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TO MY FRIENDS AND COLLEAGUES ON THE STAFF OF ENGLISH A

PREFACE

The object of this book is to lay out a course in the writing of arguments which shall be simple enough for classes which give only a part of the year to the work, and yet comprehensive enough for special

classes in the subject. It is especially aimed at the interests and needs of the student body as a whole, however, rather than at those of students who are doing advanced work in argumentation. Though few men have either the capacity or the need to become highly trained specialists in the making of arguments, all men need some knowledge of the art. Experience at Harvard has shown that pretty much the entire freshman class will work with enthusiasm on a single argument; and they get from this work a training in exact thought and a discipline that they get from no other kind of writing.

Accordingly I have laid out this book in order to start students as soon as possible on the same kind of arguments that they are likely to make in practical life. I have striven throughout to keep in mind the interests and needs of these average individuals, who in the aggregate will tread such a variety of paths in their passage through the world. Not many of them will get to Congress, there to make great orations on the settlement of the tariff, and the large majority of them will not go into the law; and even of the lawyers many will have little concern with the elaborate piecing together of circumstantial evidence into the basis for a verdict. But all of them will sooner or later need the power of coming to close quarters with more or less complicated questions, in which they must bring over to their views men of varying prepossessions and practical interests; and all of them all their lives will need the power of seeing through to the heart of such questions, and of grasping what is essential, though it be separated by a hair's breadth from the inessential that must be cast to one side. It is for this training of the powers of thought that a course in the making of arguments is

profitable, even when pursued for so short a time as can be given to it in most schools and colleges.

In laying out the book I have had these three purposes in mind: first, that the student shall without waste of time be set to exploring his subject and running down the exact issues on which his question will tarn; second, that as he collects his material he shall be led on to consider what part of it is good evidence for his purpose, and how to test his reasoning from the facts; third, that with his material gathered and culled and his plan settled he shall turn his attention to presenting it in the most effective way possible for the particular occasion.

Throughout I have tried to lay stress on the making of arguments, not as an end in themselves, and to fit certain more or loss arbitrary formulas, but as the practical kind of appeal that every young man is already making to his fellows on matters that interest him, and that he will make more and more in earnest as he gets out into the world. The tendency of some of the books to treat argumentation, especially in the form of debating, as a new variety of sport, with rules as elaborate and technical as those of football, turns away from the subject a good many young men to whom the training in itself would be highly valuable. The future of the subject will be closely dependent on the success of teachers in keeping it flexible and in intimate touch with real affairs.
I have made some suggestions looking towards this end in Appendix II.

My obligations to earlier workers in the field will be obvious to all who know the subject. In especial, I, like all other writers on the subject, have built on foundations laid by Professor George Pierce Baker, of Harvard University.

For permission to use the articles from _The Outlook_ I am indebted to the courtesy of the editors of that journal; for the article on "The Transmission of Yellow Fever by Mosquitoes," to the kindness of General Sternberg, and of the editor of _The Popular Science Monthly_.

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CHAPTER I

WHAT WE ARGUE ABOUT, AND WHY

1. What Argument is. When we argue we write or speak with an active purpose of making other people take our view of a case; that is the only essential difference between argument and other modes of writing. Between exposition and argument there is no certain line. In Professor Lamont's excellent little book, "Specimens of Exposition," there are two examples which might be used in this book as examples of argument; in one of them, Huxley's essay on "The Physical Basis of Life," Huxley

himself toward the end uses the words, "as I have endeavored to prove to you"; and Matthew Arnold's essay on "Wordsworth" is an elaborate effort to prove that Wordsworth is the greatest English poet after Shakespeare and Milton. Or, to take quite different examples, in any question of law where judges of the court disagree, as in the Income Tax Case, or in the Insular cases which decided the status of Porto Rico and the Philippines, both the majority opinion and the dissenting opinions of the judges are argumentative in form; though the majority opinion, at any rate, is in theory an exposition of the law. The real difference between argument and exposition lies in the difference of attitude toward the subject in hand: when we are explaining we tacitly assume that there is only one view to be taken of the subject; when we argue we recognize that other people look on it differently. And the differences in form are only those which are necessary to throw the critical points of an argument into high relief and to warm the feelings of the readers.

2. Conviction and Persuasion. This active purpose of making other people take your view of the case in hand, then, is the distinguishing essence of argument. To accomplish this purpose you have two tools or weapons, or perhaps one should say two sides to the same weapon, _conviction_ and _persuasion_. In an argument you aim in the first place to make clear to your audience that your view of the case is the truer or sounder, or your proposal the more expedient; and in most arguments you aim also so to touch the practical or moral feelings of your readers as to make them more or less warm partisans of your view. If you are trying to make some one see that the shape of the hills in New England is due to glacial action, you never think of his feelings; here any

attempt at persuading him, as distinguished from convincing him, would be an impertinence. On the other hand, it would be a waste of breath to convince a man that the rascals ought to be turned out, if he will not on election day take the trouble to go out and vote; unless you have effectively stirred his feelings as well as convinced his reason you have gained nothing. In the latter case your argument would be almost wholly persuasive, in the former almost wholly a matter of convincing.

These two sides of argument correspond to two great faculties of the human mind, thought and feeling, and to the two ways in which, under the guidance of thought and feeling, mankind reacts to experience. As we pass through life our actions and our interest in the people and things we meet are fixed in the first place by the spontaneous movements of feeling, and in the second place, and constantly more so as we grow older, by our reasoning powers. Even the most intentionally dry of philosophers has his prejudices, perhaps against competitive sports or against efficiency as a chief test of good citizenship; and after childhood the most wayward of artists has some general principles to guide him along his primrose path. The actions of all men are the resultant of these two forces of feeling and reason. Since in most cases where we are arguing we have an eye to influencing action, we must keep both the forces in mind as possible means to our end.

3. Argument neither Contentiousness nor Dispute. Argument is not contentiousness, nor is it the good-natured and sociable disputation in which we occupy a good deal of time with our friends. The difference is that in neither contentiousness nor in kindly dispute do we expect, or

intend, to get anywhere. There are many political speeches whose only object is to make things uncomfortable for the other side, and some speeches in college or school debates intended merely to trip up the other side; and neither type helps to clear up the subjects it deals with. On the other hand, we spend many a pleasant evening arguing whether science is more important in education than literature, or whether it is better to spend the summer at the seashore or in the mountains, or similar subjects, where we know that everybody will stand at the end just where he stood at the beginning. Here our real purpose is not to change any one's views so much as it is to exchange thoughts and likings with some one we know and care for. The purpose of argument, as we shall understand the word here, is to convince or persuade some one.

4. Arguments and the Audience. In argument, therefore, far more than in other kinds of writing, one must keep the audience definitely in mind. "Persuade" and "convince" for our purposes are active verbs, and in most cases their objects have an important effect on their significance. An argument on a given subject that will have a cogent force with one set of people, will not touch, and may even repel, another. To take a simple example: an argument in defense of the present game of football would change considerably in proportions and in tone according as it was addressed to undergraduates, to a faculty, or to a ministers' conference. Huxley's argument on evolution (p. 233), which was delivered to a popular audience, has more illustrations and is less compressed in reasoning than if it had been delivered to the American Academy of Arts and Sciences. Not only theoretically, but in practice, arguments must

vary in both form and substance with the audiences to which they are addressed. An argument shot into the void is not likely to bring down much game.

5. Profitable Subjects for Arguments. To get the best results from practice in writing arguments, you must choose your subjects with care and sagacity. Some classes of subjects are of small value. Questions which rest on differences of taste or temperament from their very nature can never be brought to a decision. The question whether one game is better than another--football better than baseball, for example--is not arguable, for in the end one side settles down to saying, "But I like baseball best," and you stick there. Closely akin is such a question as, Was Alexander Pope a poet; for in the word "poet" one includes many purely emotional factors which touch one person and not another. Matthew Arnold made a brave attempt to prove that Wordsworth stood third in excellence in the long line of English poets, and his essay is a notable piece of argument; but the very statement of his thesis, that Wordsworth "left a body of poetical work superior in power, in interest, in the qualities which give enduring freshness, to that which any of the others has left," shows the vanity of the attempt. To take a single word--"interest"--from his proposition: what is the use of arguing with me, if Wordsworth happened to bore me, as he does not, that I ought to find him interesting. All I could do would be humbly to admit my deficiency, and go as cheerfully as might be to Burns or Coleridge or Byron. Almost all questions of criticism labor under this difficulty, that in the end they are questions of taste. You or I were so made in the beginning that the so-called romantic school or the so-called

classical school seems to us to have reached the pinnacle of art; and all the argument in the world cannot make us over again in this respect. Every question which in the end involves questions of aesthetic taste is as futile to argue as questions of the palate.

Other questions are impracticable because of vagueness. Such questions as, Should a practical man read poetry, Are lawyers a useful class in the community, Are the American people deteriorating, furnish excellent material for lively and witty talk, but no one expects them to lead to any conclusion, and they are therefore valueless as a basis for the rigorous and muscular training which an argument ought to give. There are many questions of this sort which serve admirably for the friendly dispute which makes up so much of our daily life with our friends, but which dissolve when we try to pin them down.

Some questions which cannot be profitably argued when phrased in general terms become more practicable when they are applied to a definite class or to a single person. Such questions as, Is it better to go to a small college or a large one, Is it better to live in the country or in the city, Is it wise to go into farming, all lead nowhere if they are argued in this general form. But if they are applied to a single person, they change character: in this specific form they not only are arguable, but they constantly are argued out with direct and practical results, and even for a small and strictly defined class of persons they may provide good material for a formal argument. For example, the question, "Is it better for a boy of good intellectual ability and capacity for making friends, who lives in a small country town, to go to a small college or

a large," provides moderately good material for an argument on either side; though even here the limiting phrases are none too definite. In a debate on such a subject it would be easy for the two sides to pass each other by without ever coming to a direct issue, because of differing understanding of the terms. On the whole it seems wiser not to take risks with such questions, but to choose from those which will unquestionably give you the training for which you are seeking.

Roughly speaking, subjects for an argument which are sure to be profitable may be divided into three classes: (1) those for which the material is drawn from personal experience; (2) those for which the material is provided by reading; and (3) those which combine the first two. Of these there can be no question that the last are the most profitable. Of the first class we may take for an example such a question as, Should interscholastic athletics be maintained in---- school? Here is a question on which some parents and teachers at any rate will disagree with most boys, and a question which must be settled one way or the other. The material for the discussion must come from the personal knowledge of those who make the arguments, reenforced by what information and opinion they can collect from teachers and townspeople. In Chapter II we shall come to a consideration of possible sources for material for these and other arguments. There is much to be said for the practice gained by hunting up pertinent material for arguments of this sort; but they tend to run over into irreconcilable differences of opinion, in which an argument is of no practical value.

The second class of subjects, those for which the material is drawn

wholly from reading, is the most common in intercollegiate and interscholastic debates. Should the United States army canteen be restored, Should the Chinese be excluded from the Philippines, Should the United States establish a parcels post, are all subjects with which the ordinary student in high school or college can have little personal acquaintance. The sources for arguments on such subjects are to be found in books, magazines, and official reports. The good you will get from arguments on such subjects lies largely in finding out how to look up material. The difficulty with them lies in their size and their complexity. When it is remembered that a column of an ordinary newspaper has somewhere about fifteen hundred words, and that an editorial article such as on page 268, which is thirty-eight hundred words long, is in these days of hurry apt to be repellent, because of its length, and on the other hand that a theme of fifteen hundred words seems to the ordinary undergraduate a weighty undertaking, the nature of this difficulty becomes clear. To put it another way, speeches on public subjects of great importance are apt to be at least an hour long, and not infrequently more, and in an hour one easily speaks six or seven thousand words, so that fifteen hundred words would not fill a fifteen-minute speech. This difficulty is met in debates by the longer time allowed, for each side ordinarily has an hour; but even then there can be no pretense of a thorough treatment. The ordinary written argument of a student in school or college can therefore do very little with large public questions. The danger is that a short argument on a large question may breed in one an easy content with a superficial and parrotlike discussion of the subject. Discussions of large and abstract principles are necessary, but they are best left to the time of life when one has a comprehensive and intimate knowledge of the whole mass of

facts concerned.

By far the best kind of subject, as has been said, is that which will combine some personal acquaintance with the facts and the possibility of some research for material. Many such subjects may be found in the larger educational questions when applied to your own school or college. Should the elective system be maintained at Harvard College, Should the University of Illinois require Latin for the A.B. degree, Should fraternities be abolished in----High School, Should manual training be introduced in----High School, are all questions of this sort. A short list of similar questions is printed at the end of this section, which it is hoped will prove suggestive. For discussing these questions you will find considerable printed material in educational and other magazines, in reports of presidents of colleges and school committees, and other such places, which will give you practice in hunting up facts and opinions and in weighing their value. At the same time training of your judgment will follow when you apply the theories and opinions you find in these sources to local conditions. Moreover, such questions will give you practice in getting material in the raw, as it were, by making up tables of statistics from catalogues, by getting facts by personal interview, and in other ways, which will be considered in Chapter II. Finally, such subjects are much more likely to be of a size that you can bring to a head in the space and the time allowed to the average student, and they may have some immediate and practical effect in determining a question in which your own school or college has an interest. Arguments on such subjects are therefore less likely to be "academic" discussions, in the sense of having no bearing on any real

conditions. When every college and school has plenty of such subjects continually under debate, there seems to be no reason for going farther and faring worse.

The main thing is to get a subject which will carry you back to facts, and one in which you will be able to test your own reasoning.

6. Suggestions of Subjects for Practice. Many of the subjects in the list below will need some adaptation to fit them to local conditions; and these will undoubtedly suggest many others of a similar nature. Other subjects of immediate and local interest may be drawn from the current newspapers; and the larger, perennial ones like prohibition, woman suffrage, immigration laws, are always at the disposal of those who have the time and the courage for the amount of reading they involve. The distinction between a subject and the proposition to be argued will be made in Chapter II.

SUGGESTIONS FOR SUBJECTS OF ARGUMENTS

TO BE ADAPTED TO LOCAL AND PRESENT CONDITIONS

1. Admission to this college should be by examination only.

2. The entrance requirements of this college set a good standard for a public high-school course.

3. Admission to this college should be by certificate from the candidate's school, such as is now accepted at----College.

4. The standards for admission to this college or to the State University should be raised.

5. The standard for graduating from this college should be raised.

6. Attendance at chapel exercises should be made voluntary.

7. The numbers of students in this college should be limited by raising the standard for admission.

8. A reading knowledge of French or of German, to be tested by an oral examination, should be substituted for the present requirements for entrance in those languages.

9. No list of books should be prescribed for the entrance examination in English.

10. Freshmen should be required to be within bounds by eleven o'clock at night.

11. Freshmen should not be elected to college societies.

12. Students who have attained distinction in their studies should be treated as graduate students are, in respect to attendance and leave of absence.

13. Arrangements should be made by which the work done on college papers should count toward the degree.

14. The honor system in examinations should be introduced into this college.

15. The course of study in this college should be made wholly elective.

16. Coeducation should be maintained in this college.

17. Secret societies should be prohibited in----High School.

18. The business course in----High School should be given up.

19. Compulsory military drill should be introduced into----School (or, into this college).

20. Greek should be given up in----School.

21. All students in----School, whether in the business course or not, should be required to study Latin.

22. Athletics have had a detrimental effect on the studies of those who have taken part in them.

23.----School should engage in athletic contests with two other schools only.

24. The school committee in----should be reduced to five members.

25. The school committee in----is at present too large for efficient direction of the schools.

26. The principal of the high school in----should report directly to the school committee and not to the superintendent of schools.

27. This city should assign a sum equal to----mills of the whole tax rate to the support of the public schools.

28. The high school of this city should have a single session each day,

instead of two.

29. This city should substitute a commission government on the general model of that in Des Moines, Iowa, for the present system.

30. The commission form of government has proved its superiority to government by a mayor and two legislative boards.

31. This city should elect its municipal officers by preferential voting.

32. This city should establish playgrounds in the crowded parts of the city, notably in Wards----and----.

33. Boys should be allowed to play ball in unfrequented streets.

34. This city should set apart----mills on the tax rate each year for building permanent roads.

35. The laws and regulations governing the inspection and the sale of milk should be made more stringent.

36. This city should buy and run the waterworks.

37. This city should build future extensions of the street railway system and lease them to the highest bidder.

38. This city should buy and operate the street railway system.

38. The street railway company in this city should be required to pave and care for all the streets through which it runs.

40. A committee of business men should be appointed by the mayor to conduct negotiations for bringing new industries to the city.

41. This city should establish municipal gymnasiums.

42. This city would be benefited by the consolidation of the two street railway systems.

43. This state should adopt a ballot law similar to that of Massachusetts.

44. This state should adopt the "short ballot."

45. This state should tax forest lands according to the product rather than the assessed value of the land.

46. The present rules of football are satisfactory.

47. This college should make "soccer" football one of its major sports.

48. Unnecessary talking by the players should be forbidden in games of baseball.

49. Coaching from the side lines should be forbidden in baseball.

50. "Summer baseball" should be regarded as a breach of amateur standing.

51. An intercollegiate committee of graduates should be formed with power to absolve college athletes from technical and minor breaches of the amateur rules.

52. This college should make an effort to return to amateur coaching by proposing agreements to that effect with its principal rivals.

53. This university should not allow students with degrees from other institutions to play on its athletic teams.

54. The managers of the principal athletic teams in this college should be elected by the students at large.

55. The expenses of athletic teams at this college should be considerably reduced.

7. The Two Kinds of Arguments. With the subject you are going to argue on chosen, it will be wise to come to closer quarters with the process of arguing. A large part of the good results you will get from practice in writing arguments will be the strengthening of your powers of exact and keen thought; I shall therefore in the following sections try to go somewhat below the surface of the process, and see just what any given kind of argument aims to do, and how it accomplishes its aim by its appeal to special faculties and interests of the mind. I shall also consider briefly the larger bearings of a few of the commoner and more important types of argument, as the ordinary citizen meets them in daily life.

We may divide arguments roughly into two classes, according as the proposition they maintain takes the form, "This is true," or the form, "This ought to be done." The former we will call, for the sake of brevity, arguments of fact, the latter arguments of policy. Of the two classes the former is addressed principally to the reason, the faculty by which we arrange the facts of the universe (whether small or great) as they come to us, and so make them intelligible. You believe that the

man who brought back your dog for a reward stole the dog, because that view fits best with the facts you know about him and the disappearance of the dog; we accept the theory of evolution because, as Huxley points out at the beginning of his essay (see pp. 233, 235), it provides a place for all the facts that have been collected about the world of plants and animals and makes of them all a consistent and harmonious system. In Chapter III we shall come to a further consideration of the workings of this faculty so far as it affects the making of arguments.

Arguments of policy, on the other hand, which argue what ought to be done, make their appeal in the main to the moral, practical, Or aesthetic interests of the audience. These interests have their ultimate roots in the deep-seated mass of inherited temperamental motives and forces which may be summed up here in the conveniently vague term "feeling." These motives and forces, it will be noticed, lie outside the field of reason, and are in the main recalcitrant to it. When you argue that it is "right" that rich men should endow the schools and colleges of this country, you would find it impossible to explain in detail just what you mean by "right"; your belief rises from feelings, partly inherited, partly drawn in with the air of the country, which make you positive of your assertion even when you can least give reasons for it. So our practical interests turn in the end on what we want and do not want, and are therefore molded by our temperament and tastes, which are obviously matters of feeling. Our aesthetic interests, which include our preferences in all the fields of art and literature and things beautiful or ugly in daily life, even more obviously go back to feeling. Now in practical life our will to do anything is latent until some part of this

great body of feeling is stirred; therefore arguments of policy, which aim to show that something ought to be done, cannot neglect feeling. You may convince me never so thoroughly that I ought to vote the Republican or the Democratic ticket, yet I shall sit still on election day if you do not touch my feelings of moral right or practical expediency. The moving cause of action is feeling, though the feeling is often modified, or even transformed, by reasoning. We shall come back to the nature of feeling in Chapter V, when we get to the subject of persuasion.

An important practical difference between arguments of fact and arguments of policy lies in the different form and degree of certitude to which they lead. At the end of arguments of fact it is possible to say, if enough evidence can be had, "This is undeniably true." In these arguments we can use the word "proof" in its strict sense. In arguments of policy on the other hand, where the question is worth arguing, we know in many cases that in the end there will be men who are as wise and as upright as ourselves who will continue to disagree. In such cases it is obvious that we can use the word "proof" only loosely; and we speak of right or of expediency rather than of truth. This distinction is worth bearing in mind, for it leads to soberness and a seemly modesty in controversy. It is only in barber-shop politics and sophomore debating clubs that a decision of a question of policy takes its place among the eternal verities.

With these distinctions made, let us now consider a few of the chief varieties of these two classes of arguments, dealing only with those which every one of us comes to know in the practical affairs of life. It

will be obvious that the divisions between these are not fixed, and that they are far from exhausting the full number of varieties.

8. Arguments of Fact. Among the commonest and most important varieties of arguments of fact are those made before juries in courts of law. It is a fundamental principle of the common law under which we live that questions of fact shall be decided by twelve men chosen by lot from the community, and that questions of the law that shall be applied to these facts shall be decided by the judges. Accordingly in criminal trials the facts concerning the crime and the actions and whereabouts of the accused are subjects of argument by the counsel. If the prisoner is attempting to establish an alibi, and the evidence is meager or conflicting, his counsel and the prosecuting officer must each make arguments before the jury on the real meaning of the evidence. In civil cases likewise, all disputed questions of fact go ordinarily to a jury, and are the subject of arguments by the opposing lawyers. Did the defendant guarantee the goods he sold the plaintiff? Was undue influence exerted on the testator? Did the accident happen through the negligence of the railroad officials? In such cases and the countless others that congest the lists of the lower courts arguments of fact must be made.

Other common arguments of fact are those in historical questions, whether in recent or in ancient history. Macaulay's admirable skeleton argument (p. 155) that Philip Francis wrote the _Junius Letters_, which so grievously incensed the English government about the time of the American Revolution, is an example of an argument of this sort; the part of Lincoln's Cooper Institute Address which deals with the views of the

founders of the nation on the subject of the control of slavery in the territories is another. Another question concerning facts is that which a few years ago stirred classical archaeologists, whether the Greek theater had a raised stage or not. In all such cases the question is as to facts which at one time, at any rate, could have been settled absolutely. The reason why an argument about them becomes necessary is that the evidence which could finally settle the questions has disappeared with the persons who possessed it, or has been dissipated by time. Students of history and literature have to deal with many such questions of fact.

A somewhat different kind of question of fact, and one often extremely difficult to settle, is that which concerns not a single, uncomplicated fact, but a broad condition of affairs. Examples of such questions are whether woman suffrage has improved political conditions in Colorado and other states, whether the introduction of manual training in a certain high school has improved the intelligence and serviceableness of its graduates, whether political corruption is decreasing in American cities. The difficulty that faces an argument in such cases as these is not the loss of the evidence, but rather that it consists of a multitude of little facts, and that the selection of these details is singularly subject to bias and partisan feeling. These questions of a broad state of affairs are like questions of policy in that in the end their settlement depends thus largely on temperamental and practical prepossessions.

Still another and very important variety of arguments of fact, which are

often conveniently described as arguments of theory, includes large scientific questions, such, for example, as the origin of our present species of plants and animals, or the ultimate constitution of matter, or the cause of yellow fever. In such arguments we start out with many facts, already gained through observation and experiment, which need the assumption of some other fact or facts attained through reasoning from the others, to make them fit together into a coherent and intelligible system. Every important new discovery in science makes necessary arguments of this sort. When the minute forms of life that the layman lumps together under the name "germs" were discovered there was a host of arguments to explain their manner of life and the way some of them cause disease and others carry on functions beneficent to mankind. A notable example of the arguments concerning this kind of fact is that at page 251 concerning the cause of yellow fever; and another is Huxley's argument on evolution (p. 233), where he points out that "the question is a question of historical fact." The element of uncertainty in the settlement of such questions is due to the facts being too large or too minute for human observation, or to their ranging through great ages of time so that we must be contented with overwhelming probability rather than with absolute proof. Furthermore the facts that are established in arguments of this sort may have to be modified by new discoveries: for many generations it was held to be a fact that malaria was caused by a miasma; now we know that it is caused by a germ, which is carried by mosquitoes. Arguments of this type tend to go through a curious cycle: they begin their life as arguments, recognized as such; then becoming the accepted explanation of the facts which are known, for a longer or shorter time they flourish as statements of the truth; and then with the uncovering of new facts they crumble away or are transformed into new

and larger theories. Darwin's great theory of the origin of species has passed through two of these stages. He spoke of it as an argument, and for a few years it was assailed with fierce counterarguments; we now hold it to be a masterful explanation of an enormous body of facts. When it will pass on to the next stage we cannot foresee; but chemists and physicists darkly hint at the possibility of the evolution of inorganic as well as organic substances.

In arguments of fact, it will be noticed, there is little or no element of persuasion, for we deal with such matters almost wholly through our understanding and reason. Huxley, in his argument on evolution, which was addressed to a popular audience, was careful to choose examples that would be familiar; but his treatment of the subject was strictly expository in tone. In some arguments of this sort, which touch on the great forces of the universe and on the nature of the world of life of which we are an infinitesimal part, the tone of the discourse will take on warmth and eloquence; just as Webster in the White Murder Case, dealing with an issue of life and death, let the natural eloquence which always smoldered in his speech, burn up into a clear glow. But both Huxley and Webster would have held any studied appeal to emotion to be an impertinence.

In ordinary life most of us make fewer arguments of fact than of policy. It is only a small minority of our young men who become lawyers, and of them many do not practice before juries. Nor do any large number of men become scholars or men of science or public men, who have to deal with questions of historical fact or to make arguments of fact on large

states of affairs. On the other hand, all of us have to weigh and estimate arguments of fact pretty constantly. Sooner or later most men serve on juries; and all students have to read historical and economical arguments. We shall therefore give some space in Chapter III to considering the principles of reasoning by which we arrive at and test conclusions as to the existence of facts, and the truth of assertions about them.

9. Arguments of Policy. When we turn from arguments of fact to arguments of policy it will be noticed that there is a change in the phraseology that we use: we no longer say that the assertions we maintain or meet are true or not true, but that the proposals are right or expedient or wrong or inexpedient; for now we are talking about what should or should not be done. We say, naturally and correctly, that it is or is not true that woman suffrage has improved political conditions in Colorado but it would be a misuse of words to say that it is true or not true that woman suffrage should be adopted in Ohio; and still more so to use the word "false," which has an inseparable tinge of moral obliquity. In questions of policy that turn on expediency, and in some, as we shall see directly, that turn on moral issues, we know beforehand that in the end some men who know the subject as well as we do and whose judgment is as good and whose standards are as high, will still disagree. There are certain large temperamental lines which have always divided mankind: some men are born conservative minded, some radical minded: the former must needs find things as they are on the whole good, the latter must needs see vividly how they can be improved. To the scientific temperament the artistic temperament is unstable and

irrational, as the former is dry and ungenerous to the latter. Such broad and recognized types, with a few others like them, ramify into a multitude of ephemeral parties and classes,--racial, political, social, literary, scholarly,--and most of the arguments in the world can be followed back to these essential and irremovable differences of character. Individual practical questions, however, cross and recross these lines, and in such cases arguments have much practical effect in crystallizing opinion and judgment; for in a complicated case it is often extremely hard to see the real bearing of a proposed policy, and a good argument comes as a guide from the gods to the puzzled and wavering. But though to be effective in practical affairs one has to be positive, yet that is not saying that one must believe that the other side are fools or knaves. Some such confusion of thought in the minds of some reformers, both eminent and obscure, accounts for the wake of bitterness which often follows the progress of reform. Modesty and toleration are as important as positiveness to the man who is to make a mark in the world.

Arguments of policy are of endless variety, for we are all of us making them all the time, from the morning hour in which we argue with ourselves, so often ineffectually, that we really ought to get up when the clock strikes, to the arguments about choosing a profession or helping to start a movement for universal peace. It would be a weariness to the flesh to attempt a classification of them that should pretend to be exhaustive; but there are certain major groups of human motive which will be a good basis for a rough, but convenient, sorting out of the commoner kinds of arguments of policy. In practical affairs we ask first

if there is any principle of right or wrong involved, then what is best for the practical interests of ourselves and other people, and in a few cases, when these other considerations are irrelevant, what course is dictated by our ideas of fitness and beauty. I will briefly discuss a few of the main types of the argument of policy, grouping them according as they appeal chiefly to the sense of right and wrong, to practical interests, or to aesthetic interests.

There are many arguments outside of sermons which turn on questions of right and wrong. Questions of individual personal conduct we had better not get into; but every community, whether large or small, has often to face questions in which moral right and wrong are essentially involved. In this country the whole question of dealing with the sale of alcoholic drinks is recognized as such. The supporters of state prohibition declare that it is morally wrong to sanction a trade out of which springs so much misery; the supporters of local option and high license, admitting and fighting against all this misery and crime, declare that it is morally wrong to shut one's eyes to the uncontrolled sales and the political corruption under state-wide prohibition. The strongest arguments for limiting by law the hours of labor for women and children have always been based on moral principles; and all arguments for political reform hark back to the Ten Commandments. One has the strongest of all arguments if he can establish a moral right and wrong in the question.

The difficulty comes in establishing the right and wrong, for there are many cases where equally good people are fighting dead against each

other. The question of prohibition, as we have just seen, is one of those cases; the slavery question was a still more striking one. From before the Revolution the feeling that slavery was morally wrong slowly but steadily gained ground in the North, until from 1850 it became more and more a dominant and passionate conviction.[1] Yet in the South, which, as we must now admit, bred as many men and women of high devotion to the right, this view had only scattered followers. On both sides tradition and environment molded the moral principle. In arguing, therefore, one must not be too swift in calling on heaven to witness to the right; we must recognize that mortal vision is weak, and that some of the people whom we are fighting are borne on by principles as sincerely held to be righteous as our own.

Nevertheless, a man must always hold to that which to him seems right, and fight hard against the wrong, tolerantly and with charity, but with unclouded purpose. In politics there are still in this country many occasions when the only argument possible is based on moral right. The debauching of public servants by favors or bribes, whether open or indirect, injustice of all sorts, putting men who are mentally or morally unfit into public office, oppression of the poor or unjust bleeding of the rich, stirring up class or race hatred, are all evils from which good citizens must help to save the republic; and wherever such evils are found the moral argument is the only argument worthy of a decent citizen.

By far the most numerous of arguments of policy, however, are those which do not rise above the level of practical interests. The line

between these and arguments of moral right is not always easy to draw, for in the tangle of life and character right and advantage often run together. The tariff question is a case in point. Primarily it turns on the practical material advantage of a nation; but inevitably in the settling of individual schedules the way opens for one industry or branch of business to fatten at the expense of another, and so we run into the question of the square deal and the golden rule.

In general, however, the great questions on which political parties divide are questions of practical expediency. Shall we, as a nation, be more comfortable and more prosperous if the powers of the federal government are strengthened and extended? Shall we have better local government under the old-fashioned form of city government, or under some form of commission government? Should we have more business and more profitable business if we had free trade with the Dominion of Canada? Shall we be better off under the Republican or the Democratic party? All these are questions in which there is little concern with right and wrong: they turn on the very practical matter of direct material advantage. In some of these cases most men vote on one side or the other largely through long habit; but there constantly arise, especially in local matters, questions which cross the usual lines of political division, so that one, willingly or unwillingly, must take the trouble of thinking out a decision for himself. Not infrequently one is a good deal puzzled to decide on which side to range himself, for the issues may be complex; then one reads the arguments or goes to meetings until one side or the other seems to present the most and the most important advantages. When one is thus puzzled, an argument which is

clear and easy to understand, and which makes its points in such a way that they can be readily carried in mind and passed on to the next person one meets, has a wonderful power of winning one to its side.

The arguments of policy which, after political arguments, are the most common, are those on questions of law. As we have seen a few pages back, such arguments are settled by the judges, while questions of fact are left to the jury. In the White Murder Case, in which Daniel Webster made a famous argument, it was a question of fact for the jury whether the defendant Knapp was in Brown Street at the time of the murder, and whether he was there for the purpose of aiding and abetting Crowninshield, the actual murderer; the question whether his presence outside the house would make him liable as a principal in the crime was a question of law. This distinction between questions of fact and questions of law is one of the foundation principles of the common law. From the very beginning of the jury system, when the jury consisted of neighbors who found their verdict from their own knowledge of the case, to the present day when they are required carefully to purge their minds of any personal knowledge of the case, the common law has always held that in the long run questions of fact can best be settled by average men, drawn by lot from the community. Questions of law, on the other hand, need learning and special training in legal reasoning, for the common law depends on continuity and consistency of decision; and a new case must be decided by the principles which have governed like cases in the past.

