

The Difference Between High School and College

SINCE YOU KNOW what high school work is like, we can approach the nature of college work by comparing college with high school. College freshmen believe that there must be a difference between high school and college, but their ideas about what the difference is are often radically mistaken. Students often see the function of high school as the teaching of facts and basic skills. They see high school as a continuation of elementary and junior high school in this respect. In senior high school, one learns physics and chemistry, trigonometry, American and world history—all subjects in which the “facts” to be learned are harder, but in which the method is much the same as in elementary and junior high school. The method of study most commonly used is memorization, although students are also called upon to apply memorized formulas in working problems and to make deductions in mathematical proofs. There are some exceptional high school classes, and some exceptional high schools, in which this is not so. But by and large, the perceived emphasis in secondary education is on learning facts through memorization. The secondary school teacher holds a position of authority because he has mastered factual information. Tests demand recitation of facts, papers require compilation of facts.

It is only natural, then, that the typical student sees college along these same lines. Reinforced by the relation between elementary school, junior high, and high school, the students usually believe that the relation between high school and college is the same as that between junior high

school and high school. They believe that the difference between high school and college is that college courses are simply more difficult and that they are more difficult because they present more difficult factual information; they examine more difficult topics; they go over topics covered in high school but in a more detailed and painstaking way. College is taken to be different from high school *only* in being more difficult. Unfortunately this belief is reinforced by the actual content and method of presentation of typical freshman courses and programs. For example, in the first semester a freshman might take a course in English composition, a beginning physics course, a course in a foreign language, and perhaps a lower-level survey course in social science or history. These courses are often indistinguishable from high school courses.

New Types of Intellectual Work

At the same time, college freshmen sometimes suspect or expect that college is or should be different *in kind* (not just in difficulty) from high school—that somehow intellectual activity in college is or should be of a distinctly different and higher level. And this expectation is fulfilled when the student gets beyond the introductory survey courses. There the instructors do seem to expect something different *in kind* from the student, though without telling the student explicitly and in detail what this is.

The good college teacher presents some information, in the sense of “what is currently believed.” But he also spends much time talking about *the basis* on which this information is currently believed. *A large part of college work consists of discussing and examining the basis of current beliefs.*

The difference between high school and college is not that there is intellectual activity in one and not in the other. The difference is that college work requires that students engage in a *different kind* of intellectual activity, *in addition to* the activity of understanding the material

that is presented. The first type of intellectual activity in both high school and college is understanding the material. Even here, though, college requires a different and higher type of understanding, a type to be explained to some extent in later chapters of this book. Once the material is understood, the college student must perform another sort of intellectual work on the material, namely critical examination and evaluation. A main difference, then, between high school and college is that *new types of intellectual work* are required at the college level.

To see why new types of intellectual work are required, let's look again at the way in which materials are presented in high school and college. In high school, they are presented in an authoritative manner—almost as if they were absolutely and eternally true. This mode of presentation is reinforced by the fact that the content that is presented in high school is, typically, material about which people feel very, very sure. The laws of optics, the basic facts of American history, the structure of a plant, the operation of the Federal Reserve System—these are matters about which people feel great assurance, perhaps even certainty. They can be presented on the basis of authority. They are not controversial. Of course, we all know that once in a while, something about which we are very sure in this way turns out to be false—or at least subject to revised beliefs. Nevertheless, revisions of this sort are infrequent.

But in college a different attitude prevails toward the material being presented. Rather than being treated as unchanging fact, it is treated as beliefs or conclusions that have been reached on the basis of investigations.

