, we separate ourselves from the extreme skeptic who finds it impossible to tell lies, except, perhaps, the one lie that attempts to conceal his skeptical state of mind. Unlike the extreme skeptic, we do not refuse to attribute truth to certain statements and falsity to others, sometimes with more assurance, sometimes with less. The statements we regard as true are those that not only honestly express what we think to be the case, but those that in our judgment also assert what is in fact the case.**

**Here, too, there is a relationship of agreement or correspondence, but now that relation obtains between what a person thinks, believes, opines, or says to himself and what actually exists or does not exist in reality. When I assert that that which is, is, or that that which is not, is not, my assertion is true. When I assert that that which is, is not, or that that which is not, is, my assertion is false.**

**Just as the truth of speech consists in the agreement or correspondence between what one says to another and what one thinks or says to oneself, so the truth of thought consists in the agreement or correspondence between what one thinks, believes, or opines and what actually exists or does not exist in the reality that is independent of our minds and of our thinking one thing or another.**

**This definition of truth answers the question, “What is truth?” but about any particular opinion or belief that we may harbor in our minds, it does not answer the question, “Is it true?” That is a much harder question to answer, even for those who accept the definition of truth as consisting in an agreement or correspondence between the mind and reality. For the extreme skeptic who rejects that definition on the ground that it erroneously presupposes a state of reality with which a state of mind can agree or disagree, that second question is not merely harder than the first, but unanswerable.**

**The definition of truth involves an erroneous presupposition, the skeptic charges. Does not his use of the word “erroneously” trip him up? Has he not contradicted himself by saying, on the one hand, that nothing is either true or false and yet saying, on the other hand, that the presupposition involved in the definition of truth is an erroneous presupposition or, in other words, false?**

**We are verging here on an age-old reply to the extreme skeptic that dismisses him as refuting himself. One cannot say that no statements are true or false, or that there is no such thing as truth in the sense defined, without contradicting oneself. If the statement that expresses the skeptic’s view about truth is one that he himself regards as true, then at least one statement is true. If it is false, then it is quite possible for**

**many other statements to be either true or false. If the statement that expresses the skeptic’s view is neither true nor false, then why should we pay any attention to what he says?**

**Either he has contradicted himself or he has impelled us to discontinue any further conversation with him on the grounds that it can lead nowhere. There is no point in talking to someone who is willing to answer any question by saying both yes and no at the same time.**

**Since the extreme skeptic does not acknowledge the restraint imposed by the rule of reason that we ought not to contradict ourselves if we can avoid doing so, our refutation of him by appealing to that rule does not silence him. He has no objection to being unreasonable. We may have refuted him to our own satisfaction, but that does not carry with it an acknowledgment by him that he has been refuted and should abandon his skepticism. The only consequence that follows from our regarding his view as self-contradictory and therefore self-refuting is the judgment we may be forced to make that there is no point in carrying on the conversation with him any further.**

**The commonsense view is the one that all of us embrace when we reject the self-contradictory and self-refuting position of the extreme skeptic as being not only unreasonable, but also impracticable. There is hardly an aspect of our daily lives that would be the same if we were to embrace instead of rejecting the position of the extreme skeptic. We are firmly committed to the view that truth and falsity are ascertainable by us and that, with varying degrees of assurance, we can somehow discriminate between what is true and what is false. Almost everything we do or rely upon is grounded in that commitment.**

**One illustration of this should suffice. We accept trial by jury before a judicial tribunal as a way of deciding disputed questions of fact. Was the prisoner at the bar seen running away from the scene of the crime? Was the last will and testament of the deceased signed by him while in a sound state of body and mind? Witnesses are called to give testimony in answer to such questions; and, in the direct and cross-examination of the witnesses, the attempt is made by counsel either to enhance their credibility in the eyes of the jury or to diminish it.**

**When all the evidence is in and the jury has completed its deliberations, the verdict they render asserts the truth of a statement of fact, either beyond a reasonable doubt in a criminal prosecution or by a preponderance of the evidence in a civil litigation.**