Nevertheless, these principles, which are now embodied in an enormous

mass of decisions by courts all over the English-speaking world, are in essence a working out into minute discriminations of certain large principles, which in turn are merely the embodiment of the practical rules under which the Anglo-Saxon race has found it safest and most convenient to live together. They settle in each case what, in view of the interests of the community as a whole and in the long run, and not merely for the parties now at issue, is the most convenient and the justest thing to do. Mr. Justice Holmes, of the Supreme Court of the United States, wrote before his appointment to that bench:

"In substance the growth of the law is legislative. And this in a deeper sense than that what the courts declare to have always been the law is in fact new. It is legislative in its grounds. The very considerations which judges most rarely mention, and always with an apology, are the secret roots from which tine law draws all the juices of life. I mean of course considerations of what is expedient for the community concerned. Every important principle which is developed by litigation is in fact and at bottom the result of move or less definitely understood views of public policy; most generally, to be sure, under our practices and traditions, the unconscious result of instinctive preferences and inarticulate convictions, but none the less traceable to views of public policy in the last analysis."[2]

In some cases it is obvious that the question of law is a question of policy, as in the so-called "political decisions" of the United States Supreme Court. Such were the decisions formulated by Chief Justice Marshall on constitutional questions, which made our government what it

is. The difference between "the strict construction" of the Constitution and the "free construction" was due to a difference of temperament which has always tended to mark the two great political parties of the country. So with the Insular cases, which determined the status of the distant possessions of the United Stales, and which split the Supreme Court into so many pieces: the question whether the Constitution applied in all its fullness to Porto Rico and the Philippines was essentially a political question, though of the largest sort, and therefore a question of policy.

Finally, there are the arguments of policy which deal with matters of taste and aesthetic preference. The difficulty with these arguments is that they do deal with questions of taste, and so fall under the ancient and incontrovertible maxim, _de gustibus non est disputandum_. Artists of all varieties and some critics are given to talking as if preferences in color, in shape, in styles of music, were absolutely right and wrong, and as if they partook in some way of the nature of moral questions; but any one who has observed for even twenty years knows that what the architects of twenty years ago declared the only true style of art is now scoffed at by them and their successors as hopelessly false. The cavelike forms of the Byzantine or Romanesque which superseded the wooden Gothic have in turn given way to Renaissance classic in its various forms, which now in turn seem on the point of slipping into the rococo classical of the Ecole des Beaux Arts. In painting, the violent and spotty impressionism of twenty years ago is paling into the study of the cool and quiet lights of the Dutchmen of the great period.[3] And at each stage there are strenuous arguments that the ideas of that

particular live years are the only hope for the preservation of the art concerned.

The essential difficulty with all such arguments is that the aesthetic interests to which they appeal are personal, and depend on personal preferences. Most of us in such matters, having no special knowledge, and liking some variety of differing styles, modestly give way to the authority of any one who makes a profession of the art. In the laying out of a park a landscape architect may prefer single trees and open spaces, where the neighbors and abutters prefer a grove. In the long run his taste is no better than theirs, though he may argue as if they were ignorant and uncultivated because they disagree with him. In all such cases, unless there is some consideration of practical expediency, such as letting the southwest wind blow through in summer, arguments can do little except to make and keep everybody angry. Their chief value is to make us see things which perhaps we had not thought of.

In practice these three kinds of arguments, which turn on moral, practical, and aesthetic considerations, tend to be much mingled. The human mind is very complex, and our various interests and preferences are inseparably tangled. The treacheries of self-analysis are proverbial, and are only less dangerous than trying to make out the motives of other people. Accordingly we must expect to find that it is sometimes hard to distinguish between moral and aesthetic motives and practical, for the morality and the taste of a given people always in part grow out of the slow crystallizing of practical expediencies, and notions of morality change with the advance of civilization.

Furthermore, one must never forget that an argument of policy which does not involve and rest on subsidiary questions of fact is rare; and the questions of fact must be settled before we can go on with the argument of policy. Before this country can intelligently make up its mind about the protective tariff, and whether a certain rate of duty should be imposed on a given article, a very complex body of facts dealing with the cost of production both here and abroad must be settled, and this can be done only by men highly trained in the principles of business and political economy. Before one could vote intelligently on the introduction of a commission form of government into the town he lives in he must know the facts about the places in which it has already been tried. It is not too much to say that there is no disputed question of policy into which there does not enter the necessity of looking up and settling pertinent facts.

On the other hand, there are some cases of questions of fact in which our practical interests deeply affect the view which we take of the facts. In all the discussions of the last few years about federal supervision and control of the railroads it has been hard to get at the facts because of the conflicting statements about them by equally honest and well-informed men. Where there is an honest difference of interest, as in every case of a bargain, the opposite sides cannot see the facts in the same way: what is critically significant to the railroad manager seems of no great consequence to the shipper; and the railroad manager does not see the fixed laws of trade which make it impossible for the shipper to pay higher freight rates and add them to the price of his

goods. It is not in human nature to see the whole cogency of facts that make for the other side. In all arguments, therefore, it must be remembered that we are; constantly swinging backward and forward from matters of fact to matters of policy. In practice no hard-and-fast line separates the various classes and types; in the arguments of real life we mingle them naturally and unconsciously.

Yet the distinction between the two main classes is a real one, and if one has never thought it out, one may go at an argument with a blurred notion of what he is attempting to do. Since argument after school and college is an eminently practical matter, vagueness of aim is risky. It is the man who sees exactly what he is trying to do, and knows exactly what he can accomplish, who is likely to make his point. The chief value of writing arguments for practice is in cultivating a keen eye for the essential. To write a good argument means, as we shall see, that the student shall first conscientiously take the question, apart so as to know exactly the issues involved and the unavoidable points of difference, and then after searching the sources for information, he shall scrutinize the facts and the reasoning both on his own side and on the other. If he does this work without shirking the hard thinking he will get an illuminating perception of the obscurities and ambiguities which lurk in words, and will come to see that clear reasoning is almost wholly a matter of sharper discrimination for unobserved distinctions.

EXERCISES

1. Find an example which might be thought of either as an argument or an exposition, and explain why you think it one or the other.

2. Find examples in current magazines or newspapers of an argument in which conviction is the chief element, and one in which persuasion counts most.

3. Give three examples from your talk within the last week of a discussion which was not argument as we use the term here.

4. Show how, in the case of some current subject of discussion, the arguments would differ in substance and tone for three possible audiences.

5. Find three examples each of questions of fact and questions of policy from current newspapers or magazines.

6. Find three examples of questions of fact in law cases, not more than one of them from a criminal case.

7. Find three examples of questions of fact in history or literature.

8. Find three questions of a large state of affairs from current political discussions. 9. Find three examples of questions of fact in

science.

10. Find from the history of the last fifty years three examples of questions which turned on moral right.

11. Give three examples of questions of expediency which you have heard argued within the last week.

12. Give an example from recent decisions of the courts which seems to you to have turned on a question of policy.

13. Give two examples of questions of aesthetic taste which you have recently heard argued.

14. In an actual case which has been or which might be argued, show how both classes of argument and more than one of the types within them enter naturally into the discussion.

15. Name three subjects which you have lately discussed which would not be profitable subjects for a formal argument.

16. Name five good subjects for an argument in which you would draw chiefly from your personal experience.

17. Name five subjects in which you would get the material from reading.

18. Name five subjects which would combine your own experience with reading.

19. Find how many words to the page you write on the paper you would use for a written argument. Count the number of words in a page of this book; in the column of the editorial page of a newspaper.

CHAPTER II

PLANNING THE ARGUMENT

10. Preparations for the Argument. When you have chosen the subject for your argument there is still much to do before you are ready to write it out. In the first place, you must find out by search and reading what is to be said both for and against the view you are supporting; in the second place, with the facts in mind you must analyze both them and the question to see just what is the point that you are arguing; then, in the third place, you must arrange the material you are going to use so that it will be most effective for your purpose. Each of these steps I shall consider in turn in this chapter.

As a practical convenience, each student should start a notebook, in

which he can keep together all the notes he makes in the course of his preparations for writing the argument. Number the pages of the notebook, and leave the first two pages blank for a table of contents. A box of cards, such as will be described on page 31, will serve as well as a notebook, and in some ways is more convenient. From time to time, in the course of the chapter I shall mention points that should be entered.

For the sake of convenience in exposition I shall use as an example the preparations for an argument in favor of introducing the commission form of government into an imaginary city, Wytown; and each of the directions for the use of the notebook I shall illustrate by entries appropriate to this argument. The argument, let us suppose, is addressed to the citizens of the place, who know the general facts relating to the city and its government. In creating this imaginary city, let us give it about eight thousand inhabitants, and suppose that it is of small area, and that the inhabitants are chiefly operatives in a number of large shoe factories, of American descent, though foreign-born citizens and their offspring are beginning to gain on the others. And further, let us suppose that this imaginary city of Wytown now has a city government with a mayor of limited powers, a small board of aldermen, and a larger city council. The other necessary facts will appear in the introduction to the brief.

11. Reading for the Argument. The first step in preparing for an argument is to find out what has been already written on the general subject, and what facts are available for your purpose. For this purpose you must go to the best library that is within convenient reach. Just

how to look for material there I shall discuss a few pages further on; here I shall make some more general suggestions about reading and taking notes.

Almost always it pays to give two or three hours to some preliminary reading that will make you see the general scope of the subject, and the points on which there is disagreement. An article in a good encyclopedia or one in a magazine may serve the purpose; or in some cases you can go to the opening chapter or two of a book. If you have already discussed the subject with other people this preliminary reading may not be necessary; but if you start in to read on a new subject without some general idea of its scope you may waste time through not knowing your way and so following false leads.

In your reading do not rest satisfied with consulting authorities on your own side only. We shall presently see how important it is to be prepared to meet arguments on the other side; and unless you have read something on that side, you will not know what points you ought to deal with in your refutation. In that event you may leave undisturbed in the minds of your readers points which have all the more significance from your having ignored them. One of the first reasons for wide reading in preparation for an argument is to assure yourself that you have a competent knowledge of the other side as well as of your own.

In using your sources keep clearly and constantly in mind the difference between fact and opinion. The opinions of a great scholar and of a

farseeing statesman may be based on fact; but not being fact they contain some element of inference, which is never as certain. When we come to the next chapter we shall consider this difference more closely. In the meantime it is worth while to urge the importance of cultivating scruples on the subject and a keen eye for the intrusion of human, and therefore fallible, opinion into statements of fact. A trustworthy author states the facts as facts, with the authorities for them specifically cited; and where he builds his own opinions on the facts he leaves no doubt as to where fact ends and opinion begins.

The power to estimate a book or an article on a cursory inspection is of great practical value. The table of contents in a book, and sometimes the index, will give a good idea of its scope; and samples of a few pages at a time, especially on critical points, which can be chosen by means of the index, will show its general attitude and tone. The index, if properly made, will furnish a sure guide to its relevance for the purpose in hand. Half an hour spent in this way, with attention concentrated, will in most cases settle whether the book is worth reading through. An article can be "sized up" in much the same way: if it is at all well written the first paragraphs will give a pretty definite idea of the subject and the scope of the article; and the beginnings, and often the ends, of the paragraphs will show the course which the thought follows. Though such skimming cannot be relied on for a real knowledge of the subject, it is invaluable as a guide for this preliminary reading.

12. Taking Notes. In reading for your argument, as for all

scholarly reading, form early your habits of taking thorough and serviceable notes. Nothing is more tantalizing than to remember that you once ran across a highly important fact and then not be able to recall the place in which it is to be found.

One of the most convenient ways to take notes for an argument is to write each fact or quotation on a separate card. Cards convenient for the purpose can be had at any college stationer or library-supply bureau. If you use them, have an ample supply of them, so that you will not have to put more than one fact on each. Leave space for a heading at the top which will refer to a specific subheading of your brief, when that is ready. Always add an exact reference to the source--title, name of author, and, in case of a book, place and date of publication, so that if you want more material you can find it without loss of time, and, what is more important, so that you can fortify your use of it by a reference in a footnote. When you find a passage that you think will be worth quoting in the original words, quote with scrupulous and literal accuracy: apart from the authority you gain by so doing, you have no right to make any one else say words he did not say. If you leave out part of the passage, show the omission by dots; and in such a case, if you have to supply words of your own, as for example a noun in place of a pronoun, use square brackets, thus []. On the following page are examples of a convenient form of such notes.

* * * * *

RESULTS IN DES MOINES

The streets have been kept cleaner than ever before for $35,000.

The rates for electric lights have been reduced from $90 to $65.

Gas rates have dropped again from $22 to $17.

Water rates have dropped from 30c to 20c per 1000 gal.

The disreputable district has been cleaned up and bond sharks

driven out of business.

The Des Moines Plan of City Government, _World's Work_, Vol. XVIII,

P. 11533.

PRESIDENT ELIOT'S VIEWS

"Now city business is almost wholly administrative and executive

and very little concerned with large plans and far-reaching legislation.

There is no occasion for two legislative bodies, or even one, in the

government of a city.... Now and then a question arises which the

will of the whole people properly expressed may best settle; but

for the prompt and conclusive expression of that will the initiative

and referendum are now well-recognized means."

C. W. Eliot, City Government by Fewer Men, _World's Work_, Vol. XIV

p. 9419.

* * * * *

In making notes, whether for an argument or for general college work, it is convenient, unless you know shorthand, to have a system of signs and abbreviations and of contractions for common words. The simpler shorthand symbols can be pressed into service; and one can follow the practice of stenography, which was also that of the ancient Hebrew writing, of leaving out vowels, for there are few words that cannot be recognized at a glance from their consonants. If you use this system at lectures you can soon come surprisingly near to a verbatim report which will preserve something more than bare facts.

In your reading for material do not cultivate habits of economy or parsimony. You should always have a considerable amount of good fact left over, for unless you know a good deal of the region on the outskirts of your argument you will feel cramped and uncertain within it. The effect of having something in reserve is a powerful, though an intangible, asset in an argument; and, on the other hand, the man who has emptied his magazine is in a risky situation.

13. Sources for Facts. In the main, there are two kinds of sources for facts, sources in which the facts have already been collected and digested, and sources where they are still scattered and must be brought together and grouped by the investigator. Obviously there is no sharp or permanent distinction between these two classes. Let us first run through some of the books which are commonly available as sources of

either kind, and then come back to the use of them.

To find material in books and magazines there are certain well-known guides. To look up books go first to the catalogue of the nearest library. Here in most cases you will find some sort of subject catalogue, in which the subjects are arranged alphabetically; and if you can use the alphabet readily, as by no means all college students can, you can soon get a list of the books that are there available on the subject. On many subjects there are bibliographies, or lists of books, such as those published by the Library of Congress; these will be found in every large library. For articles in magazines and weekly journals, which on most current questions have fresh information, besides a great deal of valuable material on older questions, go to Poole's "Index to Periodical Literature," which is an index both by title and subject to the articles in important English and American magazines from 1802 to 1906, and to "The Reader's Guide to Periodical Literature," which began in 1901 and includes more magazines, and which is brought up to date every month.

For other material the works listed below will be serviceable; they are the best known of the reference books, and some of them will be found in all libraries and all of them in large libraries. The books on this list by no means exhaust the number of good books of their own kind; they are good examples, and others will ordinarily be found on the same shelves with them.

DICTIONARIES

THE NEW ENGLISH DICTIONARY (MURRAY'S) Unfinished: to have ten volumes, of which nine have now been published. This gives the history of each word for the last seven hundred years, with copious quotations, dated, to show the changes in its use.

THE CENTURY DICTIONARY, CYCLOPEDIA OF NAMES, AND ATLAS New edition, 1911, in twelve volumes. This has fuller information about the meanings of the words than is usually found in a dictionary.

THE NEW INTERNATIONAL DICTIONARY (WEBSTER'S) New edition, 1910, enlarged, with copious and exact etymologies.

ROGET'S THESAURUS OF ENGLISH WORDS AND PHRASES A standard book of synonyms.

FERNALD, ENGLISH SYNONYMS, ANTONYMS, AND PREPOSITIONS With illustrations and expositions of the differences in meaning.

ENCYCLOPEDIAS

ENCYCLOPAEDIA BRITANNICA Very full; highly authoritative; 11th edition, 1910.

NEW INTERNATIONAL ENCYCLOPEDIA Briefer; reedited in 1904.

LA GRANDE ENCYCLOPIDIE; BROCKHAUS, KONVERSATIONS-LEXIKON Both copious and authoritative.

ALLUSIONS AND QUOTATIONS

CRUDEN'S CONCORDANCE An index to every word in the Bible.

BARTLETT'S CONCORDANCE TO SHAKESPEARE An index to every word in Shakespeare.

BARTLETT'S FAMILIAR QUOTATIONS An index to a very large number of the quotations most frequently met with.

BREWER'S DICTIONARY OF PHRASE AND FABLE This explains a great quantity of common allusions in words and phrases.

DICTIONARIES OF PROPER NAMES

CENTURY CYCLOPEDIA OF NAMES This includes not only names of real persons, but also those of many famous characters in fiction.

LIPPINCOTT'S UNIVERSAL PRONOUNCING DICTIONARY OF BIOGRAPHY AND MYTHOLOGY

DICTIONARY OF NATIONAL BIOGRAPHY Revised edition. Confined to English biography, and to persons dead at the dale of publication of Supplement (1909). The articles are full, and of the highest authority. In the index and epitome is a convenient summary of dates and facts.

APPLETON'S CYCLOPEDIA OF AMERICAN BIOGRAPHY Six volumes, 1887-1901; with supplement (unfinished), bringing it down to date.

WHO'S WHO An annual publication; English, but with some American names; living persons only.

WHO'S WHO IN AMERICA; WER IST'S; QUI ETES-VOUS Corresponding works for America, Germany, and France.

DEBRETT'S PEERAGE A repository of a great mass of facts concerning English families of historical distinction.

FOR CURRENT OR HISTORICAL FACTS

THE STATESMAN'S YEAR BOOK Arranged by countries; contains a great mass of facts; has a bibliography at the end of each country or state.

THE WORLD ALMANAC; THE TRIBUNE ALMANAC Examples of annuals issued by large newspapers, which contain an enormous mass of facts, chiefly American.

WHITAKER'S ALMANAC Much miscellaneous information about the British empire and other countries.

THE ANNUAL REGISTER; THE NEW INTERNATIONAL YEARBOOK; THE AMERICAN YEARBOOK These three give information about the events of the preceding year.

INDEX TO THE LONDON _Times_

MISCELLANEOUS WORKS

LIPPINCOTT'S NEW GAZETTEER A geographical dictionary of the world.

THE CENTURY ATLAS With classified references to places.

THE HANDY REFERENCE ATLAS Small size (octavo); a most useful book for the desk or library table.

PLOETZ'S EPITOME OF UNIVERSAL HISTORY A very compact epitome of history, with all the important dates.

NOTES AND QUERIES A periodical devoted to notes and queries on a multitude of curious and out-of-the-way facts; yearly index volumes are issued.

BIBLIOGRAPHIES ISSUED BY THE LIBRARY OF CONGRESS

SONNENSCHEIN'S THE BEST BOOKS A guide to about fifty thousand of the best available books in a great variety of fields, classified by subject.

Make yourself familiar with all of these books which are within your reach. Get into the habit, when you have a few minutes to spare, of taking them down from the shelves and turning over the pages to see what they contain. And whenever a question of fact comes up in general talk, make a mental note of it, or better, one in writing, and the next time you go to the library hunt it up in one of these reference books. You will be surprised to see, when once you have made the habit, how short a time it takes to settle disputes about most facts; and at the same time you will be extending your general knowledge.

In learning the use of these and other books, do not forget the most important source of all, the librarian. The one guiding principle of

modern librarianship is to make the books useful; and it gives every proper librarian active pleasure to show you how to use the books in his charge.

In using books and magazines scrutinize the character of the source. Is it impartial or partisan? Is its treatment of the subject exhaustive and definite, or cursory and superficial? Does the author know the subject at first hand, or does he rely on other men? On such points the second book or article will be easier to estimate than the first, and the third than the second; for with each new source you have the earlier ones as a basis for comparison. In any case do not trust to a single authority: no matter how authoritative it is, sooner or later the narrow basis of your views will betray itself, for an argument which is merely a revamping of some one else's views is not likely to have much spontaneity.

In many subjects, and especially those of new or local interest, you will not find the facts gathered and assimilated for you; you must go out and gather your own straw for the making of your bricks. Such are most questions of reform or change in school or college systems, in athletics, in municipal affairs, in short, most of the questions on which the average man after he leaves college is likely to be making arguments.

To get decisive facts on such questions as these you must go, in the case of local subjects, to the newspapers, to city and town reports, or to documents issued by interested committees; for college questions you

go to the presidents' reports and to annual catalogues or catalogues of graduates, or perhaps to _Graduates' Bulletins_ or _Weeklies_; for athletic questions you go to the files of the daily newspapers, or for records to such works as the _World_ or _Tribune Almanacs_; for school questions you go to school catalogues, or to school-committee reports. You will be surprised to find how little time you use to get together bodies of facts and figures that may make you, in a small way, an original authority on the subject you are discussing. It does not take long to count a few hundred names, or to run through the files of a newspaper for a week or a month; and when you have done such investigation you get a sense of surety in dealing with your subject that will strengthen your argument. Here, as in the larger discussions of later life, the readiness to take the initiative and the ingenuity in thinking of possible sources are what make you count.

Such sources you can often piece out by personal inquiry from men who are conversant with the subject--town or city officers, members of faculties, principals of schools. If you go to such people hoping that they will do your work for you, you will not be likely to get much comfort; but if you are keen about your subject yourself, and ready to work, you will often get not only valuable information and advice, but sometimes also a chance to go through unpublished records. A young man who is working hard and intelligently is apt to be an object of interest to older men who have been doing the same all their lives.

EXERCISES

1. Name those of the sources on pages 34-36, which are available to you. Report to the class on the scope and character of each of them. (The report on different sources can be divided among the class.)

2. Name some sources for facts relating to your own school or college; to your own town or city; to your own state.

3. Report on the following, in not more than one hundred words, naming the source from which you got your information: the situation and government of the Fiji Islands; Circe; the author of "A man's a man for a' that"; Becky Sharp; the age of President Taft and the offices he has held; the early career of James Madison; the American amateur record in the half-mile run; the family name of Lord Salisbury, and a brief account of his career; the salary of the mayor of New York; the island of Guam: some of the important measures passed by Congress in the session of 1910-1911. (This exercise a teacher can vary indefinitely by turning over the pages of reference books which his class can reach; or the students can be set to making exercises for each other.)

14. Bibliography. Before starting in earnest on the reading for your argument, begin a bibliography, that is, a list of the books and articles and speeches which will help you. This bibliography should be entered in your notebook, and it is convenient to allow space enough there to keep the different kinds of sources separate. In making your bibliography you will use some of the sources which have just been

described, especially "Poole's Index," and "The Reader's Guide," and the subject catalogue of the library. Make your entries so full that you can go at once to the source; it is poor economy to save a minute on copying down a title, and then waste ten or fifteen in going back to the source from which you got it. On large subjects the number of books and articles is far beyond the possibilities of most courses in argumentation, and here you must exercise your judgment in choosing the most important. The name of the author is on the whole a safe guide: if you find an article or a book by President Eliot on an educational subject, or one by President Hadley on economics, or one by President Jordan on zoology, or one by any of them on university policy, you will know at once that you cannot afford to neglect it. As you go on with your reading you will soon find who are authorities on special subjects by noting who are quoted in text and footnotes. If the subject happens to be one of those on which a bibliography has been issued either by the Library of Congress or from some other source, the making of your own bibliography will reduce itself to a selection from this list.

Keep your bibliography as a practical aid to you in a very practical task. Do not swell it from mere love of accumulation, as you might collect stamps. The making of exhaustive bibliographies is work for advanced scholarship or for assistant librarians. For the practical purposes of making an argument a very moderate number of titles beyond those you can actually use will give you sufficient background.

Notebook. Enter in your notebook the titles of books, articles, or speeches which bear on your subject, and which you are likely to be able

to read.

Illustration. Bibliography for an argument on introducing commission government of the Des Moines type into Wytown.

BOOKS

WOODRUFF, C. R. City Government by Commission. New York, 1911. Bibliography in appendix.

HAMILTON, J. J. The Dethronement of the City Boss. New York, 1910.

ARTICLES

From Reader's Guide to Periodical Literature, Vol. II (1905-1909). (There are thirty entries here under the heading, Municipal Government, and the subheading, Government by Commission. Of these I omit those dealing with cities in Texas, as not bearing directly on the Des Moines plan, and select seven of the most recent.)

"Another City for Commission Government," _World's Work_, Vol. XVIII (June, 1909), p. 11,639.

"City Government." _Outlook_. Vol. XCII (August 14, 1909), pp.

865-866.

BRADFORD, E. S. "Commission Government in American Cities," National Conference on City Government (1909), pp. 217-228.

PEARSON, P. M. "Commission System of Municipal Government" (bibliography), Intercollegiate Debates, pp. 461-477.

ALLEN, S. B. "Des Moines Plan," National Conference on City Government (1907), pp. 156-165.

"Des Moines Plan of City Government," _World's Work_, Vol. XVIII (May, 1909), p. 11,533.

GOODYEAR, D. "The Example of Haverhill," _Independent_, Vol. LXVI (January, 1909), p. 194.

From Reader's Guide (1910). (Seven entries, of which I select the following.)

GOODYEAR, D. "The Experience of Haverhill," _Independent_, Vol. LXVIII (February, 1910), p. 415.

"Rapid Growth of Commission Government," _Outlook_, Vol. XCIV (April,

1910), p. 822.

TURNER, G. K. "New American City Government," _McClure's_, Vol. XXXV (May, 1910), pp. 97-108.

"Organization of Municipal Government," American Government and Politics; pp. 598-602.

15. Planning for a Definite Audience. Before setting to work on the actual planning of your argument there are still two preliminary questions you have to consider--the prepossessions of your audience, and the burden of proof; of these the latter is dependent on the former.

When you get out into active life and have an argument to make, this question of the audience will force itself on your attention, for you will not make the argument unless you want to influence views which are actually held. In a school or college argument you have the difficulty that your argument will in most cases have no such practical effect. Nevertheless, even here you can get better practice by fixing on some body of readers who might be influenced by an argument on your subject, and addressing yourself specifically to them. You can hardly consider the burden of proof or lay out the space which you will give to different points in your argument unless you take into account the present knowledge and the prepossessions of your audience on the subject.

Where the question is large and abstract the audience may be so general as to seem to have no special characteristics; but if you will think of the differences of tone and attitude of two different newspapers in treating some local subject you will see that readers always segregate themselves into types. Even on a larger scale, one can say that the people of the United States as a whole are optimistic and self-confident in temper, and in consequence careless as to many minor deficiencies and blemishes in our national polity. On a good many questions the South, which is still chiefly agricultural, has different interests and prepossessions from the North; and the West, being a new country, is inclined to have less reverence for the vested rights of property as against the rights of men, than the Eastern states, where wealth has long been concentrated and inherited.

As one narrows down to the immediate or local questions which make the best subjects for practice the part played by the audience becomes more apparent. The reform of the rules of football is a good example: a few years ago an audience of elderly people would have taken for granted the brutality of the game, and its tendency to put a premium on unfair play; the rules committee, made up of believers in the game, had to be hammered at for several years before they made the changes which have so greatly improved it. So in matters of local or municipal interest, such as the location of a new street car line, or the laying out of a park, it will make a vast difference to you whether you are writing for people who have land on the proposed line or park, or for the general body of citizens.

Differences in thy prepossessions of your audience and in their knowledge of the subject have, therefore, a direct and practical effect on the planning of your argument. Suppose you are arguing in favor of raising the standard of admission to your college; if your argument is addressed to the faculty you will give little space to explaining what those requirements now are; but if you are sending out an address to the alumni you must give some space to telling them clearly and without technicalities what present conditions are and explaining the changes that you propose. Theoretically an argument should change in form and proportions for every audience which you address. The theory may be pushed too far; but in the practice of real life it will be found nearly true. With different audiences you will unconsciously make different selection of material, and you will vary your emphasis, the place of your refutation, and the distribution of your space.

Notebook. Enter the audience for whom your argument might be written, and note what you think would be their knowledge of the subject, and their prepossessions toward it.

Illustration. The citizens of Wytown. They are convinced that there should be a change in the city government; but they are not yet familiar with the Des Moines plan.

EXERCISES

1. Bring to class editorials from different newspapers on the same local subject, and point out differences of attitude which they assume in the audiences they address.

2. Suggest three different possible audiences for your argument, and show what differences you would make in your argument in addressing each of them.

16. The Burden of Proof. The principle which underlies the responsibility for the burden of proof may be summed up in the adage of the common law, _He who asserts must prove_.

At the law this principle has been elaborated into a large and abstruse subject; in ordinary arguments where there is no judge to make subtle discriminations, you must interpret it in the broadest way. The average man lacks both the interest and the capacity for making keen distinctions; and when you are writing for him you would make a mistake if you were to stickle for fine points concerning the burden of proof.

In general, the principle as it bears on the arguments of everyday life implies that any argument in favor of a change shall accept the burden of proof. This application of the principle is illustrated in the following extract from an editorial article in _The Outlook_ some years ago, on a proposed change in the law of New York concerning the safeguards of vivisection.

* * * * *

The real question is not as to the merits of vivisection, but as to the proper safeguards with which the law should surround it.

At present the law of New York state applies to experiments upon animals the same principle that it applies to surgical operations upon men, women, and children. It does not attempt to prescribe the conditions under which either experiments or operations should be conducted; but it does prescribe the standards of fitness which every person who may lawfully engage in surgery and which every person who may lawfully engage in animal experimentation must meet. It penalizes with fine or imprisonment or both the unjustifiable injuring, mutilating, or killing of animals; and it confines to regularly incorporated medical colleges and universities of the state the authority under which animal experimentation may be conducted.

The burden of proof rests upon those who would have the state abandon this principle and substitute for it the principle of prescribing the conditions of scientific investigation. It rests upon them to prove, in the first place, that the present law is inadequate. It is not sufficient for them to produce lawyers who give opinions that the law is not efficient. There are lawyers of the highest standing in the state who declare that it is efficient. The only adequate mode of proof would be by the prosecution of an actual abuse. So far as we have been able to

learn, only one authentic case of alleged unjustifiable experimentation has been brought forward by the supporters of the bills. This is certainly not proof that the present law is inadequate.

In the second place, the burden of proof rests upon them to show that legal restrictions on the methods of science would not vitiate investigations, and would not, therefore, entail upon human beings greater suffering than would otherwise be inflicted upon animals ...

It is because _The Outlook_ is convinced by overwhelming evidence that the practice of vivisection has not increased suffering but has rather widened immeasurably the merciful ministrations of medicine and surgery that it regards as dangerous unintelligent interference with vivisection, and urges the maintenance of the principle underlying the present New York law.

* * * * *

So with other questions of policy, the burden of proof would be on any one who proposed a change from a policy long established, such as free trade in England, and to a less extent protection in this country, the elective system in many American colleges, the amateur rule in school and college athletics.

Always, one must remember that the burden of proof depends on the

prepossessions of the audience, and that on the same question it may change within a moderately small number of years. Ten years ago, on the question of the popular election of senators the burden was clearly on the side of those who advocated a change in the Constitution. By this time (1912) the burden of proof has for a majority of the people of the United States probably swung to the other side. In the state of Maine, where prohibition had been embodied in the state constitution for a generation, the burden of proof was on those who in 1911 argued for its repeal; whereas in Massachusetts, which has done well for many years with local option and high license, the burden would still be on those who should argue for state prohibition. In the discussions of the game of football a few years ago the burden of proof before an audience of athletes would have been on those who declared that the game must be changed; with college faculties and men of like mind the burden of proof would have been on those who defended the old game. In each case that comes up, you cannot place the burden of proof until you know whether the people you are trying to convince have any prepossessions in the matter: if they have, the burden of proof is on him who attempts to change those prepossessions; if they have not, the burden is on him who is proposing to change existing views or existing policies.

In no case, however, with a popular audience is it very safe to depend much on the burden of proof; almost always it is better to jump in and actively build up the argument on your own side. In argument, as in strategy, take the offensive whenever you can.

* * * * *

Notebook. Note whether the burden of proof is with you or against you, taking into account the probable prepossessions of the audience you have selected.

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Illustration. In the argument for the introduction of the commission form of government into Wytown the burden of proof is on the affirmative to show that the Des Moines plan of city government will cure the evils of the present government of Wytown. With the audience assumed (see p. 43), there is no burden of proof on the affirmative to establish the need of a change.