At this point I must pause for a moment in order to talk about the kinds of statements that I'm making here. I have made, and will make, statements that assert that college work has such-and-such features or that college differs from high school in this or that way. And some of you might find that in some of your courses, or indeed in your whole college career, the work is not of this kind. In

fact, some or all of your college work may seem not so different from your experience in high school. This may, of course, be due to your mistakenly approaching college work as if it were just the same as high school work. But I must admit that some college work really is no different from high school work. So how can I be justified in claiming so confidently that the two are different? My answer to this depends on first making a certain important distinction, the distinction between a *descriptive* statement and a *normative* statement. A descriptive statement tells how things in fact *are*. A normative statement tells how things *should be*, regardless of how they in fact are. If you say to me, "Things in my college *are not* the way you describe them," my reply is that they *should be* the way I describe them. Thus, some of my statements look like descriptive statements but they are to some extent normative statements too. My statements on this topic are intended to describe the way things are at the best colleges (not to be confused with the best-known colleges) and the way they should be in every college. I admit that some college teachers treat their materials as if they were teaching high school. And I admit that some exceptional high school teachers treat their materials in a college manner. What I am trying to do is not so much describe what actually goes on in the places called "high schools" and in the places called "colleges" as describe two different types of work and then say that the more advanced work is what ought to be going on in colleges. *Only* this more advanced work ought to count as "higher education." So my statements are partly descriptive (of the best teachers and the best colleges) and partly normative (in claiming that this is what ought to go on in college).

Now let's return to the difference between high school and college just mentioned. I said that in college materials are treated as beliefs or conclusions reached through investigation. Modern people take a certain attitude toward beliefs, namely that if a person believes something, he should have a basis for such beliefs. This can be put in

the following way: it is rational to believe something only if one has a basis for that belief. One basis is what we call evidence. Most people today believe that, in secular or nonreligious matters at least, one should have evidence for one's beliefs, that it is right to believe on the basis of evidence and wrong to believe that for which there is not sufficient evidence. W. K. Clifford, a nineteenth-century English mathematician and philosopher, put this point very directly when he said: "It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence."¹ Clifford puts this point with perhaps greater moral fervor than most people would, but I think that no one would deny that he expresses a view that is quite widespread in contemporary thought.

Material is presented in college not as something to be believed on the basis of authority but as something to be believed because such belief is rationally justified and can be rationally defended. Thus, much work in college—and, I would say, the work that is characteristic of college—deals with the rational justification of belief. College teachers are concerned not merely with imparting information but also, and mainly, to present and examine the basis on which this information is or should be believed. They do this because they want this material to be believed on the basis of reason rather than on the basis of authority. It is a basic presupposition of the modern mind that rationally based belief is better than belief based on authority, on faith, or on some other nonrational process. Thus, much time in college is spent investigating the rationality of this or that belief.

It is important to notice that once we make this shift from authority to rational evaluation, the mode of presentation of the material—and the way in which we regard the material—also changes. Material that is presented on the basis of authority is presented as factual and is given an air of being absolutely and unchangeably true. Material that is presented on the basis of rational justification is presented as belief, as theory, as hypothesis, some-

times as conjecture—as material supported to a greater and lesser degree by argument and evidence. And this difference in mode of presentation makes an enormous difference in how the material is regarded. What is treated in high school as eternal and unchangeable fact that human beings have discovered in their continual and relentless progress toward total knowledge will be treated in college as belief that may perhaps be well supported at the present but that could turn out to be wrong. Another way of putting this is: what is fact in high school is often only theory—perhaps well-supported theory but nevertheless only theory—in college. And theories must be treated as such: one must examine the evidence to see how much support it gives the theory; and alternative theories must be examined to see which is better, that is, to see which theory should be believed.

Basis of Belief

Why do we believe that beliefs should be rationally based? Is this belief itself rationally based? Or is this belief itself merely an arbitrary presupposition or assumption? After all, someone might claim that what matters about a belief is not whether it is rational but instead whether it is true or false. If a belief is true, then it does not matter whether or not it is held on a rational basis. A true belief that is irrational will be as effective in our lives as a true belief that is totally rational. Consider the following example. Suppose that a businessman has been kidnapped and is being held for ransom. His wife has a dream in which she sees her husband being held captive in an old warehouse by the harbor, and she wakes believing that he is indeed there. At the same time, the chief of detectives has been working all night on the case, gathering evidence, tracing the car used in the kidnapping, questioning witnesses, and interviewing suspects. By daybreak the chief of detectives comes to believe that the businessman is being held captive in that very same abandoned warehouse. He and his men break into the warehouse and

rescue the businessman. So it turns out that the wife's belief is true and that the detective's belief is true, even though the first is irrational and the second is rational. But what difference did the rationality or irrationality of the belief make? If the police had followed up on the wife's belief instead of the detective's belief, they would have gone to the same warehouse and rescued the businessman anyway. This seems to show that it is the truth of the belief, not its rationality, that matters.