**That’s what the word “verdict” means-the assertion of a truth. The verdict that the prisoner at the bar is not guilty as charged may spring from the jury’s low estimate of the credibility of the witness who testified that he saw the person charged with murder running away from the scene of the crime. The verdict may also have been determined by more credible testimony that he was somewhere else on that occasion. It never occurs to the jury to doubt that one of the two alternatives must be the case in fact: Either the person charged with the crime did have the opportunity to commit it or he did not have the opportunity to commit it.**

**The presupposition called erroneous by the skeptic will not be regarded as such by persons holding a commonsense view of the world in which we live. Common sense would not hesitate for a moment to assert that at a given time a particular thing either exists or does not exist, that a certain event either occurred or did not occur, that something being considered either does or does not have a certain characteristic or attribute. Far from being an outrageous, not to say erroneous, assumption about the reality to which our beliefs or opinions may or may not correspond, this view of reality seems undeniable to common sense.**

**By the commonsense view with regard to truth, I mean simply the non-skeptical view that understands what truth consists in-what it means for a statement to be true rather than false. In addition, the commonsense view does not doubt that some statements are true and others false and that there are ways of finding out which is which. Without being explicitly aware of it, the jury embraces this commonsense view in its unquestioning acceptance of the fact that the person charged with murder either did or did not have the opportunity to commit the crime. That being so, then one or the other of these alternatives must be true and the other false. The grounds of the jury’s verdict are thus seen to consist, first, in their accepting the presupposition involved in the definition of truth, which the skeptic rejects as erroneous; and, second, in their confidence that by weighing the evidence they can ascertain which of two opposite statements is true and which is false.**

**In the first instance, they implicitly acknowledge the correctness of the definition of truth as an agreement or correspondence between the mind and reality, which means that they affirm the existence of a reality that is independent of the mind and is what it is regardless of what we may think about it.**

**In the second instance, they implicitly acknowledge that, in addition to knowing what truth consists in, they can also use their minds to discover whether a given statement is true or false.**

**Human beings have been charged with perjury and convicted of it. They have been found guilty of falsification when they are under oath to speak the truth, the whole truth, and nothing but the truth. If the skeptic’s denials were sound, the oath every witness is required to take, and the threat of a prosecution for perjury if he or she fails to live up to it, would be a scandalous travesty.**

**Judicial procedure and trial by jury afford but one example out of many, all of which tend to show how in the practical affairs of daily life the commonsense view prevails-in business and commerce, in the practice of the professions, in the rearing of children and in other aspects of family life, in the consideration of the claims made by candidates for public office, or the claims made by advertisers, in buying and selling and in economic transactions of every sort, and in all our dealings with our fellow human beings.**

**In our further consideration of truth in the chapters t o follow, we shall be concerned with the failure to speak the truth that arises from ignorance or error rather than from deliberate prevarication. One does not have the truth in one’s mind and so, with no intention to deceive, one fails to speak it when one expresses one’s mind in verbal utterance.**

**There is a clear difference between the judgment that what a man says is false and the judgment that he is telling a lie. His statement may be false without his necessarily being a liar. Try as he will to speak truthfully by saying precisely what he thinks, he may be mistaken in what he says through error or ignorance.**

**The person we ask for directions may honestly but erroneously think that a certain road is the shortest route to the destination we wish to reach. When he tells us which road to take, what he says is false, but not a lie. However, if he does in fact know another road to be shorter and withholds that information from us, then his statement is not only false, but also a lie.**

**Milder Forms of Skepticism**

**READERS WILL HAVE NOTED that, in the preceding chapter, I referred to the skepticism there being considered as extreme. Skepticism takes milder or more moderate forms.**

**Of these, three in particular deserve our attention because they are widely prevalent and affect our understanding of truth. Two of the three tend to involve mistakes that should be avoided, but the third is that measure of sound skepticism that wisdom urges us to adopt.**