EXERCISES

1. In three subjects which you might choose for an argument show where the burden of proof would lie.

2. In the case of one of these arguments show how the burden of proof might change with the argument.

17. The Brief. When you have settled these preliminary questions of the audience you wish to win over to your view, and of the way their

prepossessions and knowledge of the subject will affect your responsibilities for the burden of proof, you are ready to begin work on the brief, as the plan for an argument is called. This brief it is better to think of as a statement of the logical framework of the argument, which you are constructing for the purpose of clearing up your own mind on the subject, and especially to help you to see how you can most effectively arrange your material. It differs from the usual brief in a case at law in that the latter is ordinarily a series of compact statements of legal principles, each supported by a list of cases already decided which bear on that principle. The brief you will be making now will consist of an _introduction_, which states whatever facts and principles are necessary to an understanding of the brief, and the _brief_ itself, which consists of a series of propositions, each supporting your main contention, and each in turn supported by others, which again may each be supported by another series. Such an analysis will thoroughly display the processes of your reasoning, and enable you to criticize them step by step for soundness and coerciveness.

I shall first explain the several steps which go to the making of the introduction to the brief; and then come to the making of the brief itself.

18. The Proposition. The first step in making the introduction to your brief is to formulate the question or proposition (the two terms are interchangeable in practice). Until you have crystallized your view of the subject into a proposition you have nothing to argue about. "Commission form of government" is a subject, but it is not arguable,

for it gives you no hold either for affirming or denying. "Commission government should be adopted in Wytown," or "Commission government has improved political conditions in Des Moines," are both propositions which are arguable (though not yet specific enough), for it is possible to maintain either the affirmative or the negative of either of them.

The proposition must be single. If it be double, you have what the lawyers call "a squinting argument," that is, an argument which looks in two directions at the same time. For example, the proposition, "Commission government would be a good thing for Wytown, but the initiative and referendum are wrong in principle," involves two separate and unconnected principles, since commission government as first embodied at Galveston does not include the initiative and referendum. Many people, including those of Galveston and other places in Texas, would accept the first half of the proposition, and disagree with the second half. On the other hand, "Wytown should adopt a commission government on the Des Moines plan," would not be a double proposition, though this plan includes the initiative and referendum; for the proposition makes the issue that the plan should be adopted or rejected as a whole.

In some cases a proposition may be grammatically compound, and yet carry a single assertion. "Municipal government by commission is more economical and efficient than municipal government with a mayor and two chambers," is really a single assertion of the superiority of the commission plan of government. In this case there is no danger of getting into a split argument; but even here it is safer to reduce the

proposition to one which is grammatically single, "Municipal government by commission has proved itself superior to municipal government with a mayor and two chambers." A predicate wholly single is a safeguard against meaning two assertions.

The proposition must not be so abstract or vague in terms that you do not know whether you agree or disagree with it. Macaulay summed up this difficulty in one of his speeches in Parliament:

* * * * *

Surely my honorable friend cannot but know that nothing is easier than to write a theme for severity, for clemency, for order, for liberty, for a contemplative life, for an active life, and so on. It was a common exercise in the ancient schools of rhetoric to make an abstract question, and to harangue first on one side and then on the other. The question, Ought popular discontents to be quieted by concession or coercion, would have been a very good subject for oratory of this kind. There is no lack of commonplaces on either side. But when we come to the real business of life, the value of these commonplaces depends entirely on the particular circumstances of the case which we are discussing. Nothing is easier than to write a treatise proving that it is lawful to resist extreme tyranny. Nothing is easier than to write a treatise setting forth the wickedness of wantonly bringing on a great society the miseries inseparable from revolution, the bloodshed, the spoliation, the anarchy. Both treatises may contain much that is true; but neither will

enable us to decide whether a particular insurrection is or is not justifiable without a close examination of the facts.[4]

In other words, though the word "insurrection" seems to be plain in meaning, yet when we make it one term of a judgment of which the other term is "justifiable," we find that we do not know whether we agree or not. The terms of the proposition are so vague that there can be no meeting of minds. If we limit the subject to a specific case, insurrection in Venezuela, or insurrection in Cuba, then we have made a beginning toward making the proposition arguable. In these particular cases, however, it would probably be necessary to go further, and specify which insurrection in Venezuela or in Cuba was intended, before the average American would be prepared either to affirm or to deny. Wherever the terms of a proposition are too vague to provoke profitable discussion they must be narrowed down to a specific case which will draw forth affirmation and denial.

A common case where the vagueness of the proposition leads to difficulties in the argument is described in the following passage:

* * * * *

An equally common form of argument, closely allied to the argument by analogy, and equally vague, is that which is popularly known as the objection to a thin end of a wedge. We must not do this or that, it is often said, because if we did we should be logically bound to do

something else which is plainly absurd or wrong. If we once begin to take a certain course there is no knowing where we shall be able to stop with any show of consistency; there would be no reason for stopping anywhere in particular, and we should be led on, step by step, into action or opinions that we all agree to call undesirable or untrue....

For it must not be forgotten that in all disputes of this kind there are two parties opposed to each other, and that what divides them is precisely their lack of agreement on the question what principle is really involved. Those who see a proposal as a thin end of a wedge always see the principle as a wider, more inclusive one, than those who make the proposal; and what gives them freedom so to see it is merely the fact that it remains indefinite.[5]

As a practical example of this confusion, consider the following extract from a speech in the United States Senate opposing the popular election of senators:

* * * * *

Every intelligent student of the present rapid trend toward popular government must see what would happen when this sentimental bar of the States being represented by two Senators instead of by the people in the United States Senate is thrown down. The initiative, the referendum, and the recall are but symptoms of the times. That the people will have their way, because they, and they alone, are the government, is the

underlying spirit of our institutions, of our newest State Constitutions, and of our progressive laws. Skillful agitation seizes upon every pretext and eagerly grasps and enlarges every opportunity for appeal to the passions in an advancement of its purposes. The next cry will necessarily be, "Why not elect the Supreme Court of the United States by popular vote? Why not elect the Federal Judiciary everywhere by popular vote?"[6]

* * * * *

Here the proposition, "That the people will have their way, because they, and they alone, are the government, is the underlying spirit of our institutions, of our newest state constitutions, and of our progressive laws," is not only obscure in terms, but it is wholly vague, for it does not define how far the progressive party propose to carry popular direct government. Until the two sides agree on that point they have nothing definite enough for profitable argument.

It is surprising to notice how often in political debates this fallacy is committed. It is human nature to believe for the time being that the other side will do the worst thing that the circumstances make possible. Fortunately, human nature just as constantly refutes the error.

To make clearer this necessity of having a definite proposition to argue, let us take one of the subjects suggested on page 10 which is not yet in a form for profitable argument, and amend it. "The standard for

graduation from this college should be raised," is a subject that can be discussed, but as it stands it would not be a good proposition for an argument, because it is vague. How much should the standard be raised? By what method should it be raised? These and other questions you would have to answer before you would have a proposition definite enough to be argued with profit. The proposition could be made definite enough by such amendments as the following: "The standard for graduation from this college should be raised by requiring one eighth more hours of lecture or recitation in each of the four years"; or, "The standard for graduation from this college should be raised by increasing the pass mark in all courses from fifty per cent to sixty per cent"; or, "The standard for graduation from this college should be raised by allowing no student to have his degree who has fallen below sixty per cent in one fourth of his work, and has not attained eighty per cent in at least one eighth of his college work." In each of these cases the proposition is so definite that you could find exactly how many students would be affected. A proposition which involves a definite body of facts is arguable; one which involves an indefinite and incalculable body of facts is not.

To take another example from the brief we shall be working out in this chapter, the proposition, "Wytown should adopt the commission form of government," is not definite enough, for there are various forms of commission government, such as the Galveston plan, the Des Moines plan, and by this time a considerable variety of others; and citizens who are at all particular in their voting would want to know just which of these was proposed for their approval. The proposition, therefore, would have

to be limited to, "Wytown should adopt a commission government after the Des Moines plan."

The exact form of your proposition will not always come to you at the first try. It may easily happen that you will not see the exact issue involved in the argument until you have gone some way with the processes of analysis which we shall be considering in the rest of this chapter. Always hold yourself ready to amend your proposition, if you can thereby come closer to the question.

Notebook. Enter the exact proposition which you are to argue.

Illustration. Wytown should adopt the commission form of government, in the form now in practice at Des Moines, Iowa.

EXERCISES

1. Make three arguable propositions on the subject, "Entrance examinations for college."

2. Criticize the following propositions and amend them, if necessary, so that they might be argued with profit:

a. Freshmen should be required to keep reasonable hours.

b. The honor system should be introduced everywhere.

c. This city should do more for its boys.

d. The street railway companies in this city should be better regulated.

e. The amateur rules for college athletes are too stringent.

f. Intercollegiate football is beneficial.

19. Definition of Terms. Making a proposition definite is chiefly a process of defining terms which are found in it; but when these are defined you may still in your argument use others which also need definition. In general the definition of terms, whether in the proposition or not, implies finding out just what a term means for the present purpose. Almost every common word is used for some variety of purposes. "Commission," for example, even within the field of government, has two very different meanings:

As applied to state and national administration, the term "commission government" is used in connection with the growing practice of delegating to appointed administrative boards or commissions--the

Interstate Commerce Commission, state railroad commissions, tax commissions, boards of control, etc.--the administration of certain special or specified executive functions ...From the standpoint of organization, then, "commission government," as applied to the state, connotes decentralization, the delegation and division of authority and responsibility, and the disintegration of popular control ...As applied to city administration, however, commission government has a very different meaning. In striking contrast to its use in connection with the state, it is used to designate the most concentrated and centralized type of organization which has yet appeared in the annals of representative municipal history. Under so-called commission government for cities, the entire administration of the city's affairs is placed in the hands of a small board or council--"commission"--elected at large and responsible directly to the electorate for the government of the city.[7]

Furthermore, even the term "commission government for cities" is not wholly definite, for there are already several recognized types of such government, such as the Galveston type, the Des Moines type, and recent modifications of these. If you are making an argument for introducing a commission government, therefore, you must go still further with your definitions, and specify the distinguishing features of the particular plan which you are urging on the voters, as is done in the definition on page 59. In other words, you must make exactly clear the meaning of the term for the present case.

Your first impulse when you find a term that needs defining may be to go

to a dictionary. A little thought will show you that in most cases you will get little comfort if you do. The aim of a dictionary is to give all the meanings which a word has had in reasonable use; what you need in an argument is to know which one of these meanings it has in the present case. If you were writing an argument on the effects or the righteousness of the change wrought in the English constitution by the recent curtailment of the veto power of the House of Lords, and wished to use the word "revolution," and to use it where it was important that your readers should understand precisely what you intended it to convey, you would not burden them with such a definition as the following, from an unabridged dictionary: "Revolution: a fundamental change in political organization, or in a government or constitution; the overthrow or renunciation of one government and the substitution of another, by the governed." Such a definition would merely fill up your space, and leave you no further ahead. A dictionary is studiously general, for it must cover all possible legitimate meanings of the word; in an argument you must be studiously specific, to carry your readers with you in the case under discussion.

Moreover, words are constantly being pressed into new uses, as in the case of "commission" (see p. 54); and others have entirely legitimate local meanings. Only a dictionary which was on the scale of the New English Dictionary and which was reedited every five years could pretend to keep up with these new uses. In an unabridged dictionary dated 1907, for example, the full definition of "amateur" is as follows: "A person attached to a particular pursuit, study or science, as to music or painting; especially one who cultivates any study or art, from taste or

attachment, without pursuing it professionally." Of what use would such a definition be to you if you were arguing in favor of strengthening or relaxing the amateur rules in college athletics, in which you had to follow through the intricacies of summer baseball and of reimbursements for training table and traveling expenses? Such a definition hardly comes in sight of the use of the word which is most in the mouths of college students in America. Words mean whatever careful and accepted writers have used them to mean; and the business of a dictionary is so far as possible to record these meanings. But language, being a living and constantly developing growth, is constantly altering them and adding to them.

What a dictionary can do for you, therefore, is merely to tell you whether in the past the word has been used with the signification which you wish to give to it; but there are very few cases in which this will be much help to you, for in an argument your only interest in the meaning of a term is in the meaning of that term for the case under discussion.

There are two quite different kinds of difficulty in putting the right interpretation on a statement, and a dictionary can only remove one of these, and by far the less important one. When you meet with a statement containing an unfamiliar word--say, the word "parallax," or "phanerogamous," or "brigantine"--and when you understand all the rest of the statement except that word, then as a general rule the dictionary will help to make the meaning clear. But when the difficulty is caused, not by a word being unfamiliar, but by its being used in a certain

context, then the best dictionary in the world is, for your purpose, of no use at all. The nature of every dictionary is necessarily such that it entirely leaves out of account all doubts about meaning which are of this second kind. The most that a dictionary can do is to tell us the meaning of a word in those cases where the context in which it is used is _not_ such as to make the meaning doubtful.[8]

In practice the words which most often need definition are those which are, as it were, shorthand symbols for perhaps a very extensive meaning. Unless the limits of this extended meaning are clearly marked out you cannot tell whether the minds of your readers are, as the lawyers say, running on all fours with your own or not. This extended meaning may be of various sorts: for example, it may be a large general principle, as in the case of "evolution" or "culture"; or it may be a general system or practice, as in the case of "commission government," "honor system," or "high standards for graduation"; or it may be a general class of things, persons, or events, as in the case of "secondary school," "professional coach," or "murder." When you use any such term in an argument, it is essential that your readers shall have the same set of details, ramifications, or instances in mind as you have yourself. For this purpose you must define the term; or, in other words, you must lay out or display the ramifications and limitations of the principle, the details of the system or practice, or the exact kinds of things, persons, or events, which you have in mind when you use the term. A few examples will make this practical meaning of defining clear.

Sometimes the definition proceeds by careful and specific limitation of

the general signification of a word, as in the following example from Bagchot:

I should say that except where it is explained to the contrary, I use the word "toleration" to mean toleration by law. Toleration by society of matters not subject to legal penalty is a kindred subject, on which if I have room I will add a few words; but in the main I propose to deal with the simpler subject, toleration by law. And by toleration, too, I mean, when it is not otherwise said, toleration in the public expression of opinions; toleration of acts and practices is another allied subject, on which I can, in a paper like this, but barely hope to indicate what seems to me to be the truth, and I should add that I deal only with the discussion of impersonal doctrines: the law of libel, which deals with accusations of living persons, is a topic requiring consideration by itself.[9]

Sometimes the definition is rather an unfolding and displaying of the implications (from the Latin, _implicare_, to fold in) of the term. Huxley, near the beginning of his three "Lectures on Evolution," made sure by the following definition that his hearers should have a precise idea of what he meant by the term "evolution":

The third hypothesis, or the hypothesis of evolution, supposes that, at any comparatively late period of past time, our imaginary spectator would meet with a state of things very similar to that which now obtains; but that the likeness of the past to the present

would gradually become less and less, in proportion to the remoteness of his period of observation from the present day; that the existing distribution of mountains and plains, of rivers and seas, would show itself to be the product of a slow process of natural change operating upon more and more widely different antecedent conditions of the mineral framework of the earth; until, at length, in place of that framework, he would behold only a vast nebulous mass, representing the constituents of the sun and of the planetary bodies. Preceding the forms of life which now exist our observer would see animals and plants not identical with them, but like them; increasing their differences with their antiquity and, at the same time, becoming simpler and simpler; until, finally, the world of life would present nothing but that undifferentiated protoplasmic matter, which, so far as our present knowledge goes, is the common foundation of all vital activity.

The hypothesis of evolution supposes that in all this vast progression there would be no breach of continuity, no point at which we could say, "This is a natural process," and "This is not a natural process," but that the whole might be compared to that wonderful process of development which may be seen going on every day under our eyes, in virtue of which there arises, out of the semifluid, comparatively homogeneous substance which we call an egg, the complicated organization of one of the higher animals. That, in a few words, is what is meant by the hypothesis of evolution.[10]

Here Huxley has laid out, in compact form the principal ramifications of the great principle of evolution, giving his hearers something like an outline map of it with its limits and principal divisions.

Where you have a practice or system to define, you will be more likely to do it by specifying the chief and essential details of the system, as in the following definition of commission government for cities. It will be noticed that this narrows down the meaning of the term to something like the Des Moines system, as distinguished from the Galveston plan.

A straight commission form of municipal government, in the judgment of Dr. Charles W. Eliot, one of its most active advocates, requires a commission composed of five members elected at large, one of whom is called the mayor, acting as chairman of the commission, but with no veto power, or any other special power not shared by the other members of the commission.

The commission so elected is the source of all authority in the city, makes all ordinances, appoints all officials, collects taxes, and makes all appropriations. As set forth by its advocates, the significant features of the plan, in addition to those already mentioned, are:

Assignment of the important divisions of the city government to individual members of the commission, or their election thereto by the voters, each being directly responsible for the conduct of his

particular department; adequate compensation to the commissioners for their time and labor, the city employing all the commissioners at living salaries, thus elevating the dignity of municipal service and making it a public career, and not a mere avocation; regularity, frequency, and publicity of the meetings of the commissioners; all employees above the class of day laborers selected from eligible lists based on examinations, oral and written, carefully devised to develop merit and fitness; recommendations after examination by an independent civil service commission; provision for the retention in office of all employees so appointed during good behavior; the power to initiate legislation reserved to the people, this right being known as the initiative; the power to call for a public vote on any measure adopted by the commission before being given effect as law reserved to the people, this being known as the referendum; the power at any time to make any member of the commission stand for reelection reserved to the people, this being known as the recall; the granting of public franchise always to be submitted to the approval of the electors.

There are two other important features: the introduction of the principle of the short ballot and the elimination of ward lines. In the matured judgment of municipal students these are considered, together with the concentration of authority, as the most effective features of the system.[11]

Here is a pretty complete display of all the essential details of the system which the author of this definition intended to mean by the term "commission government for cities."

Where the term which is to be defined is the name of a general class, whether of persons, things, or events, the definition must show just what persons, things, or events are to be included under the term for the present purpose. Lincoln gave a famous example of this sort of definition in the opening of his address at Cooper Institute, February 27, 1860. He took for the text of the first part of his speech a statement of Senator Douglas.

In his speech last autumn at Columbus, Ohio, as reported in the New York _Times_, Senator Douglas said, "Our fathers, when they framed the government under which we live, understood this question just as well, and even better, than we do now."

I fully indorse this, and I adopt it as a text for this discourse. I so adopt it because it furnishes a precise and an agreed starting point for a discussion between Republicans and that wing of the Democracy headed by Senator Douglas. It simply leaves the inquiry: What was the understanding those fathers had of the question mentioned?

What is the frame of government under which we live? The answer must be, "The Constitution of the United States." That Constitution consists of the original, framed in 1787, and under which the present government first went into operation, and twelve subsequently framed amendments, the first ten of which were framed in 1789.

Who were our fathers that framed the Constitution? I suppose the "thirty-nine" who signed the original instrument may be fairly called our fathers who framed that part of the present government. It is almost exactly true to say they framed it, and it is altogether true to say they fairly represented the opinion and sentiment of the whole nation at that time. Their names being familiar to nearly all, and accessible to quite all, need not now be repeated. I take these "thirty-nine," for the present, as being "our fathers who framed the government under which we live." What is the question which, according to the text, those fathers understood "just as well, and even better, than we do now"? It is this: Does the proper division of local from Federal authority, or anything in the Constitution, forbid our Federal Government to control as to slavery in our Federal Territories?

Upon this, Senator Douglas holds the affirmative, and Republicans the negative. This affirmation and denial form an issue; and this issue--this question--is precisely what the text declares our fathers understood "better than we."

Let us now inquire whether the "thirty-nine," or any of them, ever acted upon this question; and if they did, how they acted upon it--how they expressed that better understanding.

Here as will be seen, Lincoln took every important word and phrase, and showed exactly what persons and things were included under them. Then he

went ahead with his argument with the assurance that his audience and he were treading the same path.

Somewhat similar are the definitions in many cases at law, where the issue is whether the agreed facts in a case come under a certain term or not. The Constitution of the United States provides that "direct taxes" shall be apportioned among the states in proportion to their population, but makes no such restriction on the levying of "duties," "imposts," and "taxes." When Congress establishes a new form of tax, therefore, such as the income tax or the corporation tax, the Supreme Court is pretty sure to be called on to decide under which of these large constitutional classes it falls. In such cases as the Income Tax cases, which decided that the income tax laid in the Act of 1904 was unconstitutional, and in the Corporation Tax cases, which upheld the Act of 1909, both the arguments of counsel and the decision of the court deal wholly with the definition of the term "direct tax." Here the definition takes the form of an examination of previous cases which involved the term, to see whether the present case is like those that have been held to be within it, or like those which have been held to fall outside it. From this comparison of the two sets of cases the essential characteristics of the direct tax are brought to the surface.

A good example of the careful distinctions which must be made in defining a legal term is found in Daniel Webster's famous argument in the White Murder Case, of which an extract will be found below. The question here is just how far the term "murder" shall be extended.

There are two sorts of murder; the distinction between them it is of essential importance to bear in mind: (1) murder in an affray, or upon sudden and unexpected provocation; (2) murder secretly, with a deliberate, predetermined intention to commit the crime. Under the first class, the question usually is, whether the offense he murder or manslaughter, in the person who commits the deed. Under the second class, it is often a question whether others than he who actually did the deed were present, aiding and assisting therein. Offenses of this kind ordinarily happen when there is nobody present except those who go on the same design. If a riot should happen in the court-house, and one should kill another, this may be murder, or it may not, according to the intention with which it was done; which is always matter of fact, to be collected from the circumstances at the time. But in secret murders, premeditated and determined on, there can be no doubt of the murderous intention; there can be no doubt if a person be present, knowing a murder is to be done, of his concurring in the act. His being there is a proof of his intent to aid and abet; else, why is he there?

It has been contended, that proof must be given that the person accused did actually afford aid, did lend a hand in the murder itself; and without this proof, although he may be near by, he may be presumed to be there for an innocent purpose; he may have crept silently there to hear the news, or from mere curiosity to see what was going on. Preposterous, absurd! Such an idea shocks all common sense. A man is found to be a conspirator to commit a murder; he has planned it; he has assisted in arranging the time, the place, and the means; and he is found in the

place, and at the time, and yet it is suggested that he might have been there, not for cooperation and concurrence, but from curiosity! Such an argument deserves no answer. It would be difficult to give it one, in decorous terms. Is it not to be taken for granted, that a man seeks to accomplish his own purposes? When he has planned a murder, and is present at its execution, is he there to forward or to thwart his own design? Is he there to assist, or there to prevent? But "curiosity"! He may be there from mere "curiosity"! Curiosity to witness the success of the execution of his own plan of murder! The very walls of a court-house ought not to stand, the plowshare should run through the ground it stands on, where such an argument could find toleration.

It is not necessary that the abettor should actually lend a hand, that he should take a part in the act itself; if he be present ready to assist, that is assisting.... The law is, that being ready to assist is assisting, if the party has the power to assist, in case of need. It is so stated by Foster, who is a high authority. "If A happeneth to be present at a murder, for instance, and taketh no part in it, nor endeavoreth to prevent it, nor apprehendeth the murderer, nor levyeth hue and cry after him, this strange behavior of his, though highly criminal, will not of itself render him either principal or accessory." "But if a fact amounting to murder should be committed in prosecution of some unlawful purpose, though it were but a bare trespass, to which A in the case last stated had consented, and he had gone in order to give assistance, if need were, for carrying it into execution, this would have amounted to murder in him, and in every person present and joining with him." "If the fact was committed in prosecution of the original

purpose which was unlawful, the whole party will be involved in the guilt of him who gave the blow. For in combinations of this kind, the mortal stroke, though given by one of the party, is considered in the eye of the law, and of sound reason too, as given by every individual present and abetting. The person actually giving the stroke is no more than the hand or instrument by which the others strike." The author, in speaking of being present, means actual presence; not actual in opposition to constructive, for the law knows no such distinction. There is but one presence, and this is the situation from which aid, or supposed aid, may be rendered. The law does not say where the person is to go, or how near he is to go, but that he must be where he may give assistance, or where the perpetrator may believe that he may be assisted by him. Suppose that he is acquainted with the design of the murderer, and has a knowledge of the time when it is to be carried into effect, and goes out with a view to render assistance, if need be; why, then, even though the murderer does not know of this, the person so going out will be an abettor in the murder.

20. Definition through the History of the Case. In some cases the easiest way to put before your readers the precise details or limitations implied in a term is through a brief review of the history of the question. In the Lincoln-Douglas debates Lincoln was constantly showing that Douglas's use of the term "popular sovereignty" must be understood in the light of the whole history of the slavery question; that it meant one thing--what Douglas intended it to mean--if the history of the question before 1850 were left out of sight; but that it meant a wholly different thing if the steady encroachment of the slave

power from the Missouri Compromise of 1820 on were taken into account. And Lincoln showed that in reality "popular sovereignty" had come to mean a power oh the part of the people of a territory to introduce slavery, but not to exclude it.[12] In our own day "progressive" has a different meaning when applied to a Republican from Kansas and to one from Massachusetts or New York.

To know just what is involved by applying the term to any given public man, one must go back to the recent history of his party in his own state, and to the speeches he has made. In political discussions popular phrases are constantly thus blurred in meaning through being used as party catchwords; and to use them with any certainty in an argument one must thus go back to their origin, and then dissect out, as it were, the ambiguous implications which have grown into them.

If you were arguing any question concerning the elective system or the entrance requirements for your own college, you would often do well to sketch the history of the present system as a means of defining it, before you go on to urge that it be changed or kept as it is. So if you were arguing for a further change in the football rules, your best definition of the present game for your purpose would be a sketch of the way in which the game has been changed in the past few years, at the urgent demand of public opinion. Such a sketch you could easily get by running through the back numbers of such a magazine as _Outing_, or the sporting columns of some of the larger weeklies. Or again, if you were arguing that the street railway systems of your city should be allowed to combine, your best description or definition of the present situation

might well be a sketch of the successive steps by which it came to be what it is. Here you would go for your material to the files of local newspapers, or, if you could get at them, to sets of the reports of the railway companies.

The definition of terms through the history of the question has the advantage that, besides helping your readers to see why the terms you use have the meaning you give them for the present case, it also makes them better judges of the question by giving them a full background.

Ambiguous definitions, which do not distinguish between two or more meanings of a term for the case under discussion, are usually avoided by going back to the history of the case. In Chapter III we shall consider more fully the fallacies which spring from ambiguous use of words. Here I shall insist briefly on the necessity of searching into the way terms have come to be used in specific discussions.

The first of these is the danger which arises when a word in general use takes on a special, almost technical meaning in connection with a particular subject. Here you must take some pains to see that your readers understand it in the special sense, and not in the popular one. A crass instance, in which there is little real possibility of confusion, is the use of words like "democratic" or "republican" as the names of political parties; even with these words stump speakers sometimes try to play on the feelings of an uneducated audience by importing the association of the original use of the word into its later

use. There are a good many words used in the scientific study of government which are also used loosely in general talk. "Federal" has a precise meaning when used to distinguish the form of government of the United States from that which usually binds together the counties in a state; but we constantly use it in a sense hardly distinguishable from that of "National." The following extract from an editorial on the Philippine question is a good illustration of this precise and semitechnical use of words, and the loose, not very accurate use of everyday speech:

On the other hand, it is said that this policy of the United States toward its dependencies is insincere; that it is a covert plan of exploitation; that, as it is practiced, it is a denial in act of a mere promise to the ear; and that if it were genuine the United States would bestow self-government upon its dependencies by granting independence.

This criticism is obviously based on a confusion of independence with self-government. Russia, is independent, but in only a very slight degree are its people self-governing. Turkey has long been independent, but until the recent revolution the people of Turkey were self-governing in no sense at all. On the other hand, Canada, though not independent, is self-governing.[13]

Many an argument goes to wreck through carelessness in the use of words of this sort. Wherever the subject under discussion has grown into the partial possession of a special field, but still uses words drawn from

everyday life, you must be careful that not only you, but your audience also, understand your terms in the more precise way.

Closely related to this kind of ambiguity, and in practice still more insidious, is the ambiguity which arises from the connotation or emotional implications of words. The use of "republican" and "democrat" cited above runs over into this kind of confusion. In collegiate athletics "professional" has come to have almost an implication of moral inferiority, when it is often dependent on pretty technical considerations of expediency. In politics, to one class of temperaments "conservative," to another "radical," or at any rate "liberal" or "progressive," carries the implication of the salvation or the ruin of the country. All such words introduce a sure element of obscurity and confusion into an argument. If a word stirs your feelings in one way and those of some of your readers in another, you cannot use that word safely; in spite of the most careful definitions and disclaimers the emotional bias will creep in and twist the effect of your words in the minds of some of your audience. This emotional ambiguity is the most insidious of all ambiguities in the use of words. The danger from it is so real that I shall return to it at greater length (see p. 158).

In a good many cases the necessity of defining the terms to be used, whether in the proposition itself, or in the argument, changes with the audience. If you begin a movement to introduce a commission form of government into the town or the city in which you live, at first you will have to repeat the definition of commission government a good many times, in order that most of the voters may know exactly what you want

them to do. If the town once wakes up, however, and gets interested, you and every one else will be using such technicalities as "Galveston plan," "Des Moines plan," "recall," "initiative," and the like with no danger of leaving darkness where there should be light.

So even more obviously with school and college questions: if you are sending memorials urging the introduction of the honor system or of student self-government, one to the trustees of your college, and another to the faculty, and at the same time addressing an appeal to your fellow students through a college paper, in each of the three cases your definitions might differ. You could probably assume that both students and faculty would be more or less familiar with the question, so that your definitions would be of the nature of precise specifications of the plan you were urging. With the trustees your definitions would probably have to be longer and your explanations more detailed, for such a body would start with only a vague knowledge of the situation.

As in all other steps in making an argument, so in defining, there is no formula for all cases. In each case your knowledge of your audience must guide you, and your own sagacity. Unnecessary definitions will make them think you a prig; insufficient definition will let them stray away from your meaning.

Notebook. Enter any terms which need definition for the audience you are addressing.

Illustration. Commission form of government after the Des Mouses plan. The essential features of this plan are as follows: The entire affairs of the city are conducted by a mayor and four councilors, elected at large for two years; they are nominated at a primary election; at neither primary nor final election are party designations allowed on the ballot; these officers are subject to the recall; the mayor is chairman of the council, but has no power of veto; the executive and administrative powers are divided into five departments, each under the charge of a member of the council--(1) public affairs (under the charge of the mayor), (2) accounts and finances, (3)public safety,(4) streets and public improvements, (5) parks and public property; all other offices are filled and their duties prescribed by majority vote of the council; recall; grants of franchises must be approved by popular vote; initiative and referendum; a summary of city affairs must be published and distributed once a month.

Recall, On petition of twenty-five per cent of the voters at the last election the mayor or any of the councilmen must stand for reelection at a special election.

Referendum. On petition of twenty-five per cent of the voters any ordinance must be submitted to popular vote at a special election; no ordinance goes into effect until ten days after being passed by the council.

Initiative. On petition of twenty-five per cent of the voters a proposed measure must either be passed by the council or else submitted to popular vote.

FINDING THE ISSUES

EXERCISES

1. Write definitions of the system for choice of studies by undergraduates which is in force at your college; of the terms for admission to college; of the requirements for the degree.

2. Write a compact description or definition of the form of city government in your own city or town, like that of the Des Moines plan of commission government on page 70.

3. Write a definition of the requirements for entrance in English, according to those set forth by the Conference on Uniform Entrance Requirements in English.

4. Write a definition of the present system of college societies in your own college, using the history of their development, for your fellow students; for an article in a popular magazine.

5. Write a definition of "summer baseball" for an audience of undergraduates; for the trustees of your college.

6. Write a definition of "professional coach."

7. Write a definition of "squatter sovereignty," as used by Lincoln.

8. Write a definition of "the mutation theory."

9. Write a definition of "the English system of government."

10. Write a definition of "the romantic spirit in literature."

21. Finding the Issues. Your preparation for your argument should now have given you a clear idea of the interests and prepossessions of your readers, it should have left you with a definite proposition to support or oppose, and it should have made you sure of the meaning of all the terms you are to use, whether in the proposition or in your argument. The next step in working out the introduction to your brief is to note down the chief points that can be urged on the two sides of the question, as direct preparation for the final step, which will be to find the main issues. These main issues are the points on which the decision of the whole question will turn. They will vary in number with the case, and to some extent with the space which you have for your

argument. In a question of fact, which turns on circumstantial evidence, there may be a number of them. In the White Murder Case, in which as we have already seen, Webster was the chief counsel for the prosecution, he summed up the main issues in the following passage. The essential facts needed to understand the case are that the defendant was Franklin Knapp, that his sister-in-law, Mrs. Joseph Knapp, was the niece of Captain White, that by removing and destroying the will of Captain White the defendant and his brother Joseph supposed that they had made sure that she would inherit from him a large sum of money, that Richard Crowninshield, the actual perpetrator of the murder, had killed himself in prison. To convince the jury of the guilt of the prisoner, Webster had to carry them with him on the following seven main issues:

Gentlemen, I have gone through with the evidence in this case, and have endeavored to state it plainly and fairly before you. I think there are conclusions to be drawn from it, the accuracy of which you cannot doubt.