This would be a good argument if our beliefs were always true and never false. But beliefs can be false, and our problem is to separate the true from the false. What we must do is find good reasons for believing what we believe. We think that if we base our beliefs on good reasons, our beliefs will turn out to be true more often than false. The wife does have a reason for believing that her husband is being held in the warehouse: she dreamed it was so. But we believe that this is not a good reason because many of the things that we dream turn out to be false. Dreaming does not, for most of us, provide a reliable guide to the truth. Hence, the wife's belief is considered by modern persons to be unjustified, that is, irrational. But it is felt that evidence is a reliable guide to the truth, and that the more evidence we have, the more we are justified in believing what we do believe.

Since college students are expected to believe on the basis of good reasons, they are expected to know what those good reasons are. They are expected to know not only facts but also the reasons those are believed to be facts. Therefore, much time in college is spent in examining reasons to see if they are *good* reasons. For example, a high school text on American history might state that Alexander Hamilton was one of the chief architects of our Republic, that Hamilton's ideas were extremely influential in shaping our form of government. A college teacher covering this period of American history would not let a statement like this pass without examination—he would demand to know the reasons for believing this

claim to be true. This is, in part, why college courses beyond the initial survey courses usually cover a small specialized topic: it takes time to examine and evaluate reasons, to consider and discard alternative theories, to look at a theory from many sides before deciding that the reasons are good enough to accept the theory.

So one question with which college work is concerned is the question: "What are the reasons for believing this?" And the next question is: "Are these reasons good reasons for believing this?" And for any particular belief about which this second question is asked, the answer might turn out to be no. In that case, the belief is not justified—or, alternatively, we are not justified in believing that. The answer might turn out to be no in the case of the belief that Alexander Hamilton's ideas were influential in shaping this country's government. "But," someone will say, "that's ridiculous. Of course Hamilton was influential. All the books say so. Everyone believes it. And it's obvious." But is it so obvious? What are the reasons for believing it? If Hamilton was influential, then we should be able to give good reasons for believing that he was. And if we do not know of any reasons, or if the reasons are not good reasons, then we should not believe that he was influential.

My point here is that the business of college teaching and learning—namely the examination of reasons for beliefs—gives rise to, encourages, and absolutely depends on both students and teachers having an attitude of skepticism, of questioning, of not taking anything for granted. The whole project of college teaching and research—indeed, the whole project of the modern mind—is to base belief only on good reasons. Moderns feel that only this is rational and legitimate. We have banished authority, superstition, magic, and prophecy as bases for belief. We pride ourselves on rejecting these "primitive" and "emotional" reactions to the world. We exalt reason. And what this means is that we attempt to base belief only on good reasons. We are told that in the

Middle Ages, people believed things because the ancient Greek philosopher Aristotle said that they were true. They believed these things on Aristotle's authority. This is now seen as illegitimate; instead, we should see for ourselves whether things are true by gathering evidence and finding good reasons for ourselves. Various tribes base some beliefs on the results of magical rites. We regard this as mere superstition. The modern mind rejects all this. And college simply reflects this view about the legitimation of belief by inquiring into the rationality of every belief to find out whether each belief is supported by good reasons.

This view has extremely important consequences. Because *every* belief ought to be based on good reasons, *every* belief must be examined. This includes even the most obvious beliefs. In fact, it is especially important to examine those claims and beliefs that are most obvious—it is precisely because something is "obvious" that people will not have examined the reasons behind it. But it may turn out that any particular belief, even an "obvious" belief, is unjustified. It may turn out that although we thought that there were good reasons for that belief, when we take a hard look at the case, there are no good reasons for it.