**Pyrrho, a philosopher of antiquity, has been regarded as the outstanding exponent of extreme skepticism, and so in the history of Western thought extreme skepticism bears the label “Pyrrhonism.” In modern times, the philosopher David Hume attempted to draw a line between Pyrrhonism—the extreme skepticism that sensible persons are compelled to reject— and that moderate form of skepticism that wisdom recommends. “The great subverter of Pyrrhonism or the excessive principles of skepticism,” Hume declared, “is action, and employment, and the occupations of common life.**

**These principles may flourish and triumph in the schools; where it is, indeed, difficult, if not impossible, to refute them. But as soon as they leave the shade, and by the presence of the real objects, which actuate our passions and sentiments, are put in opposition to the more powerful principles of our nature, they vanish like smoke, and leave the most determined sceptic in the same condition as other mortals.**

**Hence, Hume concluded,**

**A Pyrrhonian cannot expect, that his philosophy will have any constant influence on the mind: or if it had, that its influence would be beneficial to society. On the contrary, he must acknowledge, if he will acknowledge anything, that all human life must perish, were his principles universally and steadily to prevail. All discourse, all action would immediately cease; and men remain in a total lethargy, till the necessities of nature, unsatisfied, put an end to their miserable existence.**

**The “more mitigated” or moderate skepticism that Hume recommended as “both durable and useful,” he also thought results from the correction of extreme skepticism by common sense and by reflection. It consists in an ever-present tincture or tinge of doubt that should accompany all-or, if not all, most-of the judgments we make concerning what is true or false. It should arise from our acknowledgment of the infirmities- and the consequent fallibility-of the human mind. It holds a middle ground between what Hume calls excessive skepticism at one extreme and excessive dogmatism at the other, a dogmatism that claims certitude and infallibility about matters in which neither is attainable.**

**Before we consider how this form of skepticism affects our understanding of truth, I would like to deal briefly with the other two forms, which tend to involve mistakes that can and should be avoided. One is the mistake that people make when they misinterpret the familiar remark: “That may be true for you, but not for me.” The other is an equally widespread misinterpretation of the remark: “That may have been true some time ago, but no longer.”**

**The first of these misinterpretations arises from the failure to distinguish between the truth or falsity that inheres in a proposition or statement and the judgment that a person makes with regard to the truth or falsity of the statement in question. We may differ in our judgment about what is true, but that does not affect the truth of the matter itself.**

**Let us take, for example, a difference of opinion about the number of peaks in the Colorado Rockies that exceed 14,000 feet. One person sets the number at fifty; the other says, “Not so.” The number of peaks in Colorado exceeding 14,000 feet is some definite integer, and so the statement that sets it at fifty is either true or false, regardless of what the persons who dispute this matter of fact may think about it.**

**The truth or falsity of a statement derives from its relation to the ascertainable facts, not from its relation to the judgments that human beings make. I may affirm as true a statement that is in fact false. You may deny as false a statement that is in fact true. My affirmation and your denial in no way alter or affect the truth or falsity of the statements that you and I have wrongly judged. We do not make statements true or false by affirming or denying them. They have truth or falsity regardless of what we think, what opinions we hold, what judgments we make.**

**A different jury hearing the evidence in a particular case might reach a different verdict. Though the prisoner at the bar may be thought guilty in the eyes of one jury and innocent in the eyes of another, one of those verdicts is right and the other wrong because the prisoner is either guilty or not guilty as charged. If guilty, then a verdict that declares the prisoner’s guilt is true even when a jury renders the opposite verdict.**

**The mistake of identifying the truth or falsity of a statement with our attribution of truth or falsity to it can be easily corrected. Those who persist in the mistake turn truth and falsity into an entirely subjective affair. They are, in effect, espousing the position that what’s true for me is true, and that’s all there is to it.**

**Stated another way, they are maintaining that there is no truth at all apart from what is true for me or true for you. When what is true for me is not true for you, I may try to change your opinion and win you over to mine, but even if I do succeed in persuading you that mine is correct, we are together no nearer to the truth in any objective sense than we were when we differed.**