I think you cannot doubt that there was a conspiracy formed fur the purpose of committing this murder, and who the conspirators were:

That you cannot doubt that the Crowninshields and the Knapps were the parties in this conspiracy:

That you cannot doubt that the prisoner at the bar knew that the murder was to be done on the night of the 6th of April:

That you cannot doubt that the murderers of Captain White were the suspicious persons seen in and about Brown Street on that night:

That you cannot doubt that Richard Crowninshield was the perpetrator of that crime:

That you cannot doubt that the prisoner at the bar was in Brown Street on that night.

If there, then it must be by agreement, to countenance, to aid the perpetrator. And if so, then he is guilty as "Principal."

Similarly, in most arguments of policy there are a number of considerations that converge in favor of or against the proposed policy. If you were writing an argument in favor of keeping the study of Latin in the commercial course of a high school, you would probably urge that Latin is essential for an effective knowledge of English, that it is the foundation of Spanish and French, languages which will be of constantly increasing importance to American business men in the future, and that young men and women who go into business have an even stronger right to studies which will enlarge their horizons and open their minds to purely cultivating influences than those who go on to college. Indeed, in very few questions of policy which are doubtful enough to need argument is there any single consideration on which the whole case will turn. Human

affairs are much complicated by cross interests, and many influences modify even one's everyday decisions.

To find the main issues--which are really the critical ones on which your audience will make up their minds--is a matter largely of native sagacity and penetration; but thorough knowledge of your whole subject is essential if you are to strike unerringly to the heart of the subject and pick out these pivotal points.

A simple and very practical device for getting at the main issues is to put down on paper the chief points which might be made on the two sides. Then with these before you, you can soon, by stating them and rearranging them, simmer down your case into arguable form.

In the argument on introducing a commission form of government into Wytown this noting down of the chief points which might be urged on the two sides would be about as follows:

Contentions on the Two Sides. On the affirmative the following points might be urged:

1. The plan would make the individuals who hold the power directly responsible at all times to the citizens.

2. It would make the responsibility for all municipal action easy to

trace.

3. It would get abler men to serve the city.

4. It would take municipal government out of politics.

5. It would hold municipal administration up to the same standards of honesty and efficiency as private business.

6. It would make it difficult to elect representatives of corrupt interests.

7. It would make possible advantageous dealings with public-service corporations.

8. It would make possible the immediate removal of an unfaithful official.

9. It would tend to interest the citizens intelligently in municipal affairs.

10. It has worked well wherever it has been tried.

On the negative side the following points might be urged:

1. The plan is a complete departure from the traditional American theory of government.

2. It throws away a chance for training in public affairs for a considerable body of young men.

3. It might put very great power in the hands of unworthy men.

4. Corrupt interests, having a larger stake, would work harder to control the city.

5. Past experience gives no reason to expect the constant interest on the part of citizens which is necessary to make so great concentration of power safe.

6. With further increase in the foreign population of the city there will be danger from race and religious clannishness.

7. A return to the old-fashioned town government, or some such modification of it as has been tried at Newport, would enlist the active interest of more citizens.

8. The system is still an experiment.

9. The present success of the plan in various places is largely to be ascribed to its novelty.

10. The present system has in the past given good government.

11. The liability to recall will keep public officials from initiating advantageous policies if they would be detrimental to part of the city, or if they were unpopular because of novelty.

In most cases, as here, you will get too many points to argue out in the space which is at your disposal. Fifteen hundred or two thousand words are very soon eaten up when you begin to state evidence in any detail, and arguments written in school or college can rarely be longer. You must look forward, therefore, to not more than four or five main issues. In going over and comparing the points which you have jotted down in this preliminary statement you must consequently be prepared to throw out all that are not obviously important. Even when you have done this you will usually have more than enough points left to fill your space, and must make some close decisions before you get at those which you finally decide to argue out.

You must also be prepared to rephrase and remold some of the points in order to get at the most important aspects of the case. This noting down

of the points which might be urged you should therefore regard entirely as a preliminary step, and not as fixing the points in the form in which you will argue them out.

In the main issues for the argument on introducing commission government into Wytown, as they are worked out below, it will be seen that main issue 4 for the affirmative is derived in part from the points marked 1, 2, 6, and 8 of those for the affirmative, and those marked 3, 4, and 5 for the negative.

Furthermore, it is obvious that the main issues you choose will vary somewhat with the side of the question which you are arguing. You will almost surely have to leave out some of the points which might be urged, and there is no sense in letting the other side choose your ground for you. Points which from one side may be of no great consequence, or not very practicable to argue, may on the other be highly effective; and in arguing you should always take what advantage can fairly be gained from position.

The phrasing of the main issues, too, will vary with the side on which you are arguing them. Here, again, you must take every fair advantage that is to be gained from position. In the main issues of the question I have been using for an example, as they are stated below, it will be seen that main issue 1 on the affirmative and main issue 3 on the negative cover very nearly the same ground; but if you were arguing on the affirmative you would direct attention to the shortcomings inherent

in the system of government, if on the negative, to the temporary and removable causes of them. Whichever side you were arguing on there is no reason that you should lose the advantage of so phrasing the issue that you can go directly to your work of establishing your contention.

In the argument on introducing commission government into Wytown the main issues might be as follows:

The main issues as chosen by the affirmative:

1. Is the admitted inefficiency of the city government at present due to the system of government?

2. Will the adoption of the plan result in more economical administration?

3. Will the adoption of the plan result in more efficient service to the city?

4. Will the direct responsibility of the mayor and councilors to the citizens be a sufficient safeguard for the increased power given to them?

The main issues as chosen by the negative:

1. Is there danger in putting such large powers into the hands of so few men?

2. Will the new plan, if adopted, permanently raise the standard of public servants?

3. Is the inefficiency of the city government at present due to temporary and removable causes?

4. Has the plan succeeded in other places largely because of its novelty?

5. Will the liability to recall keep officials from initiating new policies for fear of unpopularity?

In some cases it will be hard to reduce the number of issues to a manageable number; in others, for special reasons, it may be possible to treat a part of them only at length. In such cases one can always adopt the device of an imaginary "next chapter" or "to be continued in our next." In considering how many issues you can deal with satisfactorily, however, you must not leave out of account contentions on the other side that must be refuted; and in choosing among the possible main issues you must always exercise judgment. Many points which might be argued are not worth the space it would take to deal with them; but not infrequently

you will have to let points that have some weight give place to others that have more.

It is not to be expected that the points made by the two sides will always exactly pair off, for the considerations which make for a course of action may be different in kind from those which make against it. Sometimes one side will contribute more to the final number of main issues, sometimes the other. Ordinarily your own side will give you the larger number of points that you think worth arguing out, for an affirmative and constructive argument usually makes more impression than a negative one.

Notebook. Enter the chief points which might be made on the two sides of your question. Then, after studying them and comparing them, enter the main issues which you decide to argue out.

(The contentions on the two sides and the main issues for the model argument will be found on pages 74-77.)

EXERCISE

Take one of the questions on pages 10-12, with which you have some acquaintance, and obtain the main issues by noting down first the points which might be urged on the two sides.

NOTE. This exercise is a good one for class work. Let the class suggest the points, and write them, as they come, on the blackboard. Then call for criticism and discussion of them, in order to come to the main issues.

22. The Agreed Statement of Facts. Now that you have compared the points on which the two sides disagree, you can pick out the points on which they agree, and decide which of the latter will enter into the discussion. You are therefore in a position to draw up the agreed statement of facts, in which you will sum up compactly so much of the history of the case, of the origin of the present question, and other relevant facts and necessary definitions, as will be needed to understand the brief. The style of this statement should be strictly expository, and there should be nothing in it to which both sides could not agree. It should be similar to the statements of facts in courts of law, which are sent up with the briefs when a case is appealed on a point of legal principle.

Since this agreed statement of facts is not argument, it will make small use of such conjunctions as "because," "for," "hence," and "therefore." If you find any of them in your agreed statement, it is better to rearrange it, so that you will not seem to be giving reasons before you have begun your argument.

In the making of this preliminary statement and to a certain extent in the framing of the main issues, it is convenient and advisable,

wherever both sides of the question are to be presented in arguments, whether in writing or in debate, for the two parties to work together. In this working together they should aim to agree on as many points as possible. If they meet in a carping and unyielding temper, the result will be in the end that the patience of the audience will be tried and its attention dispersed by lengthy arguments on preliminary details. In making an argument one should never forget, even in school and college work, that the aim of all argument is to produce agreement. Few people have much interest in a contest in smartness; and it is a bad habit to care too much about the mere beating of an opponent on a question where there are real and serious issues. Any question which is worth arguing at all will have far more ground to cover, even when everything possible has been granted by both sides, than the average student can cover with any thoroughness.

Notebook. Enter those of the essential facts and definitions in the case which would be agreed to by both sides, and which are needed for an understanding of the brief.

Illustration. Agreed Statement of Facts. For many years the tax rate in Wytown has been high, and in the last ten years has not fallen below twenty-four dollars on one thousand dollars. The city water supply is of doubtful purity, and nothing has been done to improve it, chiefly because the city debt is now close to the limit allowed by law. The police service has been inadequate, especially in the region known as South Corner. Though two hundred thousand dollars have been spent on the streets in the last five years, the main street of the city is still

unpaved, and none of the other streets are macadamized. Though under the local option law the city has uniformly voted for no license, yet there is much liquor selling. The city officials have regularly been nominated at Democratic and republican conventions.

The question has arisen at the present time because of quarrels between the mayor and aldermen, because of the petition of the city government to the legislature to issue bonds for new waterworks above the authorized debt limit, because the tax rate last year was higher than ever before in the history of the city, and because of the formation of a citizens' association which has been instrumental in securing from the legislature a bill authorizing the citizens to vote on the adoption of the proposed plan.

Points which are not discussed here will be taken up in succeeding papers.

The definitions on page 70 are to be taken as part of this agreed statement.

EXERCISES

1. Criticize the following sentences for their fitness as parts of introductions to briefs:

a. It is agreed that the commission form of government has succeeded in Des Moines because it is simple and easily controlled by the people.

b. Summer baseball is to be understood as playing baseball for money, for a man who is given his board and lodging by a hotel for playing is taking the equivalent of money.

c. (As one of the contentions for the affirmative on the question whether a street railroad should be compelled to build a certain new line, which would not be immediately profitable.) The convenience of the public should be considered before large dividends, since the public grants the franchise.

2. Make an agreed statement of facts for an argument on one of the subjects in the list on pages 10-12.

NOTE. This is a good exercise for class use: let the different members of the class propose facts to be agreed on, and then put them before the rest of the class for criticism.

23. Arrangement of Material. For the arrangement of the material in a brief, it is not possible to give much general advice, since this arrangement would change with the space allotted to the argument, and especially with the audience. On this point knowledge of your readers,

of their acquaintance with the subject, and of their prepossessions will count as much as knowledge of the subject when you come to the arguments of practical life.

In general, if your audience is likely to be lukewarm or indifferent, begin with a point which will stir them up. In the argument on the introduction of commission government into Wytown, for which I have constructed a brief, I assumed that the citizens were already aroused to the need of some change, and therefore began by showing that the evils of the present administration can be traced chiefly to the present system of government. If I had assumed that the people needed first to be aroused to believing a change to be necessary, I should have put at the beginning an exposure of the corruption and inefficiency of the present city government, with specific cases to establish the point.

Likewise for the close of your argument be sure that you have a strong and effective point. In the case of commission government for Wytown, by refuting the objection that too much power is given to the councilmen I provide a chance to show at the same time how completely the commission government keeps the control in the hands of the people; and the latter point is the strongest that can be made for the commission form of government.

24. The Place of the Refutation. The place of the refutation and its extent also differ greatly with the audience. Sometimes it may occupy practically the whole space. A few years ago _The Outlook_

published an editorial opposing a change in the laws of New York relating to vivisection (for a part of it, see p. 44), in which it refuted the two arguments urged for the change, and then pointed out that the burden of proof still rested on the other side. Here the refutation occupied almost the whole of the argument. Huxley, in his three "Lectures on Evolution," of which the first is printed on page 233, gave the whole of this first lecture to a refutation of the alternative theories of the origin of plants and animals; since it was necessary to dispose of accepted theories before the new theory could get a hearing, he put his refutation first.

Where there are no such special reasons, it is safe to follow the principle that you should not draw more attention than necessary to the arguments on the other side. Refutation of less important statements and contentions will naturally come at the point of the argument which deals with that part of the subject. State them fairly always, but do not magnify their importance by dealing with them at too great length.

It is not often wise to lump the refutation at the end of your argument. The last impression on your audience is the strongest: it is good strategy to keep it for your own best points. Sometimes, as in the brief worked out on page 90, it is possible to combine the refutation with positive argument which will be effective; but do not forget that negative argument makes much less impression than that which is positive and constructive.

25. The Brief Proper. We have seen on page 47 that the brief is in essence a statement of the logical framework of your argument. Its purpose is to lay out your reasoning in such a way that you can scrutinize each link and make sure that each assertion and each group of assertions is attached to a firm support. For this reason the brief for a written or spoken argument is best thrown into the form of tabulated statements marked with a series of numbers and letters which will show at a glance the exact place of each statement or assertion in the whole system of reasoning. When you can thus, as it were, strip your argument to its bones and tendons, you can go ahead with the confidence that your reasoning is logically coherent.

When you get out into the world you will work out your own way of making briefs for any arguments that fate imposes on you. The value of practice now is in being able to get at the work then without wasting time. The rules below are offered to you as the result of long experiment and study lay the best authorities. Moreover, if you are working in a class you should remember that you will get a great deal more out of your teacher if you save his time by sticking closely to uniformity in outward form.

I shall first show how a brief is constructed, by following through part of the process for the argument on the introduction of commission into Wytown; then I shall give the rules, with some explanation of their working and of their practical expediency.

We have just seen that the brief is essentially a display of the logical framework of the argument: it should consist, therefore, of the main contentions in support of the proposition, with the reasons urged in support of these contentions, and of the facts and reasons brought forward in support of these reasons, this successive support of reasons being carried down to ultimate facts, wherever possible.

When you come to the working out of your brief you start with your main issues, stated now as assertions. Then for each of them you give one or more reasons.

In the brief for introducing commission government into Wytown, let us start with the main issues for the affirmative, transforming them from questions into assertions. The first main issue would then read:

The admitted inefficiency of the city government at present is due to the system of government.

The next step is to assign reasons for making this assertion. Accordingly we should add a "since" or a "for" to the assertion, and then underneath arrange these reasons in order. Let us suppose that we put down three reasons:

I. The admitted inefficiency of the city government at present is due to the system of government; for

A. Partisan politics determine nominations to office;

B. Advantageous contracts cannot be made;

C. The responsibility for expenditures is scattered.

Each of these assertions clearly needs to be supported before it will be accepted. Let us follow out the support of the first one, and set down here the reasons and facts which will make it incontestable.

A. Partisan politics determine nominations to office; for

1. The organization of the national parties is permanent.

2. There has been bargaining between parties to reward political services with city offices.

Of these points the first is an obvious fact; in the argument it will need only slight development and specification to make its bearing on the case effective. The second, on the other hand, must be supported by evidence; and in the brief, accordingly, we should refer to the facts as stated in newspapers of specified dates from which full quotation would be made in the argument. Here then, in both cases, though in

different ways, we get down to the bed rock of fact on which the reasoning is built up. At the same time, each joint in the framework of the reasoning has been laid bare, so that no weak place can escape detection. These are always the two main objects of making a brief--to get down to the facts on which the reasoning is built up, and to display every essential step in the reasoning.

26. Rules for Briefing. The rules given below are divided into two groups: those in the first group deal chiefly with the form of the brief; those in the second go more to the substance; but the distinction between the two groups is far from being absolute.

I

1. A brief may be divided into three parts: the Introduction, the Proof, the Conclusion. Of these the Introduction should contain noncontentious matter, and the Conclusion should be a restatement of the proposition, with a bare summary of the main issues in affirmative (or negative) form.

The introduction has already been dealt with at length (see pp. 48-81). The conclusion brings the main points of the argument together, and gives an effect of workmanlike completeness to the brief. It should never introduce new points.

2. In the Introduction keep each step of the analysis by itself, and indicate the several parts by such headings as "The following terms need definition," "The following facts are agreed on," "The following points will be left out of consideration in this argument" "The chief contentions on the two sides are as follows," "The main issues on which the argument will be made are as follows."

It is not to be expected that all these steps, with the appropriate headings, will be necessary in every brief. The only use of a brief is to aid you to construct a specific argument, and you must consider each case by itself.

3. Follow a uniform system of numbering throughout, so that each number or letter used will show whether the statement is one of the main supports of your case, or in what degree it is subordinated.

In other words, the numbering should show at a glance whether a given assertion is a main reason, a reason for a reason, or in still more subordinate degree of support. The system of numbering in the brief on page 90 is convenient. Whatever system is adopted, it should be followed by the whole class.

4. The refutation should have a distinct set of symbols.

These symbols may well be uniform with the others, but with the prime

mark to distinguish them (see p. 93).

5. In briefing the refutation always state first the assertion that is to be refuted, with such connectives as, "Although it is urged ..., yet the contention is unsound, for ...," "Although the case is cited, ... yet the case is irrelevant, for ..."

These connectives will vary with the nature of the assertion to be refuted; the important thing is to state the assertion so clearly that your critic can judge the relevancy and force of your refutation. (For examples, see pp. 91-93.)

II

6. A brief in all its parts should be phrased in complete sentences; mere topics are of no value.

In the brief on page 90, if the headings under I were "A. Party politics, B. Waste in contracts, C. No responsibility for expenditures," neither the maker of the brief nor the critic of it could know with any certainty the course of the reasoning. It is undoubtedly true that many lawyers and other men of affairs use only topic heads when they are planning an argument; but it is to be remembered that they are men who have been training their powers of thought in hard earnest, and their ability to work out and stick to a train of reasoning with so

little written aid has not much bearing on what is the best practice for young men who are in the process of gaining this ability. To make a full outline of the reasoning in a few arguments is the best way to get the sense for logical and coherent structure.

7. Each heading should contain a single assertion only.

The reason for this rule is obvious: if under each assertion you are going to set the reasons for that assertion, you will get into trouble if your assertion is double-headed, since what is a reason for one part of it may not be a reason for another. If in the brief on page 90 heading I B should read, "Advantageous contracts cannot be made, and the responsibility for expenditures is scattered," subheading I C 2, "Accounts are submitted to separate committees of the two boards in which no members have special responsibility," would have nothing to do with the making of contracts, and subheading I B 1, "Contracts must be passed on by both aldermen and common councilmen and the mayor," would have nothing to do with expenditures.

8. In the body of the brief the assertions should be arranged as follows: Each main heading should embody one of the main issues as stated in the Introduction; and each of the subordinate assertions should stand as a reason for the assertion to which it is subordinate. The connective between an assertion and one subordinate to it will therefore be for, since, or because, or the like, not hence or therefore, or the like.

A brief thus arranged lays out the reasoning in a complete and easily scrutinized form. Thus in the brief on page 90 for the assertion in the first main issue, "The admitted inefficiency, of the city government at present is due to the system of government," three chief reasons are given: A. "Partisan politics determine nominations to office," B. "Advantageous contracts cannot be made," and C. "The responsibility for expenditures is scattered." Then for each of these secondary assertions reasons in support are adduced; thus for B. "Advantageous contracts cannot be made," the reasons are I. "Contracts must be passed on separately by aldermen, common councilmen, and the mayor," and 2. "Bargains are made between the aldermen representing different wards." In this case final references are given for each of these subordinate assertions, so that we get down to the ultimate foundation of verifiable fact on which the argument is to be built up.

The advantage of this form is that if you have set down several assertions as reasons for another, and you are doubtful whether they all belong there, you can test them separately by putting them one by one after the main assertion they are intended to support with a "for" or a "since" between.

You put the assertion first and the reason for it afterwards, because when there is more than one reason in support, if you have the reason first you must then repeat the assertion with each reason, or run the risk of confusion. If under I in the brief on page go, for example, you

began with the reason, "In the present system partisan politics determine nominations to office," and then added the result, "Therefore the city government is inefficient," you would have to repeat the result with B and C; and when you came to the third degree of support, the repetition would be intolerably clumsy and confusing.

9. Headings and subheadings should not have more than one numbering.

The reason for this rule is also obvious: each heading or subheading marks a step in the argument, and what belongs on one step cannot be on another at the same time. In the brief on page 90 the assertion that "Partisan politics determine nominations to office" is stated as a chief reason for the assertion in the first main issue, that "The admitted inefficiency of the city government at present is due to the system of government." It would confuse a reader to mark it A I, as if it wore a support also in the second degree.

10. The brief should give references to the evidence or authorities relied on to support assertions.

General references to articles and books which will be constantly referred to should be put at the beginning of the brief. References to specific statements of fact or quotations of opinion should be added as they occur in the brief (see the brief on p. 90).

EXERCISES

1. Criticize the following portion of a brief:

This college should have a longer Christmas vacation, for

I. College life tends to break up family life;

A. Father and son;

B. Younger brothers and sisters;

C. Intimate friends.

2. Criticize the following detached portions of a brief on the proposition, This city should double its appropriation for the public library, and amend them if necessary:

a. II. The funds for the purchase of books are insufficient and the staff is inadequate.

b. B. The reading room is crowded to suffocation, therefore

1. Many people avoid the library.

c. III. Those who oppose the increased appropriation declare that

A. The library is a luxury for the rich; hence

1. The rich should support it; but

2. This is not true, for

a. Most of the borrowers of books are people

of moderate means; therefore

b. The city should support the library.

d. IV. A. The city is able to double the appropriation; for

1. It has spent largely for parks,

a. Which are also for the pleasure and improvement

of the citizens;

b. Hence it can pay for additions to the library.

e. VI. It is not true

A. That the readers want only recent fiction and that they

should buy these books for themselves; for

1. They mostly are not able to buy books; hence

2. They should be encouraged to read other books.

3. Give an example of an argument and an audience where it

would be necessary to put the refutation first; of one

in which it would be necessary to stir up the interest

of readers at the start.

4. Suggest methods for gaining the interest of the readers

in the last case.

SPECIMEN BRIEF

Wytown should adopt a commission government like that of Des Moines, Iowa.

General references: C.R. Woodruff, City Government by Commission. New York, 1911; J.J. Hamilton, The Dethronement of the City Boss, New York, 1910; City newspapers of various dates; draft of proposed charter, published by the Citizens' Association.

(The successive steps of the introduction will be found on pp. 43, 53, 70, 74-75, 76-77, 79-80.)

I. The admitted inefficiency of the city government at present is due to the system of government; for

A. Partisan politics determine nominations to office; since

1. The organization of the national parties is permanent, and that of any citizens' movement temporary.

2. There has been bargaining between the parties to reward political services by city offices. Daily papers, March 12-20, 1909; March 3-15, 1910.

B. Advantageous contracts cannot be made; for

1. Contracts must be passed on separately by aldermen, common councilmen, and the mayor. Present city charter, sections 19-21.

2. Bargains are made between the aldermen representing different wards. Daily papers, October 3, 1908; January 25, 1910.

C. The responsibility for expenditures is scattered; for

1. Heads of departments are responsible to the two boards and not to the mayor. Present city charter, section 15.

2. Accounts are submitted to separate committees of the two boards in which no members have special responsibility. Present city charter, sections 22-23.

II. The adoption of the plan will result in important economies; for

A. The administration of city affairs will be made simpler; since

1. The councilmen will both lay out the work and be responsible for the execution of it. Draft or charter, sections 5 and 13.

2. Plans for work in all departments will be considered together.

3. A small body with full powers can make better bargains than two larger ones acting independently.

B. The plan has resulted in economies where it has been tried; for

1. In Des Moines, Iowa, the first year under the new charter showed a relative saving of $182,949.65 as compared with the year before. C. R. Woodruff, as cited, p. 250.

2. In Haverhill, Massachusetts, in the first year of commission government a deficit of $79,452 was turned into a surplus of $36,511, after paying off indebtedness to the extent of $133,000. C. R. Woodruff, as cited, p. 278.

1'.Though a despatch in a daily paper (April 3, 1911) declares that the city of Haverhill has been forced to borrow, yet the report is untrustworthy without further evidence; for

a'. In itself it is contradictory and confused; and b'. It is known that professional politicians and other enemies

of the plan have often spread false reports about it.

McClure's Magazine, Vol. XXXV, p. 107.

III. The adoption of the plan will result in more efficient service to

the city; for

A. A better class of citizens will be drawn into office;

for

1. City officials can plan and carry out their policies

without petty interference;

2. In Cedar Rapids, Iowa, the commission, employed a civic-service

expert, and carried out his recommendations. J. J. Hamilton,

as cited, p. 180.

3. In Galveston, Texas, citizens of a better grade have taken

office, and the tone of the city administration has been

raised. W. B. Munro, in The Chautauquan, Vol. LI, p. 110.

B. Commission government has resulted in better administration where

it has been tried; for

1. Galveston and Houston, Texas, Des Moines and Cedar Rapids, Iowa,

have all reported better police administration, improvements in

streets and parks, more advantageous dealings with

public-service corporations. C. J. Woodruff, as cited,

pp. 242-287.

2. No city which has tried the plan has yet given it up. C. J.

Woodruff, as cited, p. 310.

1'.Although Chelsea, Massachusetts, is cited as having given up a

commission government, yet the case is not parallel, since

a'. The commission under which the city had lived was appointed

by the governor after a disastrous conflagration; and

b'. The form of government substituted has most of the essential features of the: commission government except the size of the council, which has four members elected at large, and five by district.

IV'. Although it is urged that the corrupt element in politics would have unlimited power if they should capture the commission, yet the direct responsibility to the citizens will be a safeguard for the enlarged power, for

A'. Every act of the city government will be known; since under the charter--sections 24, 25, 29, 33--

1'. The meetings of the council will be public.

2'. All resolutions are to be in writing and recorded.

3'. All votes are to be recorded.

4'. An itemized statement of receipts and expenditures must be printed and distributed every month.

5'. Ordinances making contracts or granting franchises must be published one week before final passage, and on petition may be referred to the people.

6'. In Des Moines under the new charter the newspapers give much space to the doings of the city government. _McClure's Magazine_, Vol. XXXV, p. 101.

B'. The provisions for a recall will be a check on corrupt officials; for

1'. In Des Moines a chief of police was retired on the suggestion of a recall for the commissioner who was responsible for his

appointment. _McClure's Magazine_, Vol. XXXV, p. 101.

2'. In Seattle a mayor who made terms with the vicious element, and was in league with public service corporations, was recalled. Daily papers, March, 1911.

CONCLUSION.

Wytown should adopt a commission government like that of Des Moines; since

A. The admitted inefficiency of the city government at present is due to the system of government;

B. The adoption of the plan will result in important economies;

C. The adoption of the plan will result in more efficient service to the city; and

D. The direct responsibility of the mayor and councilmen to the citizens will be a safeguard for the increased power given to them.

CHAPTER III

EVIDENCE AND REASONING

27. Evidence and Reasoning. We have seen in the last chapter that the chief value of making a brief is that in the first place it lays out your reasoning so that you can scrutinize it in detail; and that in the second place it displays the foundations of your reasoning on facts which cannot be contested. In this chapter we shall consider what grounds give validity to evidence and to reasoning.

Where the facts which you bring forward come from persons with first-hand knowledge of them, they are direct evidence; where you must establish them by reasoning from other facts they are indirect evidence, and in the latter case reasoning is an essential part of establishing the facts. In this chapter, therefore, I shall speak first of direct evidence, then of indirect, and then pass on to consider a few of the simpler principles which govern reasoning.

In ordinary usage the word "evidence" is pretty vague, and means anything that will help to establish one side or another of any question, whether of fact or of policy. The word, however, comes ultimately from the law, where it is used for the testimony, either oral or written or material, which is brought in to establish the truth of assertions about fact: evidence is set before the jury, which under the common law decides questions of fact. In almost any argument of policy, however, we use facts as reasons for or against the policy which is in question, and therefore inmost cases we must use evidence to establish these facts; in many cases, when the facts are established there is no

further disagreement about the policy. For example, in arguments for and against state prohibition of the liquor trade, it is an essential fact to determine whether in status where prohibition has been tried it has failed or succeeded, and another essential fact whether under similar conditions a combination of high license and local option has or has not produced less drunkenness. Both are extremely complicated and difficult facts to decide; but if clear evidence can be brought forward to establish them, reasonable-minded people would generally hold as settled the question of the policy which should be adopted. Similarly, an argument for the popular election of senators would undoubtedly make large use of the alleged fact that, in elections by the legislatures, there has been much undue interference by special interests and rich corporations; and the assertion of this fact would have to be supported by evidence. If this fact were thus clearly established, it would be recognized as a strong reason for a change in our present policy. In the interest of clearness of thought it is worth while to remember this distinction; for, as we shall see, it is only by so doing that we can determine when the ordinary rules of logic do and when they do not apply to the processes of reasoning on which argument is based. I shall speak here, therefore, of the evidence for facts, and of the reasons for or against a policy.

It may be said in passing that the highly complicated rules of evidence at the common law have practically nothing to do with our present subject, for they spring from very special conditions, and have been molded by very special purposes. Their object is to establish, so far as is possible, principles which will apply to all cases of a like nature;

and they therefore rule out many facts and much evidence which outside the court we all use without hesitation in making up our minds. The jury system has had a curious and interesting history: and judges have built up hedges around juries which seem to the layman merely technical, and unnecessary for the ends of justice.[14] Yet though the sweeping away of many of these rules from time to time shows that there has been and perhaps still is justice in this view, one must remember that the whole common law is based on the application of principles already established by earlier cases to new cases of like character; and that great care must therefore be used not to establish principles which may interfere with the even distribution of justice in the long run (see on this point S.R. Gardiner, p. 103). Even if in single cases the rule of evidence that forbids hearsay evidence works an injustice, yet in the long run it is obvious both that, if hearsay were allowed, litigants would take less trouble to get original evidence, and that much hearsay is thoroughly untrustworthy.

Another reason why the rules of evidence at the common law have little bearing on the arguments of everyday life is like that which makes it unwise to dwell much on the burden of proof: there is no one either competent or interested to enforce the exclusion. Assertion and rumor must be more than palpably vague before the ordinary man will of his own initiative take the trouble to scrutinize it; and even in refuting such material you must make its untrustworthiness very patent if you expect to make ordinary readers distrust it seriously.

28. Direct and Indirect Evidence. When we come now to consider how we

establish facts, whether single or complex, we find that, both to aid our own judgment and to convince other people, we rely on evidence. We have seen that evidence falls roughly into two classes: either it comes from persons who testify out of their own observation and experience, or it comes indirectly through reasoning from facts and principles already established or granted. The two kinds of evidence run into each other, and the terms commonly used to describe them vary: "direct evidence" is not infrequently, as in Huxley's argument (see p. 240), called "testimonial," and "indirect evidence," as in the same argument and in the opinion of Chief Justice Shaw, quoted below, is called "circumstantial." On the whole, however, the opposition between the two classes, so far as it is of practical importance, may best be indicated by the terms "direct evidence" and "indirect evidence." The distinction between the two classes is made clear in the following extract from the opinion of Chief Justice Shaw of the Massachusetts Supreme Court. It will be noticed that it is the same doctrine as that laid down by Huxley (see p. 240).

The distinction, then, between direct and circumstantial evidence is this. Direct or positive evidence is when a witness can be called to testify to the precise; fact which is the subject of the issue in trial; that is, in a case of homicide, that the party accused did cause the death of the deceased. Whatever may be the kind or force of the evidence, this is the fact to be proved. But suppose no person was present on the occasion of the death,--and of course no one can be called to testify to it,--is it wholly unsusceptible of legal proof? Experience has shown that circumstantial evidence may be offered in such

a case; that is, that a body of facts may be proved of so conclusive a character, as to warrant a firm belief of the fact, quite as strong and certain as that on which discreet men are accustomed to act in relation to their most important concerns....

Each of these modes of proof has its advantages and disadvantages; it is not easy to compare their relative value. The advantage of positive evidence is, that you have the direct testimony of a witness to the fact to be proved, who, if he speaks the truth, saw it done; and the only question is, whether he is entitled to belief. The disadvantage is, that the witness may be false and corrupt, and the case may not afford the means of detecting his falsehood.

But in a case of circumstantial evidence where no witness can testify directly to the fact to be proved, you arrive at it by a series of other facts, which by experience we have found so associated with the fact in question, as in the relation of cause and effect, that they lead to a satisfactory and certain conclusion; as when footprints are discovered after a recent snow, it is certain that some animated being has passed over the snow since it fell; and, from the form and number of the footprints, it can be determined with equal certainty, whether it was a man, a bird, or a quadruped. Circumstantial evidence, therefore, is founded on experience and observed facts and coincidences, establishing a connection between the known and proved facts and the fact sought to be proved.[15]

Under the head of direct evidence, as I shall use the term, would fall the evidence of material objects: in an accident case, for example, the scar of a wound may be shown to the jury; or where the making of a park is urged on a city government, the city council may be taken out to see the land which it is proposed to take. Though such evidence is not testimony, it is direct evidence, for it is not based on reasoning and inference.