College As a "Subversive" Institution

This questioning of everything, including the obvious, is the mission of college in carrying out this project of modern intellectual life. And this sometimes has uncomfortable consequences for colleges, college teachers, and college students. For this mission makes the college potentially the most "subversive" institution in society. Here is an example. It has been held as "obvious" by many people in our country that the American economic system (a variety of capitalism) is superior to the Communist economic system. In college one might well investigate this belief to see if it is backed up by good reasons. However, merely raising and discussing this matter is likely to

seem (and certainly has in the past seemed) to large segments of the American people as sedition, as "anti-American," as a betrayal of the trust of the American people in colleges and universities, as a lack of faith in America. And in the past, college teachers have been threatened and punished for doing just this sort of thing. College teachers have been fired from their jobs or made to sign loyalty oaths because they have investigated such topics or have come to have unorthodox views on such topics. The anti-Communist witchhunts of the 1950s, associated with the name of Sen. Joseph McCarthy (R-Wis.), included college teachers among their victims. Here is another example. College teachers who investigated and taught about Darwinian evolution were considered by powerful conservative segments of society to be undermining established religion and were persecuted for this, when in fact they were only doing their jobs, namely, inquiring into the reasons for a particular belief. Somewhat closer to our own time, several academics have been threatened because they have proposed that intelligence and social behavior are genetically determined. They have been prevented from speaking to groups and have even occasionally been physically assaulted. Their views have been condemned by liberals as politically dangerous. Thus, we find colleges under attack by both liberals and conservatives. All of this was foreshadowed by the situation of Socrates, the first person in recorded Western culture to have seriously examined the basis of common and obvious beliefs. Socrates unceasingly questioned others to find out whether they had good reasons for their beliefs about such sensitive topics as justice, piety, and virtue. He was finally accused of corrupting the youth and casting doubt on the gods, tried by the Athenian people, and put to death. Inquiry into reasons for beliefs has sometimes been a dangerous activity, from Socrates' time to the present, because the answer could always turn out to be no, in which case some favorite or important beliefs are threatened.

This phenomenon is not limited to college teachers. It extends to college students themselves. Many college students, after hearing and talking with their instructors and other students, have gone home during vacations and questioned important beliefs that they had formerly shared with their parents. They sometimes question their parents' way of life ("How can you live in this expensive house and drive several cars while people in other parts of the world are starving?"). Sometimes they question their parents' religious beliefs. Tensions develop and fierce quarrels break out between parents and students over just this kind of issue. So the basic attitude fostered by college—questioning of the reasons for beliefs—does sometimes lead to uncomfortable situations, and both students and faculty must be prepared to withstand this and to hold firm in carrying out the project of critical inquiry. College is sometimes thought of as an "ivory tower," as somehow not part of "real" life. But the strong emotions generated when favorite beliefs are questioned show that college work has a direct connection with important aspects of "real" life. If college were irrelevant to life, no one would care what was being done in colleges, and colleges would be viewed with amused tolerance rather than with sometimes heated emotion, vituperation, and outright assault.

When you inquire into the reasons for a belief, you may seem to be doubting that belief. When you raise questions about the reasons for a belief, some people may take you to be attacking that belief. We should distinguish here between two attitudes that one may take toward a belief when investigating the reasons for it: *doubting* the belief, in the sense of suspecting or believing that it is false; *suspending* the belief, in the sense of neither believing it to be true nor believing it to be false. This second attitude is a neutral attitude toward the belief and it maximizes the objectivity with which you pursue your inquiry into the reasons behind the belief. In view of this distinction, we can see that to raise questions about the reasons

for a belief is not necessarily to attack it, since the questioner may have the second attitude toward the belief instead of the first attitude. When you take this attitude of suspension of belief toward a statement, you are no longer regarding that statement as an expression of fact. For example, you no longer regard it as a fact that Hamilton was influential in shaping our government. You are now investigating to see if the reasons justify your taking the statement to express a fact. The statement expresses a "claim," a "hypothesis," a "theory," or a "supposition." When this statement is found to be supported by good reasons, then it may be said to express a fact.