**The subjective aspect of truth lies in the claim that the individual makes for the veracity of his judgment. The objective aspect lies in the agreement or correspondence between what an individual believes or opines and the reality about which he is making a judgment when he holds a certain belief or opinion. The objective aspect is the primary one.**

**To ignore it, or to fail to see that it is distinct from the subjective aspect, washes out the meaning of the word “true.” This is precisely what happens when an individual who claims that a certain statement is true for him adds, “And that’s all there is to it.” He might just as well have said of the statement he calls true that he likes it, and that’s all there is to it.**

**The form of skepticism that we have been examining is sometimes referred to as “subjectivism” and sometimes as “relativism.” It is widely prevalent even among persons who would not regard themselves as addicted to skepticism because they do not think of themselves as adopting the extreme skeptical view that nothing is either true or false. But they have, nevertheless, allowed themselves to fall back into excessive**

**skepticism by their refusal to acknowledge that subjective differences of opinion concerning what is true or false can be resolved by efforts to ascertain what is objectively true or false, remembering that the truth of a statement resides in its relation to reality, not in its relation to the individual’s judgment about it.**

**Closely akin is the form of skepticism—or relativism— that makes the truth of a statement depend upon the**

**circumstances of time and place. Everyone is acquainted with such remarks as “That may have been true in the Middle Ages, but it is no longer true,” or “That may be true for primitive people, but it is not true for us.” The mistake here is exactly the same mistake as before.**

**A portion of the human race some centuries ago held it to be true that the earth is flat. That false opinion has now been generally repudiated. This should not be interpreted to mean that the objective truth has changed—that what once was true is no longer true. If it is now objectively true that this planet is spherical, it never was true that it is flat. What has changed is not the truth of the matter but the prevalence of an opinion that has ceased to be popular.**

**Another example may help to make this clear. The population of a country changes from time to time, but a**

**statement about the size of a country’s population at a given time remains true when, at a later time, it has increased in size. The presence of the date in a statement about the population of the United States in a certain year enables that statement to remain true forever, if it was accurate in the first place.**

**“Forever” is a long time and “immutable” is a strong word, and yet it must be said that if a given statement is ever objectively true, it is true forever and immutably true. The impulse to recoil from what many may be inclined to regard as an outrageous claim can be checked by remembering that the claim does not preclude acknowledging that our judgments about what is true or false change from time to time, as well as differing from place to place. What is mutable and variable with the circumstances of time and place are the opinions we hold concerning the true and the false, not what is objectively true and false.**

**Sometimes the change is only in our minds and not in reality, nor in the relation between that unchanging reality and statements we make about it. Sometimes reality itself changes, as when a new species of living organism comes into existence or an existent species becomes extinct. But a statement to the effect that a species now extinct existed in an earlier geological era, as evidenced by its fossil remains in a certain stratum of the earth’s crust, remains immutably true (if true in the first place). The fact that the species no longer exists does not impeach the accuracy of the statement about its existence at an earlier time.**

**The subjectivism and relativism we have been considering are much more prevalent in regard to goodness and beauty than they are with regard to truth. One reason for this may be that it is easier to correct the errors involved in the case of truth. It is easier to distinguish between the objective and subjective aspects of truth. We will find that more difficult to do when we come to the discussion of goodness and beauty.**

**With regard to goodness and beauty, all of us are familiar with the dictates of subjectivism and relativism: “There is nothing good or evil but thinking makes it so” and “Beauty is entirely in the eye of the beholder.” But with regard to goodness and beauty as well as with regard to truth, it is necessary to distinguish between the objective and subjective aspects in order to prevent the relapse into extreme skepticism that results from an uncorrected and unrestrained subjectivism and relativism.**

**Let me recapitulate before going on. Individuals differ from one another in their judgments concerning what is true. Each by himself or herself differs from time to time in what he believes or holds to be true. We have all said, “That’s true for me even though it may not be true for you,” and “I once thought that to be true but I no longer do.” Properly interpreted, such remarks do not obliterate the objectivity of truth. On the contrary, they appeal to it, for if truth were entirely subjective we would have no basis for trying to resolve by rational means our differences of opinion about what is true; nor would we have any basis for congratulating ourselves on having made an advance by replacing a false opinion with a true one.**