29. Direct Evidence. Direct evidence is the testimony of persons who know about the fact from their own observation: such is the testimony of the witnesses to a will that they saw the testator sign it, the testimony of an explorer that there are tribes of pygmies in Africa, the testimony of a chemist to the constituents of a given alloy, or of a doctor to the success of a new treatment. Every day of our lives we are giving and receiving direct evidence; and of this evidence there is great variety in value.

In the first place, no one should place too much reliance on his own casual observations. It is notorious that we see what we expect to see; and no one who has not deliberately set himself to observe the fact can realize how much of what he thinks is observation is really inference from a small part of the facts before him. I feel a slight tremor run through the house with a little rattling of the windows, and assume that a train has gone by on the railroad below the hill a hundred yards away: as a matter of fact it may have been one of the slight earthquake shocks which come every few years in most parts of the world. The mistakes that most of its make in recognizing people are of the same sort: from some

single feature we reason to an identity that does not exist.

Of recent years psychologists have set themselves to getting some accurate facts as to this inaccuracy of human observation, and various experiments have been tried. Here is an account of one:

There was, for instance, two years ago in Goettingen a meeting of a scientific association, made up of jurists, psychologists, and physicians, all, therefore, men trained in careful observation. Somewhere in the same street there was that evening a public festivity of the carnival. Suddenly, in the midst of the scholarly meeting, the doors open, a clown in highly colored costume rushes in in mad excitement, and a negro with a revolver in hand follows him. In the middle of the hall first the one, then the other, shouts wild phrases; then the one falls to the ground, the other jumps on him; then a shot, and suddenly both are out of the room. The whole affair took less than twenty seconds. All were completely taken by surprise, and no one, with the exception of the president, had the slightest idea that every word and action had been rehearsed beforehand, or that, photographs had been taken of the scene. It seemed most natural that the president should beg the members to write down individually an exact report, inasmuch as he felt sure that the matter would come before the courts. Of the forty reports handed in, there was only one whose omissions were calculated as amounting to less than twenty per cent of the characteristic acts; fourteen had twenty to forty per cent of the facts omitted; twelve omitted forty to fifty per cent, and thirteen still more than fifty per cent. But besides the omissions there were only six among the forty

which did not contain positively wrong statements; in twenty-four papers up to ten per cent of the statements were free inventions, and in ten answers--that is, in one fourth of the papers--more than ten per cent of the statements were absolutely false, in spite of the fact that they all came from scientifically trained observers. Only four persons, for instance, among forty noticed that the negro had nothing on his head; the others gave him a derby, or a high hat, and so on. In addition to this, a red suit, a brown one, a striped one, a coffee-colored jacket, shirt sleeves, and similar costume were invented for him. He wore in reality white trousers and a black jacket with a large red neck-tie. The scientific commission which reported the details of the inquiry came to the general statement that the majority of the observers omitted or falsified about half of the processes which occurred completely in their field of vision. As was to be expected, the judgment as to the time duration of the act varied between a few seconds and several minutes.[16]

Another type of cases in which our direct testimony would be valueless is legerdemain: we think that we actually see rabbits taken out of our neighbor's hat, or his watch pounded in a mortar and presently shaken whole and sound out of an empty silk handkerchief; and it is only by reasoning that we know our eyes have been deceived.

It is obvious, therefore, that to question a man's evidence is not always to call him a liar; in most cases it is rather to question the accuracy of his inferences from such part of the facts as he actually grasped. In science no important observation is accepted until the

experiments have been repeated and checked by other observers. Indeed, most of the progress of science is due to the repetition of experiments by observers who notice some critical phenomena which their predecessors have missed.

With this qualification, that human observation is always fallible, good direct evidence is on the whole the most convincing evidence that you can use. If you can establish a fact by the mouths of trustworthy witnesses, making your readers recognize that these witnesses had good opportunities of observation and a competent knowledge of the subject, you will generally establish your point. In case of an accident in a street car it is the custom of many companies to require their conductors to take down immediately the names of a few of the most respectable-looking of the passengers, who may be called as witnesses in case of a lawsuit. All the observations of science, and most of the facts brought before juries in courts of law, as well as the multitude of lesser and greater facts which we accept in everyday life, get their authority from this principle.

In the arguments of school and college you may not make much use of direct evidence, for they do not often turn on single, simple facts. Even here, however, cases arise where you must call in the direct testimony of witnesses. If you were arguing that secret societies should be abolished in a certain school, and wished to show that such societies had led to late hours, playing cards for money, and drinking, you would need direct evidence. If you were arguing that the street railroad company of your city should be obliged to double track a certain part of

its line, you would need direct evidence of the delays and crowding of cars with a single track.

When you are using direct evidence you should make it clear that the person from whom it comes is a competent witness, that he has been in a position to know the facts at first hand, and that, if necessary, he has had the proper training to understand their meaning. In the case of an automobile accident a man who had never run a car would not be the best sort of witness as to the actions of the chauffeur, nor a man who had never sailed a boat as to what happened in a collision between two sailboats. In a scientific matter the observations of a beginner would not carry weight as against those of a man who had used a microscope for many years.

The witness, too, must be shown to be free from bias, whether practical or theoretical. It is a well-known fact that men differ greatly in the clearness of their eyesight in observing the stars, and that men who are gifted with exceptional eyesight may make valuable discoveries with inferior instruments; but if such a man has espoused a theory, say, as to the nature of the rings of Saturn, and is known to defend it passionately, his evidence concerning what he had seen is bound to be somewhat discounted.

Even official reports cannot be trusted without scrutiny.

The fact is that many things conspire to make an official report

constrained and formal. There is the natural desire of every man to put the best face on things for himself as he sets his case before the government and the world; subordinates must be let off leniently; you must live with them, and it impairs comfort to have them sullen. To make a statement unpleasant to a superior might be construed as insubordination. The public welfare makes it imperative to tell a flattering tale. The temptation is constant to tell not quite the whole truth, and nothing but the truth. There are important suppressions of fact in the official records, none more so, perhaps, than as regards Chancellorsville.[17]

If you happen to be dealing with a historical matter, where the testimony comes from a more or less remote past, and the evidence is scrappy and defective, you must be still more careful.

The great English historian, the late S.R. Gardiner, in his examination of the evidence on the Gunpowder Plot of 1605, wrote as follows about the difficulties of dealing with historical evidence:

It seems strange to find a writer so regardless of what is, in these days, considered the first canon of historical inquiry, that evidence worth having must be almost entirely the evidence of contemporaries who are in a position to know something about that which they assert. It is true that this canon must not be received pedantically. Tradition is worth something, at all events when it is not too far removed from its source. If a man whose character for truthfulness stands high, tells me

that his father, also believed to be truthful, seriously informed him that he had seen a certain thing happen, I should be much more likely to believe that it was so than if a person, whom I knew to be untruthful, informed me that he had himself witnessed something at the present day. The historian is not bound, as the lawyer is, to reject hearsay evidence, because it is his business to ascertain the truth of individual assertions, whilst the lawyer has to think of the bearing of the evidence not merely on the case of the prisoner in the dock, but on an unrestricted number of possible prisoners, many of whom would be unjustly condemned if hearsay evidence were admitted. The historian is, however, bound to remember that evidence grows weaker with each link of the chain. The injunction, "Always leave a story better than you found it," is in accordance with the facts of human nature. Each reporter inevitably accentuates the side of the narrative which strikes his fancy, and drops some other part which interests him less. The rule laid down by the late Mr. Spedding, "When a thing is asserted as a fact, always ask who first reported it, and what means he had of knowing the truth," is an admirable corrective of loose traditional stories.

A further test has to be applied by each investigator for himself. When we have ascertained, as far as possible, on what evidence our knowledge of an alleged fact rests, we have to consider the inherent probability of the allegation. Is the statement about it in accordance with the general workings of human nature, or with the particular working of the nature of the persons to whom the action in question is ascribed? Father Gerard,[18] for instance, lavishly employs this test. Again and again he tells us that such and such a statement is incredible, because, amongst

other reasons, the people about whom it was made could not possibly have acted in the way ascribed to them. If I say in any of these cases that it appears to me probable that they did so act, it is merely one individual opinion against another. There is no mathematical certainty on either side. All we can respectively do is to set forth the reasons which incline us to one opinion or another, and leave the matter to others to judge as they see fit.

It will be necessary hereafter to deal at length with father Gerard's attack upon the evidence, hitherto accepted as conclusive, of the facts of the plot. A short space may be allotted to the reasons for rejecting his preliminary argument, that it was the opinion of some contemporaries, and of some who lived in a later generation, that Salisbury contrived the plot in part, if not altogether. Does he realize how difficult it is to prove such a thing by any external evidence whatever? If hearsay evidence can be taken as an argument of probability, and in some cases of strong probability, it is where some one material fact is concerned. For instance, I am of opinion that it is very likely that the story of Cromwell's visit to the body of Charles I on the night after the king's execution is true, though the evidence is only that Spence heard it from Pope, and Pope heard it, mediately or immediately, from Southampton, who, it is alleged, saw the scene with his own eyes. It is very different when we are concerned with evidence as to an intention necessarily kept secret, and only exhibited by overt acts in such form as tampering with documents, suggesting false explanation of evidence, and so forth. A rumor that Salisbury got up the plot is absolutely worthless; a rumor that he forged a particular

instrument would be worth examining, because it might have proceeded from some one who had seen him do it.[19]

While it is rare to find a man of whom it may justly be said that there is no partition between his memory and his imagination, yet there are few of us who can be sure of facts in past matters which touch our feelings. We cannot help to some degree reconstructing events as they fade away into the past: we forget those parts of an event which did not at the time sharply touch our imagination, and those which did move us take on an overshadowing importance. Therefore the further away the events which the evidence is to reconstruct, the more care we must take to scrutinize it to see if there are signs of bias.

To test the value of direct evidence, therefore, as to single and simple facts, consider whether the evidence comes from a specifically named source, whether there is any likelihood that the witness may have been honestly deceived in his observation, whether he had a good opportunity to know the facts and a sufficient knowledge of the subject about which he is giving evidence, and, finally, whether he was reasonably free from bias in the matter.

Whenever you use direct evidence, however, it must be direct. To assert that "every one knows that secret societies in a certain school have led to immoral practices," is not direct evidence, nor to declare that "the best authorities in the city are agreed that the company should lay double tracks on a certain street." Such assertions are apt to be the

most roundabout sort of hearsay. Try cross-examining the next man you hear make this kind of sweeping assertion, in order to see what he really knows of the facts, and you will soon find how recklessly such assertions are made. You constantly hear grave statements of facts whose ultimate basis is the imagination of some enterprising newspaper reporter; yet careful and truthful people pass them on as if they were indubitable.

The news columns of the papers are largely written by young fellows just out of high school, who will declare the whole gospel on subjects with which they have a half hour's acquaintance, yet most people never question their statements. The printed page, whether of a hook, a magazine, or a newspaper, casts a spell on our judgment. Such floating assertions, with no one to father them, are of no value whatever. If you have to use statements in a newspaper as direct evidence, either take them from a newspaper which is recognized as careful about facts, or else look up the matter in two or three papers, and show that their testimony agrees.

On the other hand, a specific name, with a specific reference to volume and page, will go a long way to give your readers confidence in the evidence you adduce. And rightly so, for one man with a name and address is worth hundreds of unnamed "highest authorities"; and the more specifically you refer to him and to his evidence, the more likely you will be to win over your audience to your view.

A famous and effective example of the use of specific names to give authority to an argument, and the incidental refutation of a vague and loose assertion, is found in Lincoln's address at Cooper Institute, in the first part of which he took up Senator Douglas's statement that "our fathers, when they framed the government under which we live, understood this question just as well as, and even better than, we do now," with the implication that they intended to forbid the federal government to control slavery in the federal territories. Lincoln showed that "our fathers who framed the government under which we live" must be the makers of the Constitution: and then he proceeded to show just what action each one of them, so far as record had been preserved, had taken on the question. Here is a passage from his argument:

The question of Federal control in the Territories seems not to have been directly before the convention which framed the original Constitution; and hence it is not recorded that the "thirty-nine," or any of them, while engaged on that instrument, expressed any opinion on that precise question.

In 1789, by the first Congress which sat under the Constitution, an act was passed to enforce the ordinance of 1787, including the prohibition of slavery in the Northwestern Territory. The bill for this act was reported by one of the "thirty-nine"--Thomas Fitzsimmons, then a member of the House of Representatives from Pennsylvania. It went through all its stages without a word of opposition, and finally passed both branches without ayes and nays, which is equivalent to a unanimous passage. In this Congress there were sixteen of the thirty-nine fathers

who framed the original Constitution. They were John Langdon, Nicholas Gilman, William S. Johnson, Roger Sherman, Robert Morris, Thomas Fitzsimmons, William Few, Abraham Baldwin, Rufus King, William Paterson, George Clymer, Richard Bassett, George Read, Pierce Butler, Daniel Carroll, and James Madison.

This shows that, in their understanding, no line dividing local from Federal authority, nor anything in the Constitution, properly forbade Congress to prohibit slavery in the Federal territory; else both their fidelity to correct principle, and their oath to support the Constitution, would have constrained them to oppose the prohibition.

Again, George Washington, another of the "thirty-nine," was then President of the United States and as such approved and signed the bill, thus completing its validity as a law, and thus showing that, in his understanding, no line dividing local from Federal authority, nor anything in the Constitution, forbade the Federal Government to control as to slavery in Federal territory.

No great while after the adoption of the original Constitution, North Carolina ceded to the Federal Government the country now constituting the State-of Tennessee; and a few years later Georgia ceded that which now constitutes the States of Mississippi and Alabama. In both deeds of cession it was made a condition by the ceding States that the Federal Government should not prohibit slavery in the ceded country. Besides this, slavery was then actually in the ceded country. Under these

circumstances, Congress, on taking charge of these countries, did not absolutely prohibit slavery in them. But they did interfere with it--take control of it----even there, to a certain extent. In 1798 Congress organized the Territory of Mississippi. In the act of organization they prohibited the bringing of slaves into the Territory from any place without the United States, by fine, and giving freedom to slaves so brought. This act passed both branches of Congress without yeas and nays. In that Congress were three of the "thirty-nine" who framed the original Constitution. They were John Langdon, George Read, and Abraham Baldwin. They all probably voted for it. Certainly they would have placed their opposition to it upon record if, in their understanding, any line dividing local from Federal authority, or anything in the Constitution, properly forbade the Federal Government to control as to slavery in Federal territory.

In the end this exact statement of names, for which he had prepared himself with such laborious care, enabled Lincoln to sum up with absolute conclusiveness:

The cases I have mentioned are the only acts of the "thirty-nine," or of any of them, upon the direct issue, which I have been able to discover.

To enumerate the persons who thus acted as being four in 1784, two in 1787, seventeen in 1789, three in 1798, two in 7804, and two in 1819-1820, there would be thirty of them. But this would be counting John Langdon, Roger Sherman, William Few, Rufus King, and George Read

each twice, and Abraham Baldwin three times. The true number of those of the "thirty-nine" whom I have shown to have acted upon the question which, by the text, they understood better than we, is twenty-three, leaving sixteen not shown to have acted upon it in any way.

Here, then, we have twenty-three out of our thirty-nine fathers "who framed the government under which we live," who have, upon their official responsibility and their corporal oaths, acted upon the very question which the text affirms they "understood just as well, and even better, than we do now"; and twenty-one of them--a clear majority of the whole "thirty-nine"--so acting upon it as to make them guilty of gross political impropriety and willful perjury if, in their understanding, any proper division between local and Federal authority, or anything in the Constitution they had made themselves, and sworn to support, forbade the Federal Government to control as to slavery in the Federal territories. Thus the twenty-one acted; and, as actions speak louder than words, so actions under such responsibility speak still louder.

When you come to evidence about a large and complex state of affairs, which is the kind of fact that so many of the arguments of practical life deal with, though you will still be dealing with a fact, yet the very nature of the fact changes the value and the character of your evidence. It is a comparatively simple matter to determine whether a certain woman faced forward or backward as she was getting off a street car, or whether the eggs of a sea urchin do or do not begin to germinate under the influence of a certain chemical substance; but it is far from simple to determine whether a free elective course has or has not inured

to greater intelligence and cultivation in the graduates of a certain college, or whether the graduates of another college where the classical course is maintained have keener and more flexible minds and more refined tastes as a result of their study of the classics. In such cases as these the citing of direct evidence brings on you difficulties of a different kind from those you face when you are establishing a single, simple fact. Here you will usually depend on two main sources of evidence: statistics, and the evidence of recognized authorities on the subject.

30. Statistics. Statistics, which are collections of figures, are notoriously treacherous. On many important subjects, such, for example, as the practical effect of the elective system, it is impossible to get them; and on many other subjects, such as the effects of a protective tariff, they must be had in so enormous masses, if they are to be trusted at all, that only profound students can handle them. Where the facts are complicated, and interests are tangled, moreover, many sets of figures may enter into the question, as notably in the case of a tariff; so clearly is this difficulty now recognized that Congress has authorized a tariff board made up of distinguished students of economics and men of long experience in dealing with tariff matters to collect and study the facts and make recommendations based on them. Similarly, with the investigation into the liquor question made fifteen years ago by the Committee of Fifty: the whole question had been so tangled by assertion and counter-assertion that it became desirable to have an investigation into the facts by men of recognized ability and impartiality.[20]

In general, to use statistics safely you need a wide acquaintance with a subject, especially where the question is in any way mixed up with men's feelings, whether through politics or not. All the statistics we have make dead against great armaments and preparation for war; yet while human nature is what it is, necessary prudence seems to require every nation of any size to have them. A very little human nature will upset a very great body of statistics. Furthermore, in most human affairs results are produced by a multiplicity of causes; and though statistics may throw light on three quarters of all the causes that are potent in any given case, yet the other quarter which are irreducible to definite statement may wholly alter the result. If you are using statistics in your argument, therefore, as evidence of some large and complex fact, you should usually justify them to some extent by showing that there are no counteracting forces which they do not cover.

With this precaution, however, statistics are the foundation of most arguments on large questions. If you were arguing in favor of the purchase of local waterworks, you would present figures showing the number of houses using the public water supply, the rates paid, the profits of the company, the exact points at which public control could work economies. If you were arguing for a rule that no man shall play on a university team until he has been registered a year at the university, you would need statistics to show how many men would be affected by the rule. If you were arguing for a single session at a school instead of two, you would show exactly how many students in the school live more than a mile away from the building. In every case where statistics can be presented in such a way as to make clear that they fairly cover the

ground, they are most valuable evidence. They give the argument the effect of being founded on a rock. If it be obvious that the statistics have been freshly gathered, and are not merely casual and second-hand gleanings, they have still greater effect, for then they have a secondary force in testifying to the personal knowledge that the witness has of the subject. We shall see later the danger of the fallacy of generalizing on too narrow a basis: a generalization based on a good body of statistics runs no danger of this fallacy.

31. The Opinion of Recognized Authorities. The other chief source of evidence to establish a fact which consists of a large and complex state of affairs is the opinion of recognized authorities on the subject. The strength of such evidence depends on whether the audience will accept the person you cite as having authority on the matter. Most of us read some newspaper or periodical in the opinions of which we have confidence, because they seem to be based on investigation and competent knowledge. The annual report of the Secretary of the Treasury is excellent evidence on the state of the national finances. The reports of presidents of colleges are excellent evidence from authorities on such questions as the value of the elective system or the effect of raising the standard of admission. The report of a dean or of a schoolmaster on the value of organized athletics is effective if the audience knows that he likes out-of-door sports and takes time to see the games. Evidence drawn from an authority who is likely to be used by the other side is doubly effective, since your readers recognize that his competence is admitted.

If a man has given his life to the study of a subject and has published books that are of recognized authority, his evidence will be of especial weight. Mr. Bryce's opinion on all questions concerning a state of affairs in this country would be recognized at once as weighty, for he has given time and study to collecting the multitude of small facts which constitute the large fact. His opinion that political honesty is increasing with us has brought comfort to many good citizens who had grown despondent over the accounts of recurrent rascality in the newspapers and magazines. This is a typical case for the citation of authorities; for the facts are enormous in number, very widely scattered, and often contradictory. Only a man who has taken the pains to keep himself constantly informed, whose judgment has been trained by long consideration and comparison of the facts, and who is born with the judicial temperament can attain the authority of Mr. Bryce.

There will be cases on which you will have the right to put yourself forward as an authority, for on many subjects which fall within the range of undergraduates their knowledge is first-hand. On all questions of athletics, especially, an undergraduate is apt to have freshly in mind a considerable mass of facts. In the same way, on the results of certain requirements for admission to college, you can speak from recent experience. In matters concerning your own city, too, you may have original knowledge.

If you are going to put yourself forward as an authority, however, you must round out your knowledge of the facts by extending it beyond your

own personal experience. If it is a question of entrance requirements, you cannot stop with your own experience, or even with that of your own class at school. You must go back to the records of a number of classes before and perhaps after your own, and talk them over with the principal of the school, to see whether there are any special circumstances which affect any of them. If you are arguing for or against a change in the present rules of football, you would have to go beyond the games of your own college team, and beyond those of the present season. If, for example, it were a question of amending the rules concerning the forward pass, you could not speak with full authority unless you had looked up the accounts of the principal games for two or three years at any rate. If you put yourself forward, then, as a witness on one of these cases of complicated facts, you must make it clear to your readers that you have a right to be considered such. If you have the right, it would be folly to hide your light under a bushel.

An example of the care which is taken by men who have made themselves authorities on their subjects is to be found in the following passage from President Eliot's address, "A Wider Range of Electives in College Admission Requirements."[21] Notice how broad a basis he lays for his conclusions both in facts and in the opinions of other authorities. What should be the grounds of a just valuation of all the subjects that can be presented at admission examinations which include numerous options?

That question introduces us to a difficult inquiry. It is, of course, not an intelligent method to attribute a value to each subject in

accordance with the time devoted to the examination in that subject. What clue have we toward a better mode of determining the value which ought to be attributed to each of the numerous electives, when the young men cannot present all the permitted subjects, and hardly three fifths of them, indeed, if the range is adequately widened? I believe that the best criterion for determining the value of each subject is the time devoted to that subject in schools which have an intelligent program of studies. The Committee of Ten[22] examined the number of subjects used in about two hundred of the best secondary schools in this country, and the time-allotments for the several subjects. They found a great variety of practice as to both selection of subjects and time-allotments. You can hardly say that there is an accepted time-allotment in these secondary schools for any subject--not even for the old traditional subjects. The time-allotments differ widely in different parts of the country, and even in different schools in the same part of the country. If, then, we are to determine by school time-allotments the valuations of the different subjects, prescribed and elective, which may enter into admission examinations, we must have some sort of standard programs for secondary schools. At present (1896) I know no programs which can answer that purpose, except the provisional programs of the Committee of Ten. They may fairly be said to be the best-studied programs now before the country, and to represent the largest amount of professional consent, simply because they are the result of the work, first, of ninety school and college teachers, divided into nine different conferences by subject, and secondly, of ten representative teachers combining and revising the work of the conferences, with careful reference to the present condition of American schools.

32. Indirect Evidence. The term "indirect evidence" may be used for all evidence as to fact in which reasoning consciously plays a part. Without it we should be helpless in large regions of our intellectual life, notably in science and history, and constantly in everyday life. Clearly the line between direct and indirect evidence is vague and uncertain; it is one of the first things learned in psychology that our perceptions and judgments of things about us are almost never based exclusively on the testimony of our senses, and that we are all the time jumping to conclusions from very partial observations.

Professor Muensterberg gives the following example from his own experience of this unintentional substitution of indirect evidence for direct:

Last summer I had to face a jury as witness in a trial. While I was with my family at the seashore my city house had been burglarized and I was called upon to give an account of my findings against the culprit whom they caught with part of the booty. I reported under oath that the burglars had entered through a cellar window, and then described what rooms they had visited. To prove, in answer to a direct question, that they had been there at night, I told that I had found drops of candle wax on the second floor. To show that they intended, to return, I reported that they had left a large mantel clock, packed in wrapping paper, on the dining-room table. Finally, as to the amount of clothes which they had taken, I asserted that the burglars did not get more than

a specified list which I had given the police.

Only a few days later I found that every one of these statements was wrong. They had not entered through the window, but had broken the lock of the cellar door; the clock was not packed by them in wrapping paper, but in a tablecloth; the candle droppings were not on the second floor, but in the attic; the list of lost garments was to be increased by seven more pieces; and while my story under oath spoke always of two burglars, I do not know that there was more than one.[23]

Constantly in everyday life we make offhand assertions in the full belief that we are giving direct evidence, when as a matter of fact we are announcing inferences. The distinction is of importance in many ways, and not least as a means of avoiding heat in argument; for to question a man's inference is much less likely to make him angry than to deny his statement of fact.

For the practical purposes of argument we may let the distinction between observation and inference, and consequently that between direct and indirect evidence, turn on whether the inference is a conscious and readily distinguishable part of the judgment or not. Though bringing to light an unconscious inference is often an essential part of the detection of false reasoning, where there is no such practical consequence, we need not be too curious here about the line between direct observation and inference from observation. For the rough and ready purposes of everyday arguments it is exact enough to say that

where you recognize that you are basing your conclusion as to a fact on some process of reasoning, then you are resting on indirect evidence; where you do not recognize the inference without reflection, you are resting on direct evidence.

In the following discussion of reasoning I shall sometimes be dealing with proving a fact, sometimes with arguing forward to a policy. In many cases the two processes are practically identical, for if the fact is established the policy follows as a matter of course: in these cases, therefore, for the sake of convenience I shall use the terms interchangeably, and keep them separate only where there is danger of confusion.

33. Reasoning. Though the various forms of reasoning and the principles which they follow are the concern rather of psychology and logic than of a practical work on the writing of arguments, yet these sciences help us to understand the processes of the mind by which we convince first ourselves, and then other people, of the existence of facts, when for one reason or another direct testimony is wanting. Psychology describes the processes of reasoning as part of the activity of the mind, analyzes them into their parts, and shows their working. Logic is concerned rather with the forms of reasoning: its aim is to establish principles and rules the application of which will insure correct reasoning.

I shall first briefly and very simply sketch the underlying nature of

the reasoning process as it is described by psychologists; then I shall pass on to a practical application of the principles thereby attained; next I shall set forth a few of the simplest and clearest of the processes of reasoning which have been worked out by logic; and, finally, I shall discuss each few of the best-recognized forms of false reasoning. From both the psychological description and the rules of logic we shall derive practical suggestions for establishing facts which may be needed in an argument.

The essential feature of the process of reasoning is that it proceeds from like to like, by breaking up whole facts and phenomena, and following out the implications or consequences of one or more of the parts.[24] For example, if I infer, when my dog comes out of a barnyard with an apologetic air, and with blood and feathers on his mouth, that he has been killing a hen, I am breaking up the whole phenomenon of the dog's appearance, and paying attention only to the blood and feathers on his head; and these lead me directly to similar appearances when I have caught him in the act. If I reason, Every student who can concentrate his attention can learn quickly, George Marston has a notable power of concentration, Therefore George Marston can learn quickly, I again break up the abstraction _student_, and the concrete fact _George Marston_, and pay attention in each to the single characteristic, _concentration of attention_. Thus by means of these similar parts of different wholes I pass from the assertion concerning the class as a whole to the assertion concerning the concrete case. This process first of analysis and then of abstraction of similars is

the essential part of every act of reasoning.

In intuitive or unreasoned judgment, on the other hand, we jump to the conclusion without analyzing the intermediate steps. If I say, _I have a feeling in my bones that it will rain to-morrow,_ or, _it is borne in on me that our team will win_, the sensations and ideas that I thus lump together are too subtle and too complex for analysis, and the conclusion, though it may prove sound, is not arrived at by reasoning. The difference between such intuitive and unreasoned judgments, and reasoning properly so called, lies in the absence or the presence of the intermediate step by which we consciously recognize and choose out some single attribute or characteristic of the fact or facts we are considering, and pass from that to other cases in which it occurs.

The skill of the reasoner therefore consists of two parts: first, the sagacity to pick out of the complex fact before him, the attribute or characteristic which is significant for his present purpose; and second, the large knowledge of the subject which will enable him to follow it into other cases in which it occurs with different circumstances, or, in other words, to follow a similarity through diverse cases. Darwin's great achievement in establishing the principle of evolution lay first in the scientific sagacity which flashed home on him, after years of patient study, that the one common fact in all the multitude of plants and animals is that in the struggle for existence by which all living beings persist, those who are best fitted to their circumstances survive; and second, in his rich knowledge of the world of nature, which

made it possible for him to follow out this characteristic in all kinds of plants and animals, and so to reach the general law. But whether it be so world-sweeping a conclusion as his, or my conclusion that my dog has killed a hen, the process is the same: analysis or breaking up of the complex fact, and following out the consequences or implications of some selected part of it into other cases.

All reasoning thus reduces itself in the end to a process of passing from like to like: we notice that the present case is like other cases which we already know: then, since these cases have always in the past been accompanied by certain circumstances or consequences, we believe that the present case will also show these same circumstances or consequences. Whenever my dog has killed when the cases have been similar in the blood and feathers on his mouth; in this case he has blood and feathers on his mouth; therefore he must have killed a hen. Individual plants and animals survive which are fitted to their environment by special characteristics, and those which are not so fitted die; species of plants and animals, as well as individuals, show special adaptation to their environment; therefore species have survived through the same process of natural selection.

It follows that reasoning, whether it results in a general law or in concrete judgment, depends on the assumption that nature--and in nature we mean here the whole universe as we know it is uniform; that there are ties between facts which make it possible for us to be certain that if a given fact occurs, then another fact always occurs with it as an effect, or as a cause, or connected with it in some other manner. Without this

certainty of the uniformity of things there would be no reasoning, and therefore no argument from indirect evidence. Huxley sets forth this fundamental truth clearly and impressively at the beginning of the first of his "Lectures on Evolution" (see p. 234).

For practical purposes the various types of this inference from similarity can be conveniently thrown into three groups. As will be obvious, there is no fixed and impassable line between them.

"If an inference relies upon a resemblance that is newly seen, rare, or doubtful, it is called an inference from analogy; if it is made upon the basis of an established classification, it is called a generalization; if it involves a variety of resemblances so combined as to bear upon a single point, it is usually or frequently called an inference from circumstantial evidence."[25]

I will take up each of these types and show how we use them in the practical work of argument. It will be seen that they vary greatly in certainty of results.

34. Reasoning from Analogy. Analogy in its most tenuous form is weak as a basis for an actual inference, though it is often effective as a means of expressing an intuitive judgment where the reasons are too subtle and diffused for formal explanation. When Lincoln in the middle of the Civil War said that men do not swap horses while they are crossing a stream, the analog, though subtle, was felt to be real.

Popular adages and proverbs are common modes of expressing such deep-lying analogies: for example, "Where there is smoke there is fire"; "The slothful man saith, There is a lion in the way." Poetry too is full of these subtle, pregnant similarities which link things in some one aspect, but fail for all others.

To die; to sleep;
No more; and by a sleep to say we end
The heart-ache and the thousand natural shocks
That flesh is heir to. 'Tis a consummation
Devoutly to be wish'd. To die; to sleep;--
To sleep? Perchance to dream! Ay, there's the rub;
For in that sleep of death what dreams may come,
When we have shuffl'd off this mortal coil,
Must give us pause.

But, as in this case of Hamlet's, poetical analogies will not bear much strain; the aspect in which the similarity holds is usually the only aspect the two cases have in common, and to take poetry as a precise formulation of fact is to sin against both humor and sound reasoning.

In daily life we are constantly reasoning by analogy. If you argue that a certain man who has been successful at the head of a railroad will therefore make a good president for a college because that also is a complex institution, or that because self-government has worked well in a certain school it will probably work well in a college, or that

because a friend has been cured of sleeplessness by taking a walk just before going to bed therefore everybody who sleeps badly can be cured in the same way,--in all these cases you are reasoning by analogy. In each case it will be noticed you would pass from a similarity which exists in a single case or in a small number of cases to the conclusion. The reasoning is sound, however, only in so far as the similarity bears on the actual purpose in hand: in the first example, if the success of the railroad president arises from the power of understanding men and of philosophic insight into large problems, the reasoning will probably be valid; in the last example, if applied to insomnia due to overwork, it might be bad.