Why Reasons Matter

Why is it that college work is so concerned with the reasons for our beliefs? I have already briefly mentioned one reason for this: we hold that a belief that is supported by good reasons is more likely to be true than one that is not supported by good reasons. You should not, however, allow this justification of the search for good reasons to go unchallenged and unexamined. Is it true that good reasons make truth more likely? Someone may say that this connection between good reasons and likelihood of truth must exist because a reason will count as a *good* reason *only if* its presence does produce a greater likelihood of truth. This is what being a good reason *is*. But this response only shifts the problem by raising a new and equally important question: what types of reasons increase the likelihood of truth?

There is a second, very different, justification of the search for good reasons. One could form beliefs capriciously—that is, choose in an arbitrary manner to believe this or that. For example, if you wanted to believe that you are the best figure skater in the world, you would simply go ahead and believe it, ignoring all evidence. The trouble with forming one's beliefs in this way is that eventually—and probably sooner rather than later—you will

come into frustrating, or even violent, contact with the real world. If you did believe that you were the greatest figure skater in the world but weren't, you might demand special privileges for yourself of the type often enjoyed by great artists. And you would be shocked and frustrated when you did not get what you wanted. Basing beliefs on good reasons has been found to aid in avoiding frustrations of this sort and to help in achieving one's goals. We might call this a "pragmatic" justification of the search for good reasons. Beliefs based on good reasons help us to get along better in the world.

A third justification is what we might call a "social" justification: basing beliefs on good reasons fits together well with our democratic way of life. In a democracy, authority is frowned upon as a basis for social decisions and social action. We do not believe in following the orders of a dictator or a tyrant. Instead, we "reason together" to decide what ought to be done. We try to persuade others that our position or view is the best; and we do this by trying to show that our position is supported by the best reasons. When a zoning dispute comes up in the city council, a new curriculum is proposed in the university, or an expansion plan is discussed by a group of businessmen and women, each side tries to show that the best reasons support its alternative. This is not to deny that other factors—personal influence, threats, emotion, bribery—sometimes weigh heavily or even determine the final decision. Nevertheless, our ideal—and often our practice—is to reason and to argue for or against one side or the other in an attempt to reach the best decision. This is the way we believe that we should relate to one another in society. Each person, we feel, ought to be treated as a rational, independent judge, interested in doing what is right and capable of being persuaded by argument. This democratic vision has nothing to do with whether beliefs supported by good reasons are likely to be true. It has nothing to do with whether beliefs supported by good reasons are more likely to be instrumental in the achievement of our goals. Instead it has to do with the way in which

we think about ourselves, the kinds of persons we are or would like to become, and the ways in which we want to relate to and interact with others in society. Basing belief on good reasons discovered in cooperative discussion with others helps to make us the persons that we want to be and to produce the type of society in which we want to live.

A fourth justification is to be found in the works of the ancient Greek philosopher Plato. Plato's works take the form of dialogues between Socrates (who was Plato's teacher) and others whom Socrates encountered in Athens. These dialogues have a question-and-answer format, with Socrates asking the questions in a way that results in a critical examination and evaluation of the beliefs of others on such important topics as justice, piety, and virtue. In fact, Plato's dialogues are probably the single greatest influence in the formation of Western rationality; any critical evaluation of Western rationality should begin with an evaluation of Plato's view of the function of the intellect in living. In the *Meno*, a dialogue about the nature of virtuous action, Socrates eventually poses the question: is true belief equally as good, equally as valuable, as justified true belief (that is, true belief supported by good reasons)? In other words, he poses the question: what difference does justification, or support by good reasons, make? Isn't it enough to have true belief even if it is not supported by good reasons? It appears to many people that true belief is as useful as justified true belief, that justification by good reasons adds nothing, and so one need not bother about justification. As Socrates put it: "Then true opinion is as good a guide to correct action as knowledge . . . right opinion is not less useful than knowledge."² To show that this is wrong and that good reasons are important, Socrates begins with the story of the statues of Daedalus, which are so lifelike that they need to be fastened down to prevent them from running away:

they are not very valuable possessions if they are at liberty, for they will walk off like runaway slaves; but when fastened, they are of great value, for they are really beautiful works of art. Now this is an illustration of the nature of true opinions: while they abide with us, they are fruitful and beautiful, but they run away out of the human soul, and do not remain long, and therefore they are not of much value until they are fastened by the tie of the cause . . .³