**It is with all this in mind that the third of the milder forms of skepticism—the only one that is entirely sound—turns our attention away from the objective aspect of truth, the existence of which it does not question. Looking at the subjective aspect of truth, it offers us a correct interpretation of our conflicting and changing judgments concerning what is true or false. The fact that we differ in our judgments and change them from time to time should awaken us to the wisdom of a cautious restraint—not to regard our judgments as certain and secure, as infallible and incorrigible.**

**The fact that we often disagree with one another’s judgments about what is true and the fact that we often repudiate an earlier judgment and replace it later by one that is quite contrary to it should persuade us of the infirmity, frailty, and fallibility of the human mind in its efforts to get at the truth. Being persuaded of this should not lead us to abandon those efforts as entirely futile or fruitless, but it should restrain us from claiming certitude, finality, and incorrigibility for judgments that are subject to doubt, change, and correction.**

**The objective truth of a statement may be immutable, but not our subjective judgment about whether it is true. There are no degrees of objective truth. A statement is either true or false objectively. But when, subjectively, we judge a statement to be true or false, we may do so with more or less assurance, and accordingly we may speak of it as being more or less true, or we may say that the probability of its being true is greater or less.**

**The form of skepticism that wisdom recommends we adopt is one that does not challenge the objectivity of truth, but it does enjoin us to recognize how few are the judgments concerning what is true for which we can rightly claim certitude and finality, and how many fall in the realm of doubt where they are subject to change and correction by all the means that human beings employ in their efforts to get at the truth. In fact, it is only in the realm of doubt that we engage in the pursuit of truth.**

**The Realm of Doubt**

**WHEN SHOULD WE SAY, “I know,” and do so with complete assurance? When, after expressing a judgment, are we warranted in adding, “This is something that I know beyond the shadow of a doubt”?**

**When instead, with something less than complete assurance and yet not without some basis for our judgment, should we say, “I believe,” “I think,” “I have the opinion that . . .” or use such phrases as “in my judgment” or “in my opinion”? When, after expressing a judgment, should we add the comment: “This is something I have reason to believe is true”?**

**The criteria for drawing the line that divides the realm of certitude from the realm of doubt can be stated abstractly. As so stated, the criteria are not difficult to understand. Difficulties arise only when we try to apply these criteria to particular cases in an attempt to decide which of our judgments belong in the realm of certitude and which in the realm of doubt.**

**The criteria are as follows. A judgment belongs in the realm of certitude when it is of the sort that (1) cannot be challenged by the consideration of new evidence that results from additional or improved observations, nor (2) can it be criticized by improved reasoning or the detection of inadequacies or errors in the reasoning we have done. Beyond challenge or criticism, such judgments are indubitable, or beyond doubt.**

**In contrast, a judgment is subject to doubt if there is any possibility at all (1) of its being challenged in the light of additional or more accurate observations or (2) of its being criticized on the basis of more cogent or more comprehensive reasoning.**

**Let me illustrate this by reference once again to judicial proof in a jury trial of issues of fact. In criminal prosecutions, the degree of proof required is defined as being “beyond a reasonable doubt.” But this does not take the verdict rendered by the jury out of the realm of doubt.**

**What the jury is asked to bring in is a verdict that they have no reason to doubt—no rational basis for doubting—in the light of all the evidence offered and the arguments presented by opposing counsel.**

**It always remains possible that new evidence may be forthcoming and, if that occurs, the case may be reopened and a new trial may result in a different verdict. It also remains possible for the verdict to be appealed to a higher court on the grounds of procedural errors that affected the weighing of the**

**evidence in the deliberations of the jury.**

**The original verdict may have been beyond a reasonable doubt at the time it was made, but it is not indubitable—not beyond all doubt or beyond the shadow of a doubt—precisely because it can be challenged by new evidence or set aside by an appeal that calls attention to procedural errors that may have invalidated the jury’s deliberations—the reasoning they did in weighing and interpreting the evidence presented.**