In practical affairs it is easy to find examples of reasoning from analogy, especially in arguments of policy. The first trial of city government by commission depended on such reasoning: when Galveston, Texas, was devastated by a storm it was reasoned that in business matters a small body of picked men with absolute powers are most efficient in an emergency, and that since the reconstruction of the city was essentially a matter of business, such a body would best meet the emergency. So the extension of commission government in other states at first followed reasoning by analogy: government by commission worked well in Galveston; it would probably work well in Des Moines. In the same way with the arguments for a parcels post: they proceed from the analogy of the present postal service, which has been successful so far as it goes, and from the success of the parcels post in almost all the countries of Europe. If you were arguing that "Association" (or "soccer") football should be made one of the major sports at your

college, you would reason from the analogy of its great popularity with Englishmen all over the world that it would also probably be popular in America.

When you use the argument from analogy, however, you must make sure that the similarity between the two cases runs to the point you wish to establish. In the following extract from an argument in favor of commission government for all cities, the author explicitly limits his reasoning from the analogy of Washington to the point of the extension of the system to large cities.

If we look for successful governments by commission in this country, it is not difficult to find them in our largest cities. The city of Washington is governed by a small commission, and is acknowledged to be one of our best-governed cities. While this commission originated in an entirely different way from that of the commission form of government, successful administration under its rule is a valid answer to the argument that small commissions are suited only to the administration of small cities.[26]

Whenever you use this type of reasoning, it is wise thus to limit its bearing. If in an argument in favor of allowing secret societies in a high school you rely on the analogy of college life, take pains to show that the resemblance covers the social life of a school. If you were arguing that your city should establish a municipal gymnasium, and relied on the reasoning from the analogy of a family, in which all the

members have a direct interest in the health of the others, show that this interest has practical grounds of welfare, and does not rest wholly on affection. In every case, unless the limits of the analogy are obvious, specify them in order to carry your readers safely with you.

35. False Analogy. A peculiar danger of the argument from analogy is the fallacy which is known as false analogy, or reasoning to a conclusion which the similarity does not support. Arguments in which there are many figures of speech, especially when the style is at all florid, are apt to slop over into this fallacy. To liken education to the unfolding of a flower is all very well, if you do not go on to argue that because the lily of the field neither toils nor spins, therefore a child should do no work in school. It is said that M. Stolypin, the late premier of Russia, once half apologized In the Duma for the slowness of his reforms, saying that he Was like a man shooting with a flintlock musket; to which one of the Liberal members replied that it was not a question of weapons, but of aim, and that if his Excellency was to go on shooting at the people, it would be better if he went on using flintlocks. Under the auspices of the Carnegie Institution an expert in business administration made an inquiry into the methods of teaching and research in physics at various American universities, and made recommendations based on the conduct of business establishments. A professor of physics in answer showed in how many ways the analogy between a business concern, whose end is profit, and a physical laboratory, whose end is the advancement of knowledge, is false and misleading. The expert had suggested a general research board to correlate researches; the professor cited the cases of Airy, the

astronomer royal of England, who by his dominating position held back astronomical research in England for a generation, and of Sir Humphry Davy, who discouraged the work of Faraday, when the latter was his assistant.

The expert suggested that apparatus could be passed on from one investigator to another: the professor replied that few men can use apparatus designed for some one else's purpose, and that the cost of reconstruction would exceed the cost of new machines. In short, he completely riddled the argument from analogy set up by the expert.[27]

A notable example of conclusive refutation of an argument based on a false analogy is to be found in William James's Ingersoll Lecture on Immortality. He took up the ordinary argument against the immortality of the soul, which, starting from the accepted physiological and psychological formula, "Thought is a function of the brain," reasons that therefore when the brain dies and decays, thought and consciousness die, too.

This, then, is the objection to immortality; and the next thing in order for me is to try to make plain to you why I believe that it has in strict logic no deterrent power. I must show you that the fatal consequence is not coercive, as is commonly imagined; and that, even though our soul's life (as here below it is revealed to us) may be in literal strictness the function of a brain that perishes, yet it is not at all impossible, but on the contrary quite possible, that the life may

still continue when the brain itself is dead.

The supposed impossibility of its continuing comes from too superficial a look at the admitted fact of functional dependence. The moment we inquire more closely into the notion of functional dependence, and ask ourselves, for example, how many kinds of functional dependence there may be, we immediately perceive that there is one kind at least that does not exclude a life hereafter at all. The fatal conclusion of the physiologist flows from his assuming offhand another kind of functional dependence, and treating it as the only imaginable kind.

When the physiologist who thinks that his science cuts off all hope of immortality pronounces the phrase, "Thought is a function of the brain," he thinks of the matter just as he thinks when he says, "Steam is a function of the teakettle," "Light is a function of the electric circuit," "Power is a function of the moving waterfall." In these latter cases the several material objects have the function of inwardly creating or engendering their effects, and their function must be called _productive_ function. Just so, he thinks, it must be with the brain. Engendering consciousness in its interior, much as it engenders cholesterin and creatin and carbonic acid, its relation to our soul's life must also be called productive function. Of course, if such production be the function, then when the organ perishes, since the production can no longer continue, the soul must surely die. Such a conclusion as this is indeed inevitable from that particular conception of the facts.

Rut in the world of physical nature productive function of this sort is not the only kind of function with which we are familiar. We have also releasing or permissive function; and we have transmissive function.

The trigger of a crossbow has a releasing function: it removes the obstacle that holds the string, and lets the bow fly back to its natural shape. So when the hammer falls upon a detonating compound. By knocking out the inner molecular obstructions, it lets the constituent gases resume their normal bulk, and so permits the explosion to take place.

In the case of a colored glass, a prism, or a refracting lens, we have transmissive function. The energy of the light, no matter how produced, is by the glass sifted and limited in color, and by the lens or prism determined to a certain path and shape. Similarly, the keys of an organ have only a transmissive function. They open successively the various pipes and let the wind in the air chest escape in various ways. The voices of the various pipes are constituted by the columns of air trembling as they emerge. But the air is not engendered in the organ. The organ proper, as distinguished from its air chest, is only an apparatus for letting portions of It loose upon the world in these peculiarly limited shapes.

My thesis now is this: that, when we think of the law that thought is a function of the brain, we are not required to think of productive function only; _we are entitled also to consider permissive or

transmissive function_. And this the ordinary psychophysiologist leaves out of account.[28]

The question of the validity of an analogy in reasoning is always, as here, whether the similarity on which the reasoning rests really runs between the two cases in hand, or is not merely a general resemblance expressed by some phrase or word which seems to mean more than it does. In other words, when you are testing an analogy, whether your own or an opponent's, make sure that the similarity is real for the present case. A picturesque figure of speech may add life to an argument, but it may also cover a gap in the reasoning.

36. Reasoning by Classification or Generalization. Obviously the strength of reasoning from analogy increases with the number of cases which you can point to as showing the similarity on which you rely, for you can then begin to generalize and classify.

Analogy expresses our natural tendency to assimilate the new to the old, to interpret what is strange and unfamiliar in the light of what we already know. It may therefore be described as classification in the making. The resemblances which guide us are called analogies so long as they are newly seen, rare, or doubtful; but as the number of cases increases, analogy passes by insensible stages into established classification.[29]

An excellent example of this transition may be seen in the present state

of the argument in favor of commission government: at first, as we have seen, it depended chiefly on reasoning from analogy; by this time enough cities have adopted the plan to make it possible to classify them, and so reason by generalization.

Generalization and classification, it may be noted in passing, are two aspects of the same process of thought. When one passes from the individual facts to the larger fact which brings them together, as in the assertion, _Members of the Phi Beta Kappa are good scholars_, one makes a generalization; when one asserts of an individual the larger fact, as in the assertion, My _brother is a good scholar_ (My _brother belongs to the class Good Scholars_), one makes a classification.

When a classification or generalization is constant and familiar, it brings forth, by the natural economy of language, a name for the class or the principle; "federation," "deciduous trees," "emotion," "terminal moraine," are all names of classes; "attraction of gravity," "erosion," "degeneration," "natural selection," are names of principles which sum up acts of generalization. Almost always these names begin as figures of speech, but where they are used accurately they have a perfectly exact meaning. Darwin has given some account of this process of language:

"It has been said that I speak of natural selection as an active power or deity, but who objects to an author speaking of the attraction of gravity as ruling the movements of planets? Every one knows what is meant by such metaphorical expressions, and they are almost necessary

for brevity: so, again, it is difficult to avoid personifying the word 'Nature.' But I mean by Nature the aggregate action and product of many laws, and by laws the sequence of events as ascertained by us."[30]

When the facts intended to be meant by a phrase are thus carefully specified and delimited, the phrase ceases to be a figure of speech, and becomes the name of a class or of a principle.

Generalization and classification always take place for purposes of reasoning;[31] and reasoning which is dependent on them rests on the assumption that things are uniformly correlated in nature; when we throw things together into classes we assume that what is true for one member of a class, so far as it is a member of that class, is true to the same extent and for the purpose for which the class is made for all other members of that class.

In practice a large part of our reasoning is through generalization and classification; and as we have seen, it has a more substantial basis than when we rest on an analogy. If you hear that your brother has been elected to the Phi Beta Kappa, you reason from the generalization that all members of the Phi Beta Kappa are high scholars to the inference that your brother must have taken high rank. When I see a gang of carpenters knocking off work at four o'clock in the afternoon, I infer that they must belong to the union, because I know that unions as a class have established an eight-hour day. If you were arguing that the standards for graduation from your college should be raised, you would

try to show that each year enough men are graduated with low intellectual attainments to make a class large enough to generalize from. If you were arguing that your city should establish a municipal gymnasium, you would try to show that of the boys and young men brought before the police courts for petty mischief and more serious offenses almost all have lacked the chance to work off their animal spirits in a healthy way. Wherever you can thus establish your special case in a class which has known characteristics or consequences, you can then apply the characteristics and consequences of the class to your special case.

Where the class is recognized as having definite characteristics or consequences, you can make your inference by showing that your case falls within the class. Sometimes the stress of your reasoning will come on making it clear that the consequence or characteristic on which your reasoning depends really belongs to the class. If, for example, you were arguing, as did the Class of '85 at Amherst College, that your college should return to something like the old-fashioned classical education, you would try to establish the fact that men who have had the old-fashioned classical education are as a rule characterized by intelligence, liberal culture, and open-mindedness. In such cases it is the generalization on which the class is based which is the difficult part of your task.

In general, however, if you can show your readers that the present case belongs in a class of cases which can be recognized as belonging together by virtue of definable characteristics, you have established an

excellent foundation for an inference based on those characteristics.

37. Reasoning by Causal Relation. Reasoning by generalization rises greatly in certainty, however, whenever you can show the workings of cause and effect. If a college receives every year from a certain school a number of boys who are slack and lazy students, the dean of that college may come to generalize and expect most of the boys from that school to be poor timber. If, however, he finds that the master of the school will take and keep any boy who lives in the town, he is able to argue from this as a cause to the conclusion that the standards of the school are low, and then from these low standards as a cause to the poor quality of the graduates of the school.

Here is another example, from Professor James:

I am sitting in a railroad car, waiting for the train to start. It is winter, and the stove fills the car with pungent smoke. The brakeman enters, and my neighbor asks him to "stop that stove smoking." He replies that it will stop entirely as soon as the car begins to move. "Why so?" asks the passenger. "It _always_ does," replies the brakeman. It is evident from this "always" that the connection between car moving and smoke stopping was a purely empirical one in the brakeman's mind, bred of habit. But if the passenger had been an acute reasoner ... [and had] singled out of all the numerous points involved in a stove's not smoking the one special point of smoke pouring freely out of the stove-pipe's mouth,

he would probably ... have been immediately reminded of the law that a fluid passes more rapidly out of a pipe's mouth if another fluid be at the same time streaming over that mouth.[32]

Here the passenger's certainty that the smoking would stop would have been much increased if he had, as Professor James suggests, reasoned to the cause, instead of trusting to the brakeman's generalization from experience.

In scientific matters search for cause and effect the chief mode of progress. General Sternberg's article "Yellow Fever and Mosquitoes" (p. 251) is an admirable account of this advance from probability to certainty, which comes from demonstrating the necessary sequence which we call cause and effect. When Major Reed and his associates had shown that in cases where mosquitoes were kept away there was no yellow fever, but that in cases where infected mosquitoes were allowed to bite patients yellow fever followed, they turned the probability that mosquitoes were the transmitting agent of the fever into a certainty. Likewise with the glacial theory: it had already in the time of the elder Professor Agassiz been established that certain regions of northern Europe and America could be classed together by the occurrence of certain phenomena--rounded hills, ledges of rock smoothed off and marked with scratches running more or less north and south, deposits of clean gravel and sand, boulders of various foreign kinds of rock scattered over the surface of the country; when he showed that glaciers in their movements produce all these phenomena, he laid bare the cause of the phenomena, and so demonstrated with practical certainty the

theory of the former existence of a huge glacial sheet in the northern hemisphere. Wherever you can show that your case not only belongs to a recognized class of cases, with recognized characteristics, but also that in those characteristics there is a necessary sequence of cause and effect, you have proved your point.

In the example above, of an argument for the establishment of a municipal gymnasium, if after showing that all the boys and young men who get into the courts have no normal and healthy way of working off their natural animal spirits, you can show that in places where through settlements or municipal action gymnasiums have been provided, the number of arrests of boys and young men has greatly fallen off, you have established the grounds for an inference of cause and effect which gives your argument a wholly new strength. In the case of the argument for a return to a classical course in a college, this sequence of cause and effect would be very difficult to establish, for here you would be deep down in the most complex and subtle region of human nature. Wherever it is possible, however, lead the inference from a classification or generalization on to an inference of cause and effect.

38. Induction and Deduction. Our next step is to consider how we get the generalizations on which we base so much of our reasoning. As we have seen, the science which deals with the making of them, with their basis, and with the rules which govern inferences made from them is logic.

Logicians generally distinguish between two branches of their science, inductive and deductive reasoning. In inductive reasoning we pass from individual facts to general principles; in deductive reasoning we pass from general principles to conclusions about individual facts. The distinction, however, draws less interest in recent times than formerly, and logicians of the present generation tend to doubt whether it has any vital significance.[33] They point out that in practice we intermingle the two kinds almost inextricably, that the distinction between facts and principles is temporary and shifting, and that we cannot fit some of the common forms of inference into these categories without difficult and complicated restatement.

Nevertheless, as deductive logic and inductive logic are ancient and time-honored terms which have become a part of the vocabulary of educated men, it is worth while to take some note of the distinction between them, I shall not attempt here to do more than to explain a few of the more important principles. I shall begin with inductive logic, since that is the branch which deals with the making of generalizations from individual fact, and therefore that which has most concern in the arguments of the average man in his passage through life.

39. Inductive Reasoning. In inductive reasoning we put individual facts and cases together into a class on the basis of some definable similarity, and then infer from them a general principle. The types of inductive reasoning have been reduced by logicians to certain canons, but these reduce themselves to two main methods, which depend on whether in a given piece of reasoning we start from the likeness between the

instances or the differences between them. On these two methods, the method of agreement and the method of difference, hang all the processes of modern science, and most of our everyday arguments.

The method of agreement has been defined as follows:

If two or more instances of the phenomenon under investigation have only one circumstance in common, the circumstance in which alone all the instances agree is the cause (or effect) of the given phenomenon.[34]

A few examples, which might easily be multiplied, will show how constantly we use this method in everyday life. Suppose that a teacher is annoyed at somewhat irregular intervals by whispering and laughing in the back of the schoolroom, for which he can find no cause, but that presently he notices that whenever a certain pair of boys sit together there the trouble begins; he infers that these two boys are the cause of the trouble.

In the old days before it had been discovered that the germs of malaria are carried by mosquitoes, the disease was ascribed to a miasma which floated over low ground at night; and the innkeepers of the Roman Campagna, where malaria had almost driven out the population, urged their guests never to leave their windows open at night, for fear of letting in the miasma. In the lights of those days this was good reasoning by the method of agreement, for it was common observation that of all the many kinds of people who slept with their windows open most

had malaria. We are constantly using this method in cases of this sort, where from observation we are sure that a single cause is at work under diverse circumstances. If the cases are numerous enough and diverse enough, we arrive at a safe degree of certainty for practical purposes. As the case just cited shows, however, the method does not establish a cause with great certainty. No matter how many cases we gather, if a whole new field related to the subject happens to be opened up, the agreement may be shattered.

The method of difference, which in some cases does establish causes with as great certainty as is possible for human fallibility, works in the opposite way: instead of collecting a large number of cases and noting the single point of agreement, it takes a single case and varies a single one of its elements. The method has been stated as follows:

If an instance in which the phenomenon occurs, and an instance in which it does not occur, have every circumstance in common save one, that one occurring only in the former; the circumstance in which alone the two instances differ, is the effect, or the cause, or an indispensable part of the cause, of the phenomenon.[35]

The principle is clearer and more apprehensible in the concrete example than in the abstract statement; as a matter of fact it is applied in every experimental search for a cause. The Agricultural College of New York, for example, in the course of certain experiments on apple orchards, bought an orchard which had not been yielding well, and

divided it into halves; one half was then kept plowed and cultivated, the other half was left in grass; otherwise the treatment was the same. When the half which was kept cultivated gave a much larger yield than the other, it was safe to infer that the cultivation was the cause of the heavier yield. Dr. Ehrlich, the great German pathologist, is said to have tried six hundred and five different substances before he found one which would kill the germ of a certain disease; in each experiment he was using the method of difference, keeping the conditions the same in all except a single point, which was the addition of the substance used in that particular experiment. Wherever the conditions of an experiment can be thus controlled, the method of difference gives a very accurate way of discovering causes. With advancing knowledge a supposed cause may be in turn analyzed in such a way that each of its parts can be separately varied, in order to come more closely to the actual sequence involved.

It has been pointed out[36] that the two methods are really statements of what is required for the verification of a theory at two stages of its growth: when we are first getting a glimpse of a causal connection between two facts we collect all the cases in which they occur in as much variety as possible, to see if the connection is really universal; then, having established the universal sequence, we come to close quarters with it in a single critical instance, varying the conditions singly until we run down the one without which the effect cannot take place.

No neater and more illuminating example of this relation between the two

methods and the successful working of them can be found than that in the article by General Steinberg, "Yellow Fever and Mosquitoes" (p. 251). In that case first Dr. Carlos Finlay of Havana, and then Dr. Sternberg himself, had become convinced by comparing many cases of yellow fever that there was some intermediate host for the bacillus that caused the disease. This conclusion they reached through the method of agreement. Dr. Finlay's experiments by the method of difference had failed, however, indisputably to establish the cause, since he did not see that it was necessary to allow the bacillus at least twelve days for incubation in the body of the mosquito. The final and definitive proof, which came through the splendid self-devotion of the surgeons in charge of the experiment and of certain enlisted men who volunteered to be made the subject of the experiment, was by the method of difference. These brave men allowed themselves to be exposed to mosquitoes which had already bitten patients suffering from the fever, and they promptly came down with the disease; one of them, Dr. Lazear, gave his life for his devotion to the cause of his fellow men. Then other men were exposed in a mosquito-proof room to clothes and other articles brought directly from yellow-fever patients, and showed no ill effects. Thus it was absolutely proved, though the bacillus itself had not been found, that yellow fever is carried by mosquitoes, and is not carried by ordinary contagion.

The unsuccessful experiments of Dr. Finlay and the later success of Major Reed show how science advances by refinement of analysis in the use of the method. The hypothesis on which the former worked was that all mosquitoes who had bitten a yellow-fever patient can carry the

disease. Dr. Reed and his associates analyzed the phenomenon more closely and tried their experiments on the hypothesis that only mosquitoes who have lived twelve days after biting the patient are capable of passing on the disease. This refinement of analysis and observation is the chief mode of advance in the sciences which depend on experiment.

Scientific arguments, therefore, make constant use of both methods. Medical research frequently begins with the gathering of statistics from reported cases, and the theory or theories suggested by the method of agreement working on these facts leads to the application of the method of difference through some series of critical experiments. In general the conclusions of science where experiment cannot be used depend on the method of agreement, especially in the larger theories in biology and geology, where the lapse of unnumbered centuries is necessary to bring about changes. In physics, in chemistry, in medicine, on the other hand, critical experiments are generally possible, and so progress is by the method of difference. In such subjects as political science and government, where experiment is out of the question, one must depend chiefly on the method of agreement, except in such cases as will be mentioned below where a change in policy has the same effect as an experiment. Here, however, one must not forget that in all matters human the incalculable clement of human nature enters to complicate all results, and that emotion and feeling are always irrational.

It is by the same processes that we get most of our explanations of the world as we go through it, and most of the facts on which we base

judgment and action. When the same sort of thing happens in a number of fairly different cases, we begin to suspect that there is a reason; and if we are going to make an argument on the subject, we take note of the cases and try in some way to arrange and tabulate them. The supporters of a protective tariff collect instances of prosperity under such a tariff, the supporters of free trade cases of prosperity under free trade, the believers in the classical education cases of men trained in that way who have attained to eminence, believers in the elective system cases of men who are the products of that system who have attained equal eminence. In most cases such collection of instances does not carry you far toward a coercive argument; the cases are too complex for you to assert that any one factor is the cause of the result.

In another kind of case you can come a little nearer. In an argument for the establishment of a commission form of government in a given city or town there are now enough cases of this type of government in practice to make possible a good argument by the method of agreement; the places are scattered over the country, north and south, east and west, and range greatly in size and environments; and all of them so far (1911) report improvement in efficiency and honesty of government. Accordingly it is a fair presumption that the improvement is due to the introduction of the new form of government, since in all other respects the places which have tried it have little in common.

A more important result of the inquiry is to lead us on to an application of the method of difference. Starting with this strong probability that the improvement is due to the new form of government,

we can go a step further and examine a single case, in order to establish more clearly the sequence of events which we call a cause. In the case of any given town which has adopted the commission government the material for the application of the method of difference is ready to our hands, if nothing else has been changed in the town but the form of government. The inhabitants and the voters are the same, the physical conditions are the same. If now we seek for the cause of an admitted improvement in the administration of the city affairs, we are driven to ascribe it to the only factor in the case which has been changed, and this is the form of government. Such an argument, if supported by figures and specific facts, is obviously strong.

The same kind of argument is constantly used in the discussion of prohibition and local option as a means of reducing the amount of liquor consumed in a community, for the frequent changes both in states and in smaller communities provide material for the application of the same method of difference. Here, however, the factors are more complex, on account of differences in the character of the population in different places, and their inherited habits as concerns the use of wine, beer, and other liquors.

40. Faulty Generalization. Both generalization through the method of agreement, and the assignment of causes through the method of difference, however, have their dangers, like all forms of reasoning. A discussion of these dangers will throw light on the processes themselves.

The chief danger when you reason through the method of agreement is of jumping to a conclusion too soon, and before you have collected enough cases for a safe conclusion. This is to commit the fallacy known as hasty generalization. It is the error committed by the dogmatic sort of globetrotter, who after six weeks spent in Swiss-managed hotels in Italy will supply you with a full set of opinions on the government, morals, and customs of the country. In a less crass form it affects the judgment of most Englishmen who write books about this country, for they come over with letters of introduction to New York, Boston, Chicago, and San Francisco, and then generalize about the rest of the country and its population.

We are all in danger from the fallacy, however, for it is a necessary law of the mind that we shall begin to make opinions and judgments on a subject as soon as we become acquainted with it. The only safeguards are, in the first place, to keep these preliminary judgments tentative and fluid, and in the second, to keep them to one's self until there is some need of expressing them. The path to wisdom in action is through open-mindedness and caution.

When one has to refute an argument in which there is faulty generalization, it is often easy to point out that its author had no sufficient time or chance to make observations, or to point out that the instances on which he relied are not fair examples of their class. In practice the strength of an argument in which this error is to be found lies largely in the positiveness with which it is pronounced; for it is

human nature to accept opinions which have an outward appearance of certainty.

A not uncommon form of faulty generalization is to base an argument on a mere enumeration of similar cases. This is a poor foundation for an argument, especially for a probability in the future, unless the enumeration approaches an exhaustive list of all possible cases. To have reasoned a few years ago that because Yale had beaten Harvard at rowing almost every year for fifteen years it had a permanent superiority in the strength and skill of its oarsmen would have been dangerous, for when the years before the given period were looked up they would have shown results the other way. And an enumeration may run through a very long period of time, and still in the end be upset.

To an inhabitant of Central Africa fifty years ago, no fact probably appeared to rest on more uniform experience than this, that all human beings are black. To Europeans not many years ago, the proposition, 'All swans are white,' appeared an equally unequivocal instance of uniformity in the course of nature. Further experience has proved to both that they were mistaken; but they had to wait fifty centuries for this experience. During that long time, mankind believed in an uniformity of the course of nature where no such uniformity really existed.[37]

Unless you have so wide and complete a view of your subject that you can practically insure your enumeration as exhaustive, it is not safe to reason that because a thing has always happened so in the past, it will

always happen so in the future. The notorious difficulty of proving a negative goes back to this principle.

So closely like hasty generalization that it cannot be clearly separated from it is faulty reasoning that arises from neglecting exceptions to a general principle. All our generalizations, except those that are so near truisms as to be barren of interest, are more or less rough and ready, and the process of refining them is a process of finding exceptions and restating the principle so that it will meet the case of the exceptions.

Darwin is said to have had "the power of never letting exceptions pass unnoticed. Every one notices a fact as an exception when it is striking or frequent, but he had a special instinct for arresting an exception."[38] It was this instinct which made him so cautious and therefore so sure in the statement of his hypotheses: after the idea of natural selection as an explanation of the origin of the species of the natural world had occurred to him, he spent twenty years collecting further facts and verifying observations to test the theory before he gave it to the world. A generalization that the republican form of government produces greater peace and prosperity than the monarchical would neglect the obvious exceptions in the Central American republics; and to make it at all tenable the generalization would have to have some such proviso as, "among peoples of Germanic race." Even then the exceptions would be more numerous than the cases which would fall within the rule.[39] One must cultivate respect for facts in making theories: a theory should always be held so tentatively that any new or unnoticed

facts can have their due influence in altering it.

Of the errors in reasoning about a cause none is more common than that known by the older logic as _post hoc, ergo propter hoc_ (after this, therefore on account of it), or more briefly, the _post hoc_ fallacy. All of us who have a pet remedy for a cold probably commit this fallacy two times out of three when we declare that our quinine or rhinitis or camphor pill has cured us; for as a wise old doctor of two generations ago declared, and as the new doctrines of medical research are making clear, in nine cases out of ten nature cures.

Of the same character are the common superstitions of daily life, for example, that if thirteen sit at table together one will die within the year, or that crossing a funeral procession brings misfortune. Where such superstitions are more than playfully held, they are gross cases of calling that a cause which has no relation to the event. Here is another example, from a letter to _The Nation:_[40]

In the last volume of the Shakespeare controversy, the argument presented "To the Reader" seems fairly to be summarized as follows: The plays are recognized as wonderful; scholars are amazed at the knowledge of the classes in them, lawyers at the law, travelers at the minute accuracy of the descriptions of foreign cities; they show a keen critic of court etiquette and French soldiery; the only possible man of the time with this encyclopedic outlook was Francis Bacon. Both in the original and in the summary there seems a _casual_ connection implied,

namely, that the plays are wonderful because of the knowledge, and because of the knowledge Bacon is the author. But, stated thus baldly, the fallacy is obvious. It is not because the author "had by study obtained nearly all the learning that could be gained from books" that the Elizabethans went to see the plays, or that we to-day read them; but it is because there is to be found in them wonderful characterization expressed dramatically, namely, before an audience. And this audience is what the scholars seem to forget. For by it is the dramatist limited, since profundity of thought or skill in allusion is good or bad, artistically, exactly in proportion as the thought is comprehended or the allusion understood.

Sometimes this fallacy is caused by assuming that because a certain result followed an event in the only case known, therefore there was a causal connection. In a hearing before a committee of the Massachusetts legislature on a bill to establish closer relations between Boston and its suburbs, the question was asked of a witness whether he believed that in the case of London "the London police would have been as efficient as they are now if there had been no annexation" of the surrounding towns; he very properly replied: "That's a hard question to answer, because we have only the existing side to look at. We don't know what it would have been as separate communities." Wherever multiple causes are possible for a phenomenon it is unsafe to argue from a single case.

Another form of error in reasoning to a cause is to assume that a fact is simple, when it is really complex, as in the following example:

I do not think I am overstepping the bounds when I say that the headship of no corporation, or state, or even the headship of the United States, requires greater general ability, force of character, or knowledge of administration than the head of administration of a great city like New York or Berlin. The latter we know to be well administered, the former--well, let us say, less so. The whole difference is in the systems. Apply the Berlin system to New York, and you will get Berlin results.

Here the writer wholly ignores all sorts of active causes for this difference: Berlin has a tolerably homogeneous population, New York the most heterogeneous in the world; Germans by nature respect law and authority, and hanker for centralization; Americans make and break laws light-heartedly, and are restive under authority; and one might easily go further.

Arguments that national prosperity has followed a higher or a lower tariff are especially apt to be vitiated by this error. It is not that the tariff has no relation to the prosperity, but that there are other causes intermingled with it which may have had more immediate effect. A bad grain crop or a season of reckless speculation may obliterate all the traceable causes of a change in the tariff. Arguments from motive, too, are apt to fall into this error. It is notorious that human motives are mixed. If you argue that a whole class of business organizations are evil because they have been formed solely for the purpose of making

inordinate and oppressive profits, you leave out of sight a motive which is strong among American business men--the interest in seeing a great business more efficiently managed, and the desire to exercise power beneficently; and your argument suffers from its illegitimate assumption of a simple cause. So in the same way if you are arguing for or against the advantages of the elective system in a school or a college, or of a classical education, or of athletics, it would be folly to assume that any one cause or effect covered the whole case. Whenever in an argument you are trying to establish any such large and complex fact, you must be wary lest you thus assume a single cause where in reality there are a legion of causes.

41. Deductive Logic--the Syllogism. Deductive logic, as we have seen, deals with reasoning which passes from general principles to individual cases. Its typical form is the syllogism, in which we pass from two propositions which are given to a third, the conclusion. Of the two former one is a general principle, the other an assertion of a particular case. The classic example of the syllogism, which started with Aristotle and has grown hoary with repetition, and so venerable that it is one of the commonplaces of educated speech, runs as follows: _All men are mortal, Socrates is a man, Therefore Socrates is mortal_. Here there is the general principle, _All men are mortal_, and the assertion about the particular case, _Socrates is a man_. The two have one term in common, _men_ (or more strictly, the class Man), which is known as the middle term, through which we reach the conclusion that the characteristic of mortality in which all men are similar is true also of Socrates, by virtue of his being a man. Of the other terms, _mortal_,

which is the more inclusive, is known as the major term, and _Socrates_, the less inclusive, as the minor term. The first two propositions are the premises, that which contains the major term being known as the major premise, and the other as the minor premise.

The validity of the syllogism lies, as I have said, in the assertion of a general principle, and the bringing of the particular case in hand under that principle: if the principle is granted as incontrovertible, and the special case as really coming under it, the conclusion is inevitable.

On the syllogism in its various forms deductive logic has built up an imposing structure of rules and conclusions. In practice the value of the syllogism is largely indirect. The trouble with it in itself as a mode of progress in reasoning is twofold: in the first place there are very few general principles which, if you are cautious, you will accept without reservations; and in the second place the crucial question in another set of cases is whether the given case really falls under the general principle. The syllogism, _All great statesmen are farsighted, Daniel Webster was a great statesman, Therefore Daniel Webster was farsighted_, sounds simple; but two generations have disagreed on the question whether Webster was a great statesman; and both _great statesman_ and _farsighted_ are such vague and inclusive terms that one would either accept a general principle of which they are terms as a harmless truism, or else balk at being asked to grant a proposition which might have unexpected meanings thrust into it. This double difficulty pursues the syllogism as a device for forwarding knowledge:

either it sets forth a truth so large and vague that you cannot say whether you accept it for all cases or not, or else the disagreement comes on one of the premises, and unless both the premises are granted, strictly syllogistic reasoning does not get under way.

Nevertheless, the syllogism has great practical value for the reasoning and arguments of everyday life: in the first place it affords a means of expanding and scrutinizing the condensed forms of reasoning which are so common and so useful; and in the second place it can be used to sum up and state the results of a course of reasoning in incontrovertible form. I shall examine and illustrate both these uses of the syllogism; but first I shall give certain rules which govern all sound reasoning through syllogisms. They were invented by Aristotle, the great Greek philosopher.

42. The Rules of the Syllogism. (A term is said to be distributed, or taken universally, when the proposition of which it is a part makes a statement about all the objects included in the term. In the proposition _All men are mortal_, the term _men_ is obviously distributed, but _mortals_ is not; for no assertion is made about all mortals but only about those that are included under all men. In the proposition _No hens are intelligent_, both terms are distributed; for the assertion covers all hens, and also the whole class of intelligent beings, since it is asserted of the class as a whole that it contains no hens.)

I. A syllogism must contain three terms, and not more than three

terms.

This rule is to be understood as guarding against ambiguity, especially in the middle term; if the middle term, or either of the others, can be understood in two ways, the syllogism will not hold water.