Socrates is saying here that if a person has a merely true belief without knowing the justification of that belief, then he is not likely to have that belief for very long. A true belief is of as much value as a justified true belief as long as you have the true belief. But the trouble is that you are likely to change your mind about the merely true belief because you do not know the reasons behind it. Thus, beliefs that are merely true and not also justified are of little value because these beliefs do not stay around—you do not believe them—long enough to be of value. For example, suppose you believe the maple is a deciduous tree because someone told you this. This is a true belief. But you are accepting the belief merely on the basis of authority; you do not know its justification; you do not know why you should believe it. If someone else were to come along and tell you that the maple is not a deciduous tree, you would probably not know whom to believe; you would feel that you no longer knew what the truth was, and you would give up your belief that the maple is a deciduous tree. You would no longer have this true belief, and thus this true belief could do you no good at all. This is precisely the situation you are in if you believe things because your high school or college teachers told you that they are true. Someone else might come along and tell you something different, challenging your belief, and then you would not know whom or what to believe. But if you know the grounds—the good reasons or justification—for your beliefs, then when your belief is challenged, you can defend your belief, not only to other people but to your-

self too. You are therefore more likely to retain your true beliefs when you know *why* you ought to hold them. You are in a good position to evaluate and reject the justifications (if any) offered for other beliefs. Thus, justified true belief turns out to be more useful to us than merely true belief because it stays with us longer. We are more likely to continue to hold it.

Finally, there is a fifth and equally important justification of the search for good reasons. Earlier I said that in high school, students are required to do a certain kind of intellectual work, namely understanding the material presented. This is so in college, too. And the investigation of reasons and arguments for a belief assists in understanding that belief. To put this in a somewhat different way, if one does not know how to defend a belief, if one does not know what counts as good reasons for a belief, then to that extent one does not understand that belief. This is another of the lessons of the dialogues of Plato. In these dialogues, Socrates, through adroit questioning, seems to cast grave doubt on the favorite beliefs of other people. Many readers take Socrates to have shown in this way that these beliefs of others are false. But in many cases this is not so. For it is also possible, even likely, that these people do not defend their beliefs properly in the face of Socrates' probing questions. And they do not defend them properly because they do not fully understand their own beliefs. Thus, Socrates' questioning reveals others' lack of understanding rather than falsity. If these people had understood their beliefs, they would have known what to say in defense of those beliefs. Thus, one of Socrates' messages to us is this: it is as useless and as dangerous to hold beliefs that may be true but which you do not understand as it is to hold beliefs that are out-and-out false. By investigating reasons for our beliefs, we come to understand them better.

Some Fundamental Concepts of Argumentation

GIVEN THAT MUCH college work is devoted to the discovery and evaluation of reasons for beliefs, exactly how is this discovery and evaluation to be carried out in practice? Clearly there is no laboratory we can use in doing this, no mechanical procedure, no litmus paper that turns red when a reason is a good reason and blue when it is a bad reason.

However, there is a procedure that is used for the discovery and evaluation of reasons. This procedure is called *argumentation*. This method, argumentation, is clearly laid out in the dialogues of Plato, which have remained models of argumentation in Western civilization for thousands of years. Argumentation is a form of discussion that proceeds according to certain rules and makes use of various techniques. When I use the word *arguing* in this book, I will not mean what we ordinarily mean by *arguing*. I will *not* mean "quarreling." Arguing, in the sense of argumentation, sometimes does involve two sides struggling against one another, in that two different beliefs or theories may be competing for acceptance. But two people may engage in argumentation while behaving in a friendly and cooperative way, each helping the other present his argument. A person can, and frequently does, engage in argumentation with himself—for example, when trying to decide what is best to do, or when writing a term paper.

How does argumentation help us to recognize and evaluate reasons? Primarily it does this by testing possible reasons. In argumentation there are always two functions that must be performed: putting forward possible reasons;