**In civil litigation, the degree of proof required is defined as being “by a preponderance of the evidence.” Here the jury’s verdict claims no more than that the answer it gives to a question of fact has greater probability than the opposite answer. As the jurors have interpreted and weighed the evidence, they have found that it tends to favor one answer rather than another. Here, as in a criminal prosecution, additional evidence or better thinking on the jury’s part might result in a different verdict. The balance might shift in the opposite direction.**

**In the affairs of daily life, many of the judgments we make are, like jury verdicts, beyond a reasonable doubt or are favored by a preponderance of the evidence. For all practical purposes, we regard judgments of the first sort as being so highly probable that we act on them as if they were certain. We need not hesitate to act on them even though new evidence may be forthcoming in the future or a flaw in our thinking may be discovered. In the light of all the evidence we have before us and the thinking we have done, we have no**

**reason at present to doubt the truth of such judgments. But we should always remember that that does not make them indubitable; that does not give them the kind of certitude that removes them from the realm of doubt.**

**The essential difference between genuine certitude and the substitute for it that is often called “moral certainty” or “practical certainty” lies in the finality and incorrigibility of indubitable judgments. Even when we act on a highly probable judgment as if it were a certainty for all practical purposes, it remains a judgment that is subject to correction, to challenge, and to criticism. It is one about which we may in the future think it reasonable to change our minds.**

**In a wide variety of daily affairs—in the conduct of family life, in the care of our bodies and in all matters of health and disease, in our business or professional careers, in our financial dealings, especially in making investments, in our political decisions, especially with regard to foreign policy and international relations—we frequently act on judgments that are not beyond a reasonable doubt, but are simply more probable than their opposites. In the light of the evidence available at the time and in the light of the best thinking we have done so far, we regard them as more likely to be true.**

**The critical caution we must exercise is contained in the words “at the time” and “so far.” These words remind us that the future always holds the possibility of additional evidence and better thinking, either of which may shift the weight of probability in the opposite direction.**

**The realm of doubt is the realm of judgments that have a future, for better or for worse. This is not so in the case of judgments that have the finality and incorrigibility of certitude.**

**If we turn now from judgments that we make in the practical affairs of daily life to the conclusions of historical research, to the findings, hypotheses, and theories of the investigative sciences, and even to certain branches of mathematics, the same criteria function to place in the realm of doubt a fairly large portion of what these learned disciplines offer us as knowledge. This assessment may appear shocking to those who, distinguishing between knowledge on the one hand and opinion or belief on the other hand, regard history, science, and mathematics as branches of organized knowledge, not as collections of mere opinions or beliefs.**

**The world “knowledge” for them has the connotation of truth; in fact, it is inseparable from it. There cannot be false knowledge, as there can be false opinions and beliefs. The phrase “true knowledge” is redundant; the phrase “false knowledge” is self-contradictory.**

**However, those who hold this view acknowledge that there, is progress in these disciplines. They as well as everyone else speak of the advancement of learning in all these fields. They attribute it to new discoveries, improved observations, the development of sounder hypotheses, the substitution of more comprehensive theories for less comprehensive ones, more elaborate and more precise analysis or interpretation of the data at hand, and rectified or more rigorous reasoning. Less adequate formulations are replaced by better**

**ones-better because they are thought more likely to be true, or nearer to the truth being sought and, therefore, better approximations of it.**

**In short, all these branches of organized knowledge have a future, a future they would not have if the present found them in possession of judgments about what is true or false that had finality and incorrigibility. To whatever extent history, science, and mathematics have a future, to that same extent these bodies of “knowledge” belong in the realm of doubt, not in the realm of certitude.**

**I put the word “knowledge” in quotation marks because the word has two meanings, not one. The same holds for the word “opinion.” The recognition of the two senses in which we use these words will overcome the shock initially experienced by those who recoiled from locating history, science, and mathematics in the realm of doubt, because they are accustomed to regarding them as branches of knowledge, not as collections of opinions or beliefs.**