II. A syllogism must consist of three and only three propositions.
The reasons for this rule are sufficiently obvious.

III. The middle term of the syllogism must be distributed at least once in the premises.

If it were not thus distributed or taken universally, the two premises might refer to separate parts of the middle term, and so there would be no meeting ground on which to form the conclusion. In the syllogism,
All good athletes lend a clean life, These men lead a clean life,
Therefore these men are good athletes, the fallacy lies in the fact that in neither premise is any assertion made about all men who lead a clean life. This fallacy, which is not uncommon in practice where the terms are complicated, is known as the fallacy of the undistributed middle.

IV. No term must be distributed in the conclusion unless it was distributed in at least one of the premises.

In other words, if you have premises which deal with part of a class only, you cannot reach a conclusion about the whole class. In the syllogism, All newspaper editors know how to write, All newspaper editors are paid, Therefore all men who know how to write are paid, the fallacy is obvious. But in the following, _All bitter partisans are dangerous citizens, This man is not a bitter partisan, Therefore this man is not a dangerous citizen_, one may have to scrutinize the reasoning a little to see that the fallacy lies in the fact that _dangerous citizen_ is taken universally in the conclusion, since a proposition with a negative predicate makes an assertion about the whole of its predicate, but that it is not taken universally in the premise in which it occurs. A fallacy which thus arises from not noticing that a negative predicate distributes its term is apt to be insidious.

V. No conclusion can be drawn from two negative premises.

In other words, if both the major term and the minor term lie outside the middle term, the syllogism gives us no means of knowing what their relation is to each other. The following example will make the reason clear: _No amateur athlete has a salary for playing, John Gorman is not an amateur athlete, Therefore John Gorman has a salary for playing_.

VI. If one of the premises is negative, the conclusion must be negative.

If of the major and minor premise one is negative, then either the major or the minor term does not agree with the middle term, and the other does; therefore the major and minor term cannot agree with each other.

43. The Syllogism in Practical Use. The practical value of the syllogism and its rules comes in the first place, as I have said, when we expand a condensed form of reasoning into its full grounds in the form of a syllogism. Our reasoned judgments ordinarily take the shortened form, _Socrates is mortal, because he is a man; The Corporation Tax Bill is constitutional, because it is a tax on a way of doing business._ In each of these cases we are reasoning from a general principle, which is previously established, and from a particular way of conceiving the special fact before us, but we assume the general principle as understood. In the cases above the meaning is clear without declaring at length, _All men are mortal,_ or _All taxes on a way of doing business are constitutional._

At any time, however, when you find a piece of reasoning in this condensed form, whether your own or some one else's, which seems to you suspicious, if you expand it into a full syllogism you will have all its parts laid bare for scrutiny. Take, for example, the assertion, _"Robinson Crusoe" must be a true story, for everything in it is so minutely described_: if you expand it into the full syllogism, _All books in which the description is minute are true, "Robinson Crusoe" is a book in which the description is minute, Therefore "Robinson Crusoe" is true_, you would at once stick at the major premise. So where you suspect an ambiguity in the use of terms, you can bring it to the

surface, if it is there, by the same sort of expansion. In the argument, _Bachelors should be punished, because they break a law of nature_, the ambiguity becomes obvious when you expand: _All law breakers should be punished, Bachelors break a law of nature, Therefore bachelors should be punished_; at once you see that _law_ is used in two senses, one the _law of the land_, the other the statement of a uniformity in nature. In the argument, _These men are good citizens, for they take an interest in politics_, the expansion to _All good citizens are interested in politics, These men are interested in politics, Therefore these men are good citizens,_[41] shows that the reasoning contains a breach of the third rule of the syllogism (see p. 148) and is therefore a case of the fallacy of the undistributed middle.

Whenever you make or find an assertion with a reason attached by such a word as "since," "for," or "because," or an assertion with a consequence attached by a word like "therefore," "hence," or "accordingly," you have a case of this condensed reasoning, which, theoretically at any rate, you can expand into a full syllogism, and so go over the reasoning link by link.

Sometimes, however, the expansion is far from easy, for in many of the practical exigencies of everyday life our judgments are intuitive, and not reasoned. In such judgments we jump to a conclusion by an inarticulate, unreasoned feeling of what is true or expedient, and the grounds of the feeling may be so shadowy and complex that they can never be adequately displayed.

"Over immense departments of our thought we are still, all of us, in the savage state. Similarity operates in us, but abstraction has not taken place. We know what the present case is like, we know what it reminds us of, we have an intuition of the right course to take, if it be a practical matter. But analytic thought has made no tracks, and we cannot justify ourselves to others. In ethical, psychological, and aesthetic matters, to give a clear reason for one's judgment is universally recognized as a mark of rare genius. The helplessness of uneducated people to account for their likes and dislikes is often ludicrous. Ask the first Irish girl why she likes this country better or worse than her home, and see how much she can tell you. But if you ask your most educated friend why he prefers Titian to Paul Veronese, you will hardly get more of a reply; and you will probably get absolutely none if you inquire why Beethoven reminds him of Michael Angelo, or how it comes that a bare figure with unduly flexed joints, by the latter, can so suggest the moral tragedy of life.... The well-known story of the old judge advising the new one never to give reasons for his decisions, 'the decisions will probably be right, the reasons will surely be wrong,' illustrates this. The doctor will feel that the patient is doomed, the dentist will have a premonition that the tooth will break, though neither can articulate a reason for his foreboding. The reason lies embedded, but not yet laid bare, in all the previous cases dimly suggested by the actual one, all calling up the same conclusion, which the adept thus finds himself swept on to, he knows not how or why."[42]

The small boy who said that he could not keep step because he had a cold

in his head was relying on a sound general truth, _Colds in the head make one stupid_, for his major premise, but his condition prevented his disentangling it; and all of us every day use minor premises for which we should be incapable of stating the major.

A second practical use of the syllogism is to set forth a chain of reasoning in incontrovertible form. If you have a general principle which is granted, and have established the fact that your case certainly falls under it, you can make an effective summing up by throwing the reasoning into the form of a syllogism.

Conversely, you can use a syllogism to bring out some essential part of the reasoning of an opponent which you know will not commend itself to the audience, as did Lincoln in his debate with Douglas at Galesburg. Douglas had defended the Dred Scott decision of the United States Supreme Court, which decided that the right of property in a slave is affirmed by the United States Constitution. Lincoln wished to make the consequences of this doctrine as glaringly evident as possible. He did so as follows:

I think it follows, and I submit to the consideration of men capable of arguing, whether as I state it, in syllogistic form, the argument has any fault in it.

Nothing in the Constitution or laws of any State can destroy a right distinctly and expressly affirmed in the Constitution of the United

States.

The right of property in a slave is distinctly and expressly affirmed in the Constitution of the United States.

Therefore, nothing in the Constitution or laws of any State can destroy the right of property in a slave.

I believe that no fault can be pointed out in that argument; assuming the truth of the premises, the conclusion, so far as I have capacity at all to understand it, follows inevitably.[43]

Lincoln knew that this doctrine that no state could interfere with slavery would be intolerable to the people of Illinois, before whom he was carrying on his campaign; and this syllogism made clear to them the consequences of the decision of the Supreme Court.

Or you can use a syllogism to make obvious a flaw in the reasoning of your opponent, as in the following example:

In view of the history of commission government in this country so far as it has been made, the burden of proof rests with those who attempt to show that a government which has been so successful in cities of moderate size will not be successful in our largest cities. The syllogism they are required to prove runs briefly thus:

Commission government is acknowledged to have been successful in cities as large as one hundred and thirty thousand inhabitants, but

It has not been tried in cities containing more than one hundred and thirty thousand inhabitants;

Therefore, it will not be successful in cities of four hundred thousand or larger, which is a _reductio ad absurdum_.

The folly of the attempt is shown by the very statement of the conclusion.[44]

44. The Dilemma. One special form of the syllogism is at times so strong an argument that it deserves special mention here, namely, the dilemma. This is a syllogism in which the major premise consists of two or more hypothetical propositions (that is, propositions with an "if" clause) and the minor of a disjunctive proposition (a proposition with two or more clauses connected by "or").

In the course of the Lincoln-Douglas debate a question was put by Lincoln to Douglas, as follows: "Can the people of a United States territory in any lawful way, against the wish of any citizens of the United States, exclude slavery from its limits, prior to the formation of a state constitution?" The question may be viewed as the source of a

dilemma, both in the practical and in the syllogistic sense of the term. In fact it involved a situation which, syllogistically, comprised more than one dilemma. They may be stated as follows:

I. If Douglas answers yes, he offends the South, and if he answers no, he offends the North;

But he must answer either yes or no;

Therefore he will offend either the South or the North.

II. If Douglas offends the South, he loses the nomination for the Presidency in the next convention; and if he offends the North, he loses the election to the United States Senatorship (and his chances for the Presidency);

But he must offend either the South or the North;

Therefore he loses either the Presidency or the Senatorship.

Or, III. If Douglas offends the South, he cannot become President; and if he offends the North, he cannot become President;

But he must offend either the South or the North;

Therefore he cannot become President.[45]

The dilemma, if it leaves no hole for the other side to creep through, is an extremely effective argument in politics and in competitive debate. If you can thus get your adversary between the devil and the deep sea on a point that in the eyes of your audience is interesting and critical, you have crippled his case. But if the point is not momentous, though your audience may find the dilemma amusing, you run the risk of the reproach of "smartness" if you crow very loudly over it.

On the other hand, a dilemma that is not exhaustive will hold no one. Many of the arguments against the imposition of a federal tax on corporations assumed that if the tax were imposed it would soon be made unreasonable in amount. Most arguments that the other side will abuse any power that is given to them may be regarded as falling into the class of incomplete dilemma. A speaker who uses a leaky dilemma must have great confidence in the unintelligence of his audience, but it is surprising to see how often such dilemmas occur in political debates.

45. Reasoning from Circumstantial Evidence. The third type of reasoning from similarity named on page 120 is reasoning from circumstantial evidence. The term is familiar to every one from murder trials and detective stories. Webster's argument in the White Murder Case, from which I print a short extract on page 157, is a famous example of an argument on circumstantial evidence; and in fiction Sir

Conan Doyle has created for our delectation many notable and ingenious cases of it. But reasoning from circumstantial evidence is far from being confined to criminal cases and fiction; as Huxley points out (see p. 241), it is also the basis of some of the broadest and most illuminating generalizations of science; and the example below from Macaulay is only one of innumerable cases of its use in history.

Reasoning from circumstantial evidence differs from reasoning from analogy or generalization in that it rests on similarities reaching out in a number of separate directions, all of which, however, converge on the case in hand. This convergence is pointed out by Macaulay in the following admirable little argument on the authorship of the _Junius Letters_, which were a series of pseudonymous and malignant attacks on the British government about 1770:

Was he [Francis] the author of the Letters of Junius? Our own firm belief is that he was. The evidence is, we think, such as would support a verdict in a civil, nay, in a criminal proceeding. The handwriting of Junius is the very peculiar handwriting of Francis, slightly disguised. As to the position, pursuits, and connections of Junius, the following are the most important facts which can be considered as clearly proved: first, that he was acquainted with the technical forms of the secretary of state's office; secondly, that he was intimately acquainted with the business of the war office; thirdly, that he, during the year 1770, attended debates in the House of Lords, and look notes of speeches, particularly of the speeches of Lord Chatham; fourthly, that he bitterly resented the appointment of Mr. Chamier to the place of deputy

secretary-at-war; fifthly, that he was bound by some strong tie to the first Lord Holland. Now, Francis passed some years in the secretary of state's office. He was subsequently chief clerk of the war office. He repeatedly mentioned that he had himself, in 1770, heard speeches of Lord Chatham; and some of these speeches were actually printed from his notes. He resigned his clerkship at the war office from resentment at the appointment of Mr. Chamier. It was by Lord Holland that he was first introduced into the public service. Now, here are five marks all of which ought to be found in Junius. They are all five found in Francis. We do not believe that more than two of them can be found in any other person whatever. If this agreement does not settle the question, there is an end of all reasoning on circumstantial evidence.[46]

Here the five points or marks of similarity between the writer of the letters and Philip Francis are of such diversity that it would be an extraordinary coincidence if there had happened to be two men whom they would fit: where so many lines converge so closely at a single point it would hardly be possible for them to meet on more than one person.

The following brief extract from Webster's argument in the White Murder Case shows the same sort of convergence of similarities: each circumstance in itself is hardly strong enough to furnish ground for an argument on analogy, but taken all together they point irresistibly in one direction, namely, to the fact of a conspiracy.

Let me ask your attention, then, in the first place, to those

appearances, on the morning after the murder, which have a tendency to show that it was done in pursuance of a preconcerted plan of operation. What are they? A man was found murdered in his bed. No stranger had done the deed, no one unacquainted with the house had done it. It was apparent that somebody within had opened, and that somebody without had entered. There had obviously and certainly been concert and cooperation. The inmates of the house were not alarmed when the murder was perpetrated. The assassin had entered without any riot or any violence. He had found the way prepared before him. The house had been previously opened. The window was unbarred from within, and its fastening unscrewed. There was a lock on the door of the chamber in which Mr. White slept, but the key was gone. It had been taken away and secreted. The footsteps of the murderer were visible, outdoors, tending toward the window. The plank by which he entered the window still remained. The road he pursued had thus been prepared for him. The victim was slain, and the murderer had escaped. Everything indicated that somebody within had cooperated with somebody without. Everything proclaimed that some of the inmates, or somebody having access to the house, had had a hand in the murder. On the face of the circumstances, it was apparent, therefore, that this was a premeditated, concerted murder; that there had been a conspiracy to commit it.[47]

The strength of reasoning from circumstantial evidence lies in the number and the diversity of the points of similarity to the point in hand. If there are few of them, the possibility of coincidence increases, as it also does when the points of similarity come from the same source or are of the same nature. This possibility of coincidence

is a good rough test of the value of reasoning from circumstantial evidence: where the theory of a coincidence would stretch all probabilities one may safely leave it out of account.

In practice the argument from circumstantial evidence is more frequent in the experience of lawyers than in that of other men; but sooner or later everybody has to pass on such reasoning, for wherever direct evidence is out of the question it may be necessary to piece the situation together by circumstantial evidence. There is some prejudice against such evidence, springing from reported cases of miscarriage of justice in convictions based on it. Such cases, however, are very rare in reality, and probably do not equal in number the cases in which mistaken or false direct testimony has caused injustice.

46. Some Pitfalls of Reasoning--Ambiguity. I have already spoken of some of the dangers to which reasoning is subject--false analogy, faulty generalization of various kinds, and various sins against the rules of the syllogism. There are still a few general dangers to speak about. It should be noted that the various kinds of fallacies run into each other, and not infrequently a given piece of bad reasoning can be described under more than one of them.

Of all the sources of faulty and misleading reasoning, ambiguity is the most fruitful and the most inclusive.

It springs from the facts that words, except those which are almost

technically specific, are constantly used in more than one sense, and that a great many of the words which we use in everyday life are essentially vague in meaning. Such common words as "liberty," "right," "gentleman," "better," "classic," "honor," and innumerable others each need a treatise for any thorough definition; and then the definition, if complete, would be largely a tabulation of perfectly proper senses in which the words can be used, or a list of the ways in which different people have used them. Besides this notorious vagueness of many common words, a good many words, as I have already shown (p. 54), have two or more distinct and definable meanings.

Strictly speaking, the ambiguity does not inhere in the word itself, but rather in its use in an assertion, since ambiguity can arise only when we are making an assertion. It has been defined as "the neglect of distinctions in the meaning of terms, when these distinctions are important for the given occasion."[48] Suppose, for example, you are arguing against a certain improvement in a college dormitory, on the ground that it makes for luxury: clearly "luxury" is a word that may mean one thing to you, and another to half of your audience. By itself it is an indefinite word, except in its emotional implication; and its meaning varies with the people concerning whom it is used, since what would be luxury for a boy brought up on a farm would be bare comfort to the son of wealthy parents in the city. Indeed the advances of plumbing in the last generation have completely changed the relative meanings of the words "comfort" and "luxury" so far as they concern bathrooms and bathtubs. In the case of such a word, then, the weight of the definition above falls on the last clause, "when these distinctions are important

for the given occasion"; here is a case where the occasion on which the word "luxury" is used determines nearly the whole of its meaning. In practice, if you have a suspicion that a word may be taken in another sense than that you intend, the first thing to do is to define it--to lay down as exactly as possible the cases which it is intended to cover on the present occasion, and the meaning it is to have in those cases. For good examples of this enlightened caution, see the definitions on pages 54-65, especially that from Bagchot.

A similar difficulty arises with the words which, in the somewhat slipshod use of everyday life, have come to have as it were a sliding value.

We may raise no difficulty about understanding the assertions that Brown, and Jones, and Robinson are "honest," but when we come to the case of Smith we discover a difficulty in placing him clearly on either side of the line. That difficulty is nothing less than the difficulty of knowing the meaning given to the word in this particular assertion. We might, for instance, agree to mean by Smith's "honesty" that no shady transactions could be legally proved against him, or that he is "honest according to his lights," or again that he is about as honest as the majority of his neighbors or the average of his trade or profession.[49]

That this is not a fanciful case can be shown by noticing how often we speak of "transparent" honesty, or of "absolute" honesty: this is notably one of the words for which we have a sliding scale of values,

which vary considerably with the age and the community. "Political honesty" has a very different meaning in the England of to-day from that which it had in the eighteenth century. To get at the exact meaning of honesty, then, either for Mr. Sidgwick's Brown, Jones, Robinson, and Smith, or for Mr. Asquith and Mr. Balfour as compared with Walpole or Pitt, we need a good deal more than a dictionary definition. What has already been said (p. 65) on the use of the history of the case to get a preliminary understanding of the question which is to be argued, and the terms to be used in it, applies all through the reasoning involved in the argument. Scrutinize all the terms you use yourself, as well as those used in arguments on the other side. I have already pointed out the ambiguity there is in the emotional implications of words; but the danger from it is so subtle and so besetting that it will be worth while to dwell on it again. There are many cases in which there is no doubt as to the denotation of the word,--the cases which it is intended to name,--but in which the two sides to a controversy use the word with a totally different effect on their own and other people's feelings.
Before the Civil War pretty much the whole South had come to use the word "slavery" as implying one of the settled institutions of the country, more or less sanctified by divine ordinance; at the same time a large portion of the North had come to look on it as an abomination to the Lord.

Here there was no doubt as to the denotation of the word; but in a highly important respect it was ambiguous, because it implied a totally different reaction among the people who used it. In a case where the contrast is so glaring there is little danger of confusion; but there

are a good many cases where a word may have very different effects on the feelings of an audience without the fact coming very clearly to the surface. "Liberal" is to most Americans a term implying praise, so far as it goes; to Cardinal Newman it implied what were to him the irreverent and dangerous heresies of free thought, and therefore in his mouth it was a word of condemnation.[50] "Aesthetic" to many good people has an implication of effeminacy and of trifling which is far from praiseworthy; to artists and critics it may sum up what is most admirable in civilization. If in an argument on abolishing football as an intercollegiate sport you describe a certain game as played "with spirit and fierceness," football players would think of it as a good game, but opponents of football would hold that such a description justified them in classing the game with prize fighting. When one of the terms you use may thus stir one part of your audience in one way, and the other part in just the opposite way, you are dealing with an uncomfortable kind of ambiguity.

It is easy to get into the way of thinking that the denotation of a word--the things which it names--is the only part of its meaning that counts; but with many words the connotation--I use the word in the rhetorical rather than in the logical sense, to include its implications, associations, and general emotional coloring--has more effect on human nature. There is a good deal of difference between telling a man that his assertion is "incorrect," "untrue," or "false"; if you use the last and he is at all choleric you may bring on an explosion. In argument, where you are aiming to persuade as well as to convince, the question of the feelings of your audience and how they

will be affected by the terms you use is obviously of great importance. And if you are using such terms as "gentleman," "political honesty," "socialist," "coeducation," you must not forget that such words have a definite emotional connotation, which will vary largely with the reader.

47. Begging the Question. The fallacy of "begging the question" consists of assuming as true something that the other side would not admit. It is especially insidious in the condensed arguments of which I spoke a few pages back. A common form of the fallacy consists of slipping in an epithet which quietly takes for granted one's own view of the question, or of using some expression that assumes one's own view as correct. For example, in an argument for a change in a city government, to declare that all intelligent citizens favor it would be begging the question. In an argument for the protection of crows, to begin, "Few people know how many of these useful birds are killed each year," would be to beg the question, since the argument turns on whether crows are useful or not. A gross and uncivil form of this fallacy is to use opprobrious epithets in describing persons who take the other view, as in the following sentence from an article in a magazine on the question of examinations for entrance to college:

As for interest and variety, what could destroy and taboo both more effectually than the rigid and rigorous demands of a formal set of examinations prepared, as a rule, by pedantic specialists who know practically nothing of the fundamental problems and needs of the high school.

Begging the question is often committed in the course of defining terms, as in the following passage from Cardinal Newman's "Idea of a University":

It is the fashion just now, as you very well know, to erect so-called Universities, without making any provision in them at all for Theological chairs. Institutions of this kind exist both here [Ireland] and in England. Such a procedure, though defended by writers of the generation just passed with much plausible argument and not a little wit, seems to me an intellectual absurdity; and my reason For saying so runs, with whatever abruptness, into the form of a syllogism:--A University, I should lay down, by its very name professes to teach universal knowledge; Theology is surely a branch of knowledge; how then is it possible for it to profess all branches of knowledge, and yet to exclude from the subjects of its teaching one which, to say the least, is as important and as large as any of them? I do not see that either premise of this argument is open to exception.[51]

The obvious answer is that "university" is a vague term and that there may be many kinds of universities, as indeed there are in this country; moreover, the importance of theology is an arguable matter even among church members.

A well-recognized, but often subtle, form of begging the question is

what is known as "arguing in a circle." Usually the fallacy is so wrapped up in verbiage that it is hard to pick out. Here is a clear and well-put detection of a case of it:

There is an argument in favor of child labor so un-American and so inhuman that I am almost ashamed to quote it, and yet it has been used, and I fear it is secretly in the minds of some who would not openly stand for it. A manufacturer standing near the furnace of a glasshouse and pointing to a procession of young Slav boys who were carrying the glass on trays, remarked, "Look at their faces, and you will see that it is idle to take them from the glasshouse in order to give them an education: they are what they are, and will always remain what they are." He meant that there are some human beings--and these Slavs of the number--who are mentally irredeemable, so fast asleep intellectually that they cannot be awakened; designed by nature, therefore, to be hewers of wood and drawers of water. This cruel and wicked thing was said of Slavs; it is the same thing which has been said from time immemorial by the slave owners of their slaves. First they degrade human beings by denying them the opportunity to develop their better nature: no schools, no teaching, no freedom, no outlook; and then, as if in mockery, they point to the degraded condition of their victims as a reason why they should never be allowed to escape from it.[52]

In a diffuse and disorderly argument there is always a chance to find some begging of the question which may consist either of getting back to an assumption of the original proposition and so arguing in a circle, or of simply assuming that what has been asserted has been proved. The

fallacy of the invented example, in which a fictitious case is described as an illustration, and presently assumed as a real case, is a not uncommon form of begging the question.

48. Ignoring the Question. This is a closely allied error in reasoning that is apt to be due to the same kind of confused and woolly thinking. It consists in slipping away from the question in debate and arguing vigorously at something else. A famous exposure of the fallacy is Macaulay's denunciation of the arguments in favor of Charles I:

The advocates of Charles, like the advocates of other malefactors against whom overwhelming evidence is produced, generally decline all controversy about the facts, and content themselves with calling testimony as to character. He had so many private virtues! And had James the Second no private virtues? Was Oliver Cromwell, his bitterest enemies themselves being judges, destitute of private virtues? And what, after all, are the virtues ascribed to Charles? A religious zeal, not more sincere than that of his son, and fully as weak and narrow-minded, and a few of the ordinary household decencies which half the tombstones in England claim for those who lie beneath them. A good father! A good husband! Ample apologies indeed for fifteen years of persecution, tyranny, and falsehood!

We charge him with having broken his coronation oath; and we are told that he kept his marriage vow! We accuse him of having given up his people to the merciless inflictions of the most hot-headed and

hard-hearted of prelates; and the defense is, that he took his little son on his knee and kissed him! We censure him for having violated the articles of the Petition of Right, after having, for good and valuable consideration, promised to observe them; and we are informed that he was accustomed to hear prayers at six o'clock in the morning! It is to such considerations as these, together with his Vandyke dress, his handsome face, and his peaked beard, that he owes, we verily believe, most of his popularity with the present generation.[53]

In an argument for woman suffrage on the ground that suffrage is a right which ought not to be denied, it would be ignoring the question merely to enumerate the various ways in which the responsibility of a vote might help to better the condition of women.

To ignore the question by trying to lead the public off on a false scent is a constant device of officials who are accused of misconduct. A United States senator whose election had been questioned gave in his defense a full and harrowing account of the struggles of his boyhood. A board of assessors who had been charged with incompetence ended their defense, in which they had taken no notice of the charges, as follows:

Criticism of the Board of Assessors comes with poor grace from those whose endeavors for the common good are confined to academic essays on good government. It savors too much of the adroit pickpocket, who, finding himself hard pressed, joins in the chase, shouting as lustily as any of the unthinking rabble, "Stop, thief!"

The curious thing is that this trick of crossing the scent does lead so many people off the trail.

The so-called _argumentum ad hominem_ and the _argumentum ad populum_ are special cases of ignoring the question: they consist of appeals to the feelings or special interests of the reader or the audience which run away from the question at issue. They are not uncommon in stump speeches, and in other arguments whose chief purpose is to arouse enthusiasm.

An argument on the tariff, for example, sometimes runs off into appeals to save this grand country from ruin or from the trusts or from some other fate which the speaker pictures as hanging over an innocent and plain people. An argument for the restoration of the classical system of education which should run off into eulogies of the good old times might easily become an _argumentum ad populum_; an argument in favor of a new park which should dwell on selfish advantages which might be gained by the abutters without regard to larger municipal policy would probably be an _argumentum ad hominem_.

Obviously these two forms of shifting the issue trench closely on the element of persuasion in an argument, and in making the distinction you must apply common sense. Your adversary may reprove you for an _argumentum ad hominem_ or _ad populum_, when you believe that you are keeping well within the bounds of legitimate persuasion; but in general

it is safe to guard your self-respect by drawing a broad line between dodging and unworthy appeals to prejudice and justifiable appeals to feeling and personal interest.

EXERCISES

1. Name a question of policy which would be settled by the establishment of some controverted fact.

2. Find in the daily papers an account of a trial in which evidence was declared inadmissible under the rules of law which would have been taken into account by the average man outside the court in making up his own mind.

3. Name three questions in which the evidence would be affected by temperamental and other prepossessions of the witness.

4. Name a scientific question in which some important fact is established by reasoning from other facts.

5. Cite a case, either from real life or from fiction, in which a fact was established by circumstantial evidence; analyze the evidence and show how it rests on reasoning from similarity.

6. Give a case in which what you believed to be direct observation of a fact deceived you.

7. Give an example from your own experience within a week where vague authorities have been cited as direct evidence.

8. What would you think of the writer of the following sentences as a witness to the numbers and importance of the participants in the woman suffrage procession he is reporting?

Fifth Avenue has seldom, if ever, been more crowded than on Saturday afternoon, and never anywhere have I seen so many women among the spectators of a passing pageant. Throngs, many tiers deep, flanked the line of march, and these throngs were overwhelmingly composed of women. As I passed from block to block I could not get away from the thought that the vastest number of these were sick of heart and ashamed that they, too, were not in line behind the kilted band that headed the procession, the historic symbolic floats, and the inscribed banners, along with their three thousand or more sisters. Here were women, fighting a good fight for the cause of women--for the underpaid factory workers and the overfed lady of fortune who is deprived the right of voice in the government over her inherited property. (Report in a daily paper, May 8, 1911)

9. Find an example of historical evidence in a case where there are no direct witnesses to the fact; discuss it according to S. R. Gardiner's

tests (p. 103).

10. Find two examples from the daily papers where statistics are used to establish a complex fact.

11. Name two subjects on which you could gather statistics, and the sources from which you would draw them.

12. Bring to class the testimony of a recognized authority on some complex fact, and explain why his testimony carries weight.

13. Name a subject on which you can speak with authority, and explain why your testimony on that subject should carry weight.

14. Give an example from your own experience of a case in which it is hard to distinguish between direct and indirect evidence.

15. Find in the daily papers or current magazines an argument based on reasoning by analogy; one based on reasoning by generalization; one based on circumstantial evidence; explain the character of each.

16. Find an example of an argument based on reasoning from a causal relation.

17. Find an example of an argument from enumeration of like cases which might be easily upset.

18. In the proposition, "A gentleman ought not to become a professional baseball player," what meaning could be given to the word "gentleman"?

19. Distinguish between the meanings of _law_ in the phrases "moral law," "natural law," and "law of the land."

20. What different meanings would the word "comfort" have had in the days of your grandfather, as compared with the present day?

21. Give, two examples of words with "sliding meanings."

22. Give two examples of words whose denotation is fixed, but whose connotation or emotional implications would be different with different people.

23. Find an example of false analogy.

24. Criticize the reasoning in the following extract from a letter to a newspaper urging Republican and Democratic tickets at the municipal election in a small city in the country.

It is an acknowledged fact that competition in the business life of our city is beneficial to the consumer. If that be so, why will not competition in city affairs bring equally good results to the taxpayer?

25. Give an example you have recently heard of hasty generalization; explain its weakness.

26. Give an example of your own of the _post hoc_ fallacy.

27. Give an example of false reasoning based on assuming a complex fact to be simple.

28. Criticize the reasoning in the following extracts:

a. [Dispatch to a daily paper.] Haverhill, March 30, 1911. Opponents of commission form of government are deriving no little satisfaction from the development of testimony borne out by figures taken from the auditing department of the city of Haverhill that this method of administering municipal affairs has proved thus far to be a costly experiment there.... The total amount of bonds issued during the past twenty-seven months, covering the period of operation of commission form of government, was $576,000; the present borrowing capacity of the city is only approximately $35,000; that the city's

bonded debt has increased from $441,264 to $1,181,314 in the past five years; the net bonded debt has more than doubled within three years; that the assessed valuation has increased $5,000,000; and the tax rate has been raised from $17.40 to $19 in five years. The borrowing capacity of $341,696 on January 1, 1906, has decreased to $95,000 on January 1, 1911.... Commission form of government went into effect in Haverhill on the first Monday in January, 1909.

b. From an article in a magazine, opposing the plan of the postmaster-general to increase the postage on the advertising sections of magazines: consider especially the word "censorship":

We see two grave objections to the postmaster-general's plan. First, it requires a censorship to determine what periodicals are "magazines" whose advertising pages are to be taxed, and what are the educational and religious periodicals which are to continue to enjoy what the President calls a "subsidy." Such a censorship would be a new feature in postal administration, and it would seem to be a thing very difficult to work out on any fair basis.

29. In a newspaper report of an inquiry made by the director of the Columbia University gymnasium into the effects of smoking, the following sentences occur:

In scholarship the nonsmokers had the distinct advantage. The smokers averaged eighty per cent in their studies at entrance,

sixty-two per cent during the first two years, and seven per cent of failure. The nonsmokers got ninety-one per cent in their entrance examinations and sixty-nine per cent in their first two years in college, while only four per cent were failures. In this respect Dr. Meylan thinks there is a distinct relation between smoking and scholarship.

Of the same set of students forty-seven per cent of the smokers won places on varsity athletic teams, while only thirty-seven per cent of the nonsmokers could get places.

If the next to the last sentence had read, "Smoking therefore seems to be a cause of low scholarship," what should you think of the reasoning?

30. Criticize the reasoning in the following portion of an argument for prohibition:

Dr. Williams says, "We find no evidence that the prohibition laws have in the past been effective in diminishing the consumption of alcoholic beverages." ... The absence of logic in Dr. Williams's conclusion will be readily seen by substituting the homicide evil and the greed evil for the liquor evil in his argument.

Since its establishment the United States has sought to remedy with prohibition the homicide evil. Every state has laws with severe

penalties prohibiting murder. And yet the number of homicides in the United States has steadily increased until the number in 1910 was eight thousand nine hundred and seventy-five. Since, then, homicides have steadily increased during the past hundred years under a law with severe penalties prohibiting them, a prohibitory law has not been and cannot be a remedy for homicide.

31. Criticize the reasoning in the following extract from an argument for the electrification of the terminal part of a railroad:

It is true that locomotive smoke and gas do not kill people outright; but that their influence though not immediately measurable is to shorten life cannot, I submit, be successfully combated.... A few years ago I made some calculations based on the records of ten years' operation of the railroads in this state, and found that if a man should spend his whole time day and night riding in railroad trains at an average rate of thirty miles an hour, and if he had average good luck, he would not be killed by accident, without his fault, oftener than once in fifteen hundred years, and that he would not receive any injury of sufficient importance to be reported oftener than once in five hundred years. I ask you to estimate how long a man would, in your opinion, live if he were obliged continuously day and night to breathe the air of our stations without any opportunity to relieve his lungs by a breath of purer and better air.