**Let us first consider the meaning of the word “knowledge” that has already been mentioned. It is the sense in which knowledge cannot be false and, therefore, has the infallibility, finality, and incorrigibility that are attributes of judgments in the realm of certitude. Let us call this the strong sense of the term.**

**At the opposite extreme from knowledge in this strong sense is opinion in the weak sense of that term. When we use the word “opinion” in this sense, we refer to judgments on our part that are no more than personal predilections or prejudices. We have no basis for them, either empirical or rational. We cannot support them by appeal to carefully accumulated evidence or by appeal to reasoning that gives them credibility. We do not, in short, have sufficient reason for claiming that they are more likely to be true than are their opposites.**

**We prefer the opinions to which we are attached on emotional, not rational, grounds. Our attachment to them is arbitrary and voluntary-an act of will on our part, whatever its causes may be. Since we may just as capriciously adopt the opposite view, unfounded opinions of this sort fall to the lowest level of the realm of doubt.**

**In between these two extremes lie judgments that can be called knowledge in the weak sense of that term and opinion in the strong sense of that term. Here we have judgments that are neither arbitrary nor voluntary, judgments we have rational grounds for adopting, judgments the probability of which we can appraise in the light of all the evidence available at the moment and in the light of the best thinking we can do—the best analysis and interpretation we can make of that evidence, again at the moment.**

***At the moment!* The future holds in store the possibility of additional or improved evidence and amplified or rectified reasoning. That fact, as we have seen, places such judgments in the realm of doubt. They have the aspect of opinion because they may turn out to be false rather than true, but they also have the aspect of knowledge because, at the moment, we have no reason to doubt them. They are beyond reasonable doubt, but not beyond that shadow of a doubt, from which they cannot escape because they have a future.**

**Readers who have followed the argument so far may begin to wonder whether the realm of certitude is a completely empty domain. If not, what sort of judgments can we expect to find there?**

**The answer I am about to give applies not only to judgments we make in the course of our daily lives, judgments ordinarily made by persons of common sense, even the judgments such persons may come to make when their common sense is enlightened by philosophical reflection. It also applies to judgments in the field of mathematics and in some, if not all, of the empirical sciences.**

**Truths called self-evident provide the most obvious examples of knowledge in the strong sense of that term. They are called self-evident because our affirmation of them does not depend on evidence marshaled in support of them nor upon reasoning designed to show that they are conclusions validly reached by inference. We recognize their truth immediately or directly from our understanding of what they assert. We are convinced—convinced, not persuaded—of their truth because we find it impossible to think the opposite of what they assert. We are in no sense free to think the opposite.**

**Self-evident truths are not tautologies, trifling and uninstructive, such as the statement “All triangles have three sides.” A triangle being defined as a three-sided figure, we learn nothing from that statement. Contrast it with the statement, “No triangle has any diagonals,” which is both self-evident and instructive, not a tautology.**

**The self-evidence of the truth of the latter statement derives immediately from our understanding of the definition of a triangle as a three-sided figure and from our understanding of the definition of a diagonal as a straight line drawn between two nonadjacent angles. Seeing at once that a triangle contains no nonadjacent angles, we see at once that no diagonals can be drawn in a triangle.**

**Our understanding of diagonals also enables us to see at once that the number of diagonals that can be drawn in a plane figure that is a regular polygon having n sides (where n stands for any whole number) is the number of sides multiplied by three less than that number, the product being then divided by two.**

**Sometimes, as in the case of “No triangle has any diagonals,” the self-evidence of the truth derives from our understanding of definitions. Sometimes, it derives from our understanding of terms that are not only undefined but are also indefinable, such as “part” and “whole.”**

**Since we cannot understand what a part is without reference to a whole, or understand what a whole is without reference to parts, we cannot define parts and wholes. Nevertheless, our understanding of parts and wholes makes it impossible for us to think that, in the case of a physical body, its parts are greater than the whole. That the whole body is always greater than any of its parts is not only true, but self-evident.**

**Equally self-evident is the truth that nothing can both exist and not exist at the same time; or that, at a given time, it can both have and not have a certain characteristic. Our understanding of what it means for anything to act on another or be acted upon gives us another self-evident truth. Only that which actually exists can act upon another and that other can be acted upon only if it also actually exists. A merely possible shower of rain cannot drench anyone; nor can I be protected from the rain by a merely possible umbrella.**

**How about the prime example of self-evident truth proposed in the Declaration of Independence—that all men are created equal? Clearly, it is not self-evident as stated if the word “created” is understood to mean *created by God*, for the existence of God and God’s act of creation require the support of reasoning—reasoning that can be challenged. Suppose, however, that the proposition had been “All men are by nature**

**equal.” On what understanding of the terms involved might that statement be regarded as self-evidently true?**

**First of all, we do understand “equal” to mean “neither more nor less.” If, then, we understand “all men by nature” to mean “all human beings” or “all members of the same species,” it becomes self-evidently true for us that all are equal, which is to say that no human being is more or less human than any other.**

**All persons have, in some degree, whatever properties belong to all members of the species *Homo sapiens*. The inequality of one individual with another lies in the degree to which this or that specific property is possessed, but not in the degree of humanity that is common to all.**

**I have dwelled at some length on this example not only because we will have to return to it in later chapters dealing with the idea of equality, but also because the proposition about the equality of all human beings may have to be defended against those who advance the opposite view—Aristotle, for example, who maintains that some human beings are by nature born to be free, and some are by nature born to be slaves; or the male chauvinists over centuries past, and even in the present, who believe that females are inferior human beings.**

**I think the truth of the proposition about human equality can be defended against all these errors, but a self-evident truth should need no defense whatsoever. Hence the proposition, though true, may not be a good example of self-evident truth.**

**Another whole class of truths for which certitude may be claimed consists of those called evident, rather than self-evident. I do not, as Descartes thought, have to infer my existence from the fact that I am aware of myself thinking. I perceive it directly, just as I perceive directly the existence of all the physical objects that surround me. If there is any doubt at all about the truth of such judgments, it is the merest shadow of doubt about whether I am suffering a hallucination rather than actually perceiving.**

**When I am perceiving, not hallucinating, there can be no doubt that the objects I am perceiving actually exist. Such judgments have a semblance of certitude that falls short of complete certitude only to the extent that a shadow of doubt remains concerning the normality of my perceptual processes.**

**Whether my perceptual objects exist when I am not perceiving them is another question, to which I think the true answer is that they do, but its truth is neither self-evident nor evident. Reasoning and argument are required to defend its truth. If we go beyond judgments about the present existence of objects that we are at the moment perceiving to judgments about their existence at other times and places, or to judgments about their characteristics or attributes, we pass from the realm of certitude to that of doubt. Though we less frequently misperceive than we misremember, our perceptions as well as our memories give rise to judgments that are often in error or otherwise at fault.**

**Judgments that articulate what we perceive or remember take the form of statements about particulars—this one thing or that, one event rather than another. We are also prone to generalize on the basis of our perceptual experience. In fact, the judgments we are most likely to be insistent about are generalizations**

**from experience. Many of these are unguarded and turn out to be unwarranted because we have said “all” when we should have said “some.” Even scientific generalizations sometimes overstate the case. The history of science contains many examples of generalizations that have been falsified by the discovery of one or more negative instances.**

**The falsification that I have just referred to provides us with one more example of judgments that belong in the sphere of certitude. When the discovery of a single black swan falsifies the generalization that all swans are white, our judgment that that generalization is false is knowledge in the strong sense of the term—final, infallible, incorrigible. Nothing that might possibly ever happen in the future could reverse the judgment and make it true rather than false that all swans are white.**

**The number of self-evident truths is very small. The number of falsified generalizations, both those made by scientists and those made by laymen, is considerable; and the number of perceptual judgments about the evident truth of which we have certitude is very large. But it is not the number that matters when we compare the realm of certitude with the realm of doubt. What matters is that only judgments in the realm of doubt have a future, a future in which the effort we expend in the pursuit of truth may bring us closer to it.**