32. Give an example in which you yourself have used the method of agreement in arriving at a conclusion in the last week.

33. Give an example, from one of your studies, of the use of the method of agreement.

34. Give an example, which has recently come to your notice, of the use of the method of difference.

36. Criticize the following syllogisms, giving your reasons for thinking them sound or not:

a. All rich men should be charitable with their wealth; Charitable men forgive their enemies; Therefore all rich men should forgive their enemies.

b. Every man who plays baseball well has a good eye and quick judgment; Every good tennis player has a good eye and a quick judgment; Therefore every good tennis player is a good baseball player.

c. Whenever you find a man who drinks hard you find, a man who is unreliable; Our coachman does not drink hard; Therefore he is reliable.

d. All the steamships which cross the ocean in the quickest time are comfortable; This steamship is slow; Therefore she is not comfortable.

e. All dogs who bark constantly are not bad-tempered; This dog does not bark constantly; Therefore he is not bad-tempered.

f. All cold can be expelled by heat; John's illness is a cold; Therefore it can be expelled by heat. (From Minto)

g. The use of ardent spirits should be prohibited by law, seeing that it causes misery and crime, which it is one of the chief ends of law to prevent. (From Bode)

h. Rational beings are accountable for their actions; brutes not being rational, are therefore exempt from responsibility. (From Jevons)

36. Expand the following arguments into syllogisms and criticize their soundness:

a. The snow will turn to rain, because it is getting warmer.

b. The boy has done well in his examination, for he came out looking cheerful.

c. We had an economical government last year, therefore the tax rate will be reduced.

d. Lee will be a good mayor, for men who have energy and good judgment can do incalculable good to their fellow citizens.

e. There is unshaken evidence that every member of the board of aldermen received a bribe, and George O. Carter was a member of that board.

f. The candidate for stroke on the freshman crew came from Santos School, therefore he must be a good oarsman.

37. Criticize the reasoning in the following arguments, pointing out whether they are sound or unsound, and why:

a. It costs a Nebraska farmer twenty cents to raise a bushel of corn. When corn gets down to twenty cents he cannot buy anything, and he cannot pay more than twelve or fifteen dollars a month for help. When it gets up to thirty-five cents the farmer gives his children the best education possible, and buys an automobile. Therefore the farmer will be ruined if the tariff on corn is not

raised.

b. For many years the Democratic platforms have declared explicitly or implicitly against the duties on sugar; if the Democrats should come into power and reduce the duties, they would lose their strength in the states producing cane sugar and beet sugar; if they do not reduce the duty, they admit that their platforms have been insincere. (Condensed from an editorial in a newspaper. March, 1911)

c. I hardly need say that I am opposed to any such system as that of Galveston, or to call it by its broader name, the commission system. It is but another name for despotism. Louis XIV was a commissioner for executing the duties of governing France. Philip II was the same in Spain. The Decemvirs and Triumvirs of Rome were but the same sort of thing, as was also the Directory in France. They all came to the same end. Says Madison, in No. XLVII of _The Federalist_: "The accumulation of all powers, legislative and judiciary, in the same hands, whether of one, a few, or many, and whether hereditary, self-appointed, or elective, may justly be pronounced the very definition of tyranny." Mr. justice Story said, "Whenever these departments are all vested in one person or body of men, the government is in fact a despotism, by whatever name it be called, whether a monarchy, an aristocracy, or a democracy."

d. The procedure of Berlin has in it an element of fairness worthy of our consideration; those representing large property interests

have a surety of being at least represented. Some such system must be devised if the holding of properly at all be regarded as moral and necessary to our civilization. Remember that you are, in a large sense, but a chartered joint-stock corporation. Can you imagine the control of any other joint-stock corporation delivered over to those who have no stock or the least stock in it? Can you imagine the New York & New Haven Railroad, for example, controlled by the passengers, to the exclusion of the stock holders? Now this, to a very great degree, is what has happened in many of our cities. We have deprived the true stockholders, in some cases, of any representation whatever. I thus hold that to give property some voice in the control of a municipal corporation is but sense and justice.

e. We have tried commissions in Buffalo in branches of our city government. They have tried them in nearly every city in this country. We have governed our police by commissions, our parks by commissions, our public works by commissions. Commission government was for many years a fad in this country, and it has become discredited, so that of late we have been doing away with commissions and coming to single heads for departments having executive functions and some minor legislative functions, such as park boards, and police boards, and have been trying to concentrate responsibility in that way. In Erie County and throughout New York a commission elected by the people governs our counties. The board of supervisors is a commission government. It has never been creditable--always bad, even as compared with our city governments.

To be sure, it is not just that kind of commission government. It is a larger commission; it is not elected at large, but by districts, but it is an attempt at the same thing. So I say there is nothing new about this idea of government by a commission.

CHAPTER IV

THE ARGUMENT WRITTEN OUT

49. The Brief and the Argument. If your brief is thoroughly worked out, and based on a careful canvass of the evidence, the work on your argument ought to be at least two thirds over. The last third, however, is not to be slighted, for on it will largely depend your practical results in moving your readers. Even a legal argument rarely goes to the court on a written brief alone; and the average reader will never put himself to the effort of reading through and grasping such a brief as we have been planning here. Furthermore, if your complete argument is merely a copying out of the brief into consecutive sentences and paragraphs, you will get few readers. The making of the brief merely completes what may be called the architectural part of your labors; the writing of an argument will use all the skill you have in the choice of words and putting them together.

We saw in Chapter I that argument has two kinds of appeal to its reader: on the one hand, through its power of convincing it appeals to his reason; on the other, through its persuasive power it appeals to his feelings and his moral and practical interests. Of these two kinds of

appeal the convincing power is largely determined by the thoroughness of the analysis and the efficiency of the arrangement, and therefore in large part hangs on the work done in making the brief; the persuasive power, on the other hand, though in part dependent on the line of attack laid out in the brief and the choice of points to argue, is far more dependent on the filling in of the argument in the finished form. Even the severest scientific argument, however, is much more than the bare summary of the line of thought which would be found in a brief; and in an argument like the speeches in most political campaigns a brief of the thought would leave out most of the argument. Wherever you have to stir men up to do things you have only begun when you have convinced their reason.

50. The Introduction of the Argument. Much depends on the first part of your argument, the introduction. Its length varies greatly, and it may differ largely in other ways from the introduction to your brief. If the people you are trying to convince are familiar with the subject, you will need little introduction; a brief but clear statement of fundamentals will serve the purpose. For such an audience it is chiefly important to make the issues stand out, so that they shall see perfectly distinctly the exact points on which the question turns. Then the sooner you are at work on the business of convincing them, the better. In such arguments the introduction will perhaps not differ greatly in substance from the introduction to the brief, though it must be reduced to consecutive and agreeable form. At the other extreme is such an argument as that of Huxley's (p. 233), where he had to prepare the way very carefully lest the prejudice against a revolutionary and unfamiliar view

of the animate world should close the minds of his hearers against him before he was really started. Accordingly, before getting through with his introduction he expounded not only the three hypotheses between which the choice must be made, but also the law of the uniformity of nature and the principles and nature of circumstantial evidence. Where one shall stop between these two extremes is a question to be decided in the individual argument.

One thing, however, it is almost always wise to do; indeed, one would not go far wrong in prescribing it as a general rule: that is, to state with almost bald explicitness just how many main issues there are, and what they are. In writing an argument it is always safe to assume that most of your readers will be careless readers. Few people have the gift of reading closely and accurately, and of carrying what they have read with any distinctness. Therefore make it easy for your readers to pick up and to carry your points. If you tell them that you are going to make three points or five, they are much more likely to remember those three or five points than if they have to pick them out for themselves as they go along. Huxley, perhaps the ablest writer of scientific argument in the language, constantly practiced this device. In his great argument on evolution, he says (see p. 235): "So far as I know, there are only three hypotheses which ever have been entertained, or which well can be entertained, respecting the past history of nature"; and then, as will be seen, he takes up each in turn, with the numbering "first," "second," and "third." In the same way in his essay "The Physical Basis of Life" he says, not far from the beginning, "I propose to demonstrate to you that, notwithstanding these apparent difficulties, a threefold

unity--namely, a unity of power or faculty, a unity of form, and a unity of substantial composition--does pervade the whole living world." Burke, in his great speech "On Conciliation with America," said, "The capital leading questions on which you must this day decide are two: first, whether you ought to concede; and secondly, what your concession ought to be."

It is hardly too much to say that those writers whose sense of style is most developed are most likely to state the issues with the baldest and most direct precision.

The statement of the issues will bring out the importance of closely limiting the number of main issues. There are few subjects of argument which do not conceivably touch the interests and beliefs of their audiences in many directions; but out of these aspects some obviously count far more than others. If in your introduction you try to state all these issues, small and great, you will surely leave confusion behind you. Very few people are capable of carrying more than three or four issues distinctly enough to affect their judgment of the whole case; and even of these some will not take the trouble to do so. If you can simmer down the case to one or two or three critical points, you are making a good start toward winning over the minds of your readers.

A good statement of the history of the case is apt to be a useful and valuable part of an introduction, especially for arguments dealing with public policies. If you remind readers of what the facts have been, you

can more easily make clear to them the present situation from which you make your start. An argument for raising or lowering the tariff on some article would be apt to recount the history of the tariff so far as it concerned that article, and the progress in importing it and manufacturing it within the country. In writing out the argument from the brief on page 90 one would almost inevitably include the recent history of the city government.

In general it is best to make this preliminary statement of the history of the case scrupulously and explicitly impartial. An audience is likely to resent any appearance of twisting the facts to suit the case; and if on their face they bear against your contentions, it is wiser to prepare for your argument in some other way. There are more ways of beginning an argument than by a statement of facts; and resource in the presentation of a case goes a long way toward winning it.

It is often wise to state your definitions with care, especially of terms which are at the bottom of your whole case. The definition from Bagchot on page 58 is a good example. Here is the beginning of an address by President Eliot, in 1896, on "A Wider Range of Electives in College Admission Requirements":

As usual, it is necessary to define the subject a little. "A wider range of electives in college admission requirements." What field are we thinking of when we state this subject? If we mean the United States, the range of electives is already very large. Take, for example, the

requirements for admission to the Leland Stanford University. Twenty subjects are named, of very different character and extent, and the candidate may present any ten out of the twenty. Botany counts just as much as Latin. There is a wide range of options at admission to the University of Michigan, with its numerous courses leading to numerous degrees; that is, there is a wide range of subjects permissible to a candidate who is thinking of presenting himself for some one of its many degrees. If we look nearer home, we find in so conservative an institution as Dartmouth College that there are three different degrees offered, with three different assortments of admission requirements, and three different courses within the college. I noticed that at the last commencement there were forty-one degrees of the old-fashioned sort and twenty-seven degrees of the newer sorts given by Dartmouth College. Here in Harvard we have had for many years a considerable range of electives in the admission examinations, particularly in what we call the advanced requirements. We therefore need to limit our subject a little by saying that we are thinking of a wider range of admission electives in the Eastern and Middle State colleges, the range of electives farther west being already large in many cases.[54]

Professor William James, in his essay "The Will to Believe," in which he argues that it is both right and unavoidable that our feelings shall take part in the making of our faiths, begins with a careful definition and illustration of certain terms he is going to use constantly.

Next, let us call the decision between two hypotheses an option. Options may be of several kinds. They may be (1) _living_ or _dead_; (2) _forced_

or _avoidable_; (3) _momentous_ or _trivial_; and for our purposes we may call an option a _genuine_ option when it is of the forced, living, and momentous kind.

1. A living option is one in which both hypotheses are live ones. If I say to you, "Be a theosophist or be a Mohammedan," it is probably a dead option, because for you neither hypothesis is likely to be alive. But if I say, "Be an agnostic or be a Christian," it is otherwise: trained as you are, each hypothesis makes some appeal, however small, to your belief.

2. Next, if I say to you, "Choose between going out with your umbrella or without it," I do not offer you a genuine option, for it is not forced. You can easily avoid it by not going out at all. Similarly, if I say: "Either love me or hate me," "Either call my theory true or call it false," your option is avoidable. You may remain indifferent to me, neither loving nor hating, and you may decline to offer any judgment as to my theory. But if I say, "Either accept this truth or go without it," I put you on a forced option, for there is no standing place outside of the alternative. Every dilemma based on a complete logical disjunction, with no possibility of not choosing, is an option of this forced kind.

3. Finally, if I were Dr. Nansen and proposed to you to join my North Pole expedition, your option would be momentous; for this would probably be your only similar opportunity, and your choice now would either exclude you from the North Pole sort of immortality altogether or put at

least the chance of it into your hands. He who refuses to embrace a unique opportunity loses the prize as surely as if he tried and failed. _Per contra_ the option is trivial when the opportunity is not unique, when the stake is insignificant, or when the decision is reversible if it later prove unwise. Such trivial options abound in the scientific life. A chemist finds an hypothesis live enough to spend a year in its verification: he believes in it to that extent. But if his experiments prove inconclusive either way, he is quit for his loss of time, no vital harm being done.

It will facilitate our discussion if we keep all these distinctions well in mind.[55]

In some arguments the working out of the definitions of a few principal terms may occupy much space. Matthew Arnold, a famous critic of the last generation, wrote as an introduction to a volume of selections from Wordsworth's poems an essay with the thesis that Wordsworth is, after Shakespeare and Milton, the greatest poet who has written in English; and to establish his point he laid down the definition that "poetry is at bottom a criticism of life; that the greatness of a poet lies in his powerful and beautiful application of ideas to life--to the question, How to live." To the development of this definition he gave several pages, for the success of his main argument lay in inducing his readers to accept it.

Many legal arguments are wholly concerned with establishing definitions,

especially in those cases which deal with statute law. The recent decisions of the Supreme Court of the United States in the Corporation Tax cases and the Standard Oil Case are examples: in each of these what was at issue was the exact meaning of the words used in certain statutes passed by Congress. In the common law, too, there are many phrases which have come down from past centuries, the meanings of which have been defined again and again as new cases came up. We have seen (p. 63) how careful definition the word "murder" may need. "Malice aforethought" is another familiar instance: it sounds simple, but when one begins to fix the limits at which sudden anger passes over into cool and deliberate enmity, or how far gone a man must be in drink before he loses the consciousness of his purposes, even a layman can see that it has difficulties.

In such cases as these a dictionary definition would be merely a starting point. It may be a very useful starting point, however, as in the following extract from an article by Mr. E.P. Ripley, president of the Atchison, Topeka, and Santa Fe Railway Company, on "The Railroads and the People":

There is one point regarding this matter that many forget: this is that in all affairs there are two kinds of discrimination. There is the kind, which, as the dictionary expresses it, "sets apart as being different," which "distinguishes accurately," and there is the widely different kind which "treats unequally." in all ordinary affairs of life we condemn as "undiscriminating" those who have so little judgment or fairness as not to "distinguish accurately" or "set apart things that are

different"--who either treat equally things that are unequal, or treat unequally things that are equal. Now, when the railway traffic manager "sets apart things that are different," and treats them differently, he simply does what it is the duty of every one to do.[56]

Then he goes on to develop this definition by showing the facts on which it has to bear.

On the other hand do not bore your readers with dictionary definitions of words whose meaning no one doubts; that is a waste of good paper for you, and of good time for them; and we have seen in Chapter II the futility of the dictionary for cases in which there is real disagreement over the meaning of a word.

It will be seen, then, that the analysis you have made in preparation for the brief may spread out large or small in the argument itself. It is wise, therefore, to look on the work done for the introduction to the brief as work done largely to clear up your own thought on the subject; when you come to writing out the argument itself, you can go back to the introduction to the brief, and see how much space you are now going to give it.

In a college or school argument you will usually follow it rather closely; and you do well to do so, for you will thus fix in your mind a useful model. But when you get out into the world, you will have to consider in each case the needs and prepossessions of the particular

audience. Here as everywhere in the argument you must exercise judgment; there is no formula which will fit all cases. The scheme of analysis of the case which has been expounded in Chapter II has stood the test as the best means yet found of exploring a subject and insuring clarity of thought and certainty of attack;[57] but I know of no single fixed scheme for the argument itself which will not be racked apart by the first half dozen practical arguments you apply it to.

51. The Body of the Argument. In the main body of the argument the difference from the brief will be largely a matter of expansion: the brief indicates the evidence, the argument states it at length. Here again you cut your argument to fit your audience and the space at your command. In an argument in the editorial of a newspaper, which is rarely longer than a long college theme, there is little space for the statement of evidence. In Webster's argument in the White Murder Case, which has some thirteen thousand words and which must have taken two hours or more to deliver, the facts are studied in minute detail. Most people are surprised to see the way in which a full statement of evidence eats up space; if the facts are at all complicated, they must be analyzed and expounded one by one and their bearing on the case laid out in full. This necessity of using space in order to make facts clear is the reason why it is so hard to find adequate and convincing arguments which will print in less than fifteen or twenty pages. The trouble with a swift and compact argument like that of Macaulay's on the authorship of the _Junius Letters_ (see p. 155) is that unless you have gone into the question for yourself, you do not know whether to accept the stated facts or not. If you do accept them, the conclusion is

inevitable; but if you happen to know that scholars have long held the decision doubtful, you want to know more about the facts in detail before surrendering to Macaulay's conclusion. For an average reader to-day, who knows little of the facts, this argument would have to be greatly expanded.

In this expansion comes the chance for all the skill in exposition that you can muster, and for that subtle appeal to your readers' feelings which lies in vividness and precision of phrasing, considerations with which I will deal separately further on. Questions of proportion of space we may consider here.

The only rule that can be laid down for the distribution of your space is to use your sagacity, and all your knowledge of your subject and of your audience. In a written argument you have the advantage that you can let your pen run on your first draft, and then go back and weigh the comparative force of the different parts of the argument, and cut out and cut down until your best points for the purpose have the most space. In a debate the same end is gained by rehearsals of the main speeches; in the rebuttal, which is best when it is spontaneous, you have to trust to the judgment gained by practice.

Other things being equal, however, brevity carries an audience. If you can sum up your case in half the time that it takes the other side to state theirs, the chances are that your audience will think you have the right of it. Above all, beware of boring your readers by too exhaustive

explanation of details or of aspects of the case which they care nothing about. I suppose there is no one of us who has not a worthy friend or two who will talk through a whole evening on whether a lawn should be watered in the evening or the early morning, or whether the eighth hole on the golf course should not be fifty yards longer. One must not be like the man who in the discussion of bimetallism a few years ago used to keep his wife awake at night expounding to her the iniquities and inequalities of a single standard. It is safer to underestimate than to overestimate the endurance and patience of your audience.

52. The Refutation. The place of the refutation will, as we have seen in the chapter on planning (see p. 82), vary greatly with the argument and with the audience. Its purpose is to put out of the way as effectively as possible the main points urged by the other side. In an argument of fact this is done both by exposing weak places in the reasoning and by throwing doubt on the facts cited, either through proof that they are contradicted by better evidence, or that the evidence brought forward to establish them is shaky or inconclusive. In an argument of policy the points on the other side are met either by throwing doubt on the facts on which they rest, or by showing that the points themselves have not coercive force.

Where there are really strong points on the other side, in either kind of argument, it is often sound policy to admit their strength. This is especially true in arguments of policy where the advantages are closely balanced. If you are trying to convince a boy that he should go to your college rather than to another, you do not gain anything by telling him

that the other college is no good; if he is worth gaining over he will know better than that. And in general if you have given a man to understand that there is nothing to be said for the other side, and he afterwards finds that there are strong grounds for it, your argument will have a fall in his estimation.

In the manner of your refutation lean towards the side of soberness and courtesy. It has been said that the poorest use you can put a man to is to refute him; and it is certain that in the give and take of argument in active life the personal victories and defeats are what are soonest forgotten. If after a while you have to establish a fact in history or in biology, or to get a verdict from a jury or a favorable report from the committee of a legislature, you will think a good deal more about the arguments of your opponents than about them personally. There are few arguments in which you can afford to take no notice of the strong points of the other side; and where the burden of proof is strongly with you, your own argument may be almost wholly refutation; but it is always worth bearing in mind that if it is worth while for you to be arguing at all, there is something, and something of serious weight, to be said on the other side.

53. The Conclusion. The conclusion of your argument should be short and pointed. Gather the main issues together, and restate them in terms that will be easy to remember. Mere repetition of the points as you made them in your introduction may sound too much like lack of resource; on the other hand, it helps to make your points familiar, and to drive them home. In any event make your contentions easy to remember. Most of us go

a long way towards settling our own minds on a puzzling question when we repeat to some one else arguments that we have read or heard. If you can so sum up your argument that your readers will go off and unconsciously retail your points to their neighbors, you probably have them. On the other hand, when you have finished your argument, if you start in to hedge and modify and go back to points that have not had enough emphasis before, you throw away all you have gained. In arguing nothing succeeds like decision and certainty of utterance. Even dogmatism is better than an appearance of wabbling. It is the men like Macaulay, who see everything black and white with no shades between, who are the leaders of the world's opinion. Sum up, then, wherever it is decent to do so, as if there were only one side of the case, and that could be stated in three lines.

54. The Power of Convincing. The convincing power of an argument depends on its appeal to the reason of its readers. To put the same fact in another way, an argument has convincing power when it can fit the facts which it deals with smoothly and intelligently into the rest of the reader's experience. If an argument on a complicated mass of facts, such as the evidence in a long murder case, makes the reader say, "Yes, now I see how it all happened," or an argument for the direct election of United States senators makes him say, "Yes, that is a plain working out of the fundamental principles of popular government," then he is convinced. In this aspect argument merges into exposition. It is significant that, as has already been noted, Matthew Arnold's argument that Wordsworth is the greatest English poet after Shakespeare and Milton, and Huxley's argument that the physical basis of animal and

plant life is the same, are both used in a book of examples of exposition.[58] The essential difference between argument and exposition from this point of view lies in the emphasis: normally an explanation covers the whole case evenly; an argument throws certain parts and aspects of the case into relief.

If, therefore, to be convincing, your argument must provide a reasonable explanation of the whole state of affairs to which the case belongs, you can use all the devices there are for clear and effective explanation. I will therefore briefly review a few of these.

Of the value of an introduction which lays out the ground to be covered I have already spoken. The more distinct an idea you can implant in your readers' minds of the course you are going to follow in your argument, the more likely they will be to follow it. Since the success of your argument hangs on carrying them with you on the main issues, let them know beforehand just what those issues are, and in such a way that they can hold them with a minimum of effort. The value of a clear and, as it were, maplike introduction is even greater in an argument than in an exposition.

In the second place, use your paragraphing for all that it is worth, and that is a great deal. The success of any explanation or argument springs from the way in which it takes a mass of facts apart, and rearranges them simply and perspicuously; and there is no device of composition which helps so much towards clearness as good paragraphing. Accordingly

when you come to make your final draft, make certain that each paragraph has unity. If you have any doubts see if you can sum up the paragraph into a single simple sentence. Then look at the beginnings of the paragraphs to see whether you have made it easy for your readers to know what each one is about. Macaulay's style is on the whole clearer and more effective for a general audience than that of any other writer in English; and his habit of beginning each paragraph with a very definite announcement of its subject is almost a mannerism. Incidentally there is no better rough test of the unity of your paragraphs than thus to give them something of the nature of a title in the first sentence. Often, too, at the end of an important paragraph it is worth while to sum up its essence in pithy form. Mankind in general is lazy about thinking, and more than ready to accept an argument which is easy to remember and repeat. The end of a paragraph is the place for a catchword.

In the third place, bind the sentences in your paragraphs together. When one is building up a first draft, and picking facts from a variety of sources, it is inevitable that the result shall be somewhat disjointed. In working over the first draft, really work it over, and work it together. Make all the sentences point the same way. Pronouns are the most effective connectives that we have; therefore recast your sentences so that there will be as little change of subject as possible. Then use the explicit connectives in as much variety as you can. It is not likely that you will make your paragraphs too closely knit for the average reader.

In the fourth place, bind your argument together as a whole by

connectives at the beginnings of the paragraphs and by brief summarizing paragraphs. In the present generation of schoolboys a good many have groaned over Burke's speech "On Conciliation with America"; but if the first time that one of these sufferers must make an argument in real earnest, he will go back to Burke for some of the devices used to bind that argument together, he will be surprised to see how practically e efficient those devices are. And none of them counts more for clarity and thoroughness than the conscientious way in which Burke took his hearers by the hand at the beginning of each paragraph, and at each turn in his argument, to make sure that they knew just how they were passing from one point to another.

From the doctrine of clear explanation, then, we may carry over to the making of clear arguments the habit of laying out the ground at the beginning, of making the paragraphs do their full work by attending to unity, to emphasis, and to coherence, and of binding the paragraphs together into a closely knit whole.

55. The Power of Persuading. Finally, we have to consider the question of how an argument can be made persuasive--probably the most difficult subject in the range of rhetoric on which to give practical advice. The key to the whole matter lies in remembering that we are here dealing with feelings, and that feelings are irrational and are the product of personal experience. The experience may be bitter or sweet, and to some degree its effects are modified by education; but in substance your feelings and emotions make you what you are, and your capacities in these directions were born with you. If the citizens of a

town have no feeling about political dishonesty, reformers may talk their throats out without producing any result; it is only when taxes get intolerable or the sewers smell to heaven that anything will be done. Many people die for whose deaths each of us ought to feel grief, but if these people have never happened to touch our feelings, we can reason with ourselves in vain that we should feel deeply grieved. Feeling and emotion are the deepest, most primitive part of human nature; and very little of its field has been reduced to the generalizations of reason.[59]

When you come, therefore, in the making of your argument to the point of stirring up the feelings of your readers on the subject, do not waste any time in considering what they ought to feel: the only pertinent question is what they do feel. On your shrewdness in estimating what these feelings are, and how strong they are, will hang your success as an advocate. Tact is the faculty you need now--the faculty of judging men, of knowing when they will rise to an appeal, and when they will lie back inert and uninterested. This is a matter you cannot reason about; if you have the faculty it will be borne in on you how other men will feel on your subject. The skill of politicians, where it does not confine itself to estimating how much the people will stand before rebelling, consists in this intuition of the movement of public opinion; and the great leaders are the men who have so sure a sense of these large waves of popular feeling that they can utter at the right moment the word that will gather together this diffused and uncrystallized feeling into a living force. Lincoln's declaration, "A house divided against itself cannot stand, I believe that this government cannot

endure permanently half slave and half free," brought to a head a conflict that had been smoldering ever since the adoption of the Constitution, and made him the inevitable leader who was to bring it to a close. It will be noticed, however, that the time had to come before the inspired word could make its appeal. The abolitionists and antislavery men had long been preaching the same doctrine that Lincoln uttered, and the folly and wickedness of slavery had been proved by philosophers and preachers for generations. Until the time grows ripe the most reasonable doctrine does not touch the hearts of men; when the time has ripened, the leader knows it and speaks the word that sets the world on fire for righteousness.

The same faculty, on a smaller scale, is needed by every one of us who is trying to make other people do anything. The actual use of the faculty will vary greatly, however, with different kinds of arguments. In certain kinds of scientific argument any attempt at persuasion as such would be an impertinence: whether heat is a mode of motion, whether there are such infinitesimal bodies as the ions which physicists of to-day assume to explain certain new phenomena, whether matter consists of infinitesimal whirls of force--in all such questions an argument appeals solely to the reason; and in such Bacon's favorite apophthegm has full sway, Dry light is ever the best. In Huxley's arguments for the theory of evolution feeling had some share, for when the theory was first announced by Darwin some religious people thought that it cut at the foundations of their faith, and Huxley had to show that loyalty to truth is a feeling of equal sanctity to scientific men: hence there is some tinge of feeling, though repressed, in his argument, and a definite

consciousness of the feelings of his audience.

At the other extreme are the arguments where the appeal to feelings is everything, since it is clear that the audience is already of the speaker's way of thinking. Examples of such arguments are most apt to be found in speeches in political campaigns and in appeals for money to help forward charities of all kinds. It is probable that most of the conversions in political matters are through reading; consequently the purpose of the speeches is to stir up excitement and feeling to such a heat that the maximum of the party voters will take the trouble to go out to the polls. Arguments directed to this class, accordingly, are almost wholly appeals to feeling. The famous debate between Lincoln and Douglas in 1858 was of this character; of the thousands of people who heard them in one or another of the seven debates most had taken sides already. In such a case as this, however, where a change in general political opinion was impending, the reasoning of the debates had more force than in ordinary times, and probably helped many voters to a clearer view of a very distressing and harassing situation. Between times, however, in politics, where there are no great moral or practical differences between parties, the purpose of speeches is almost wholly persuasive. Success one way or another is a question of getting out the voters who more or less passively and as a matter of habit hold to the party. Party speakers, accordingly, use every device to wake up their voters, and to make them believe that there is a real crisis at hand. Every attempt is made to attach moral issues to the party platforms, and to show how the material prosperity of the voters will fail if the other party wins.

Roughly, therefore, we may say that persuasion tends to play a small part in arguments of facts, and a larger part in questions of policy. This is a rough generalization only, for every one knows what eloquence and efforts at eloquence go into the arguments before juries in capital cases, and how dry and abstract are the arguments before the judges on points of law, or on questions of public policy in books of political economy. But in the long run, the less feeling enters into decisions of questions of fact, the better.

Of the factors which make for the persuasiveness of an argument I will speak here of three--clearness of statement, appeal to the practical interests of the audience, and direct appeal to their feelings.

There can be no doubt that clearness of statement is a powerful element in making an argument persuasive, though the appeal that it makes to the feelings of the readers is slight and subtle. In practice we mostly read arguments either to help make up our minds on a subject or to get aid in defending views for which we have no ready support. In the latter case we do not need to be persuaded; but in the former there can be no question that an argument which clears up the subject, and makes it intelligible where before it was confusing, does have an effect on us over and above its aid to our thought.

56. The Practical Interests of the Audience. Of directly persuasive power, however, are the other two factors--the appeal to the practical

interests of readers, and the appeal to their emotions. Of these the appeal to practical interests has no proper place in arguments on questions of fact, but a large and entirely proper share in most arguments of policy. Henry Ward Beecher's speech on the slavery issue in the Civil War, before the cotton operatives of Liverpool,[60] is a classic example of the direct appeal to the practical interests of an audience. They were bitterly hostile to the North, because the supplies of cotton had been cut off by the blockade; and after he had got a hearing from them by appealing to the English sense of fair play, he drove home the doctrine that a slave population made few customers for the products of English mills. Then he passed on to the moral side of the question.

Arguments on almost all public questions--direct election of senators, direct primaries, commission form of government, tariff, currency, control of corporations, or, in local matters, the size of a school committee, the granting of franchises to street railroads or water companies, the laying out of streets, the rules governing parks--are all questions of policy in which the greatest practical advantage to the greatest proportion of those who are interested is the controlling force in the decision. At particular times and places moral questions may enter into some of these questions, but ordinarily we come to them to settle questions of practical advantage.

In arguments on all such questions, therefore, the direct appeal to the practical interests of the people you are addressing is the chief factor that makes for persuasiveness. Will a change to a commission form of

government make towards a reduction of taxes and towards giving greater and more equitably distributed returns for those that are levied? Will the direct primary for state officers make it easier and surer for the average citizen of the state to elect to office the kind of men he wants to have in office? Will a central bank of issue, or some institution like it, establish the business of the country on a basis less likely to be disturbed by panics? Will a competing street-car line make for better and cheaper transportation in the city? In all such questions the only grounds for decision are practical, and founded in the prosperity and the convenience of the people who have the decision.

To make arguments in such cases persuasive you must show how the question affects the practical interests of your readers, and then that the plan which you support will bring them the greatest advantage. Generalities and large political truths may help you to convince them; but to persuade them to active interest and action you must get down to the realities which touch them personally. If you are arguing for a commission government in your city on the ground of economy, show in dollars and cents what portion of his income the owner of a house and lot worth five or ten thousand dollars pays each year because of the present extravagance and wastefulness. If you can make a voter see that the change is likely to save him ten or twenty-five or a hundred dollars a year, you have made an argument that is persuasive. The arguments for the reformation of our currency system are aimed directly at the material interests of the business men of the country and their employees; and the pleas for one or another system attempt to show how each will conduce to the greater security and profit of the greatest

number of people.

To make such arguments count, however, you must deal in concrete terms. A recent argument[61] for the establishment of a general parcels post in this country presents figures to show that for the transportation of a parcel by express at a rate of forty-five cents, the railroad gets twenty-two and one-half cents for service which it could do at a handsome profit for five cents. Of the validity of these figures I have no means of judging; but the effectiveness of the argument lies in its making plain to each of its readers a fact which touches his pocket every time he sends a parcel by express. It is this kind of argument that has persuasiveness, for the way we spend our money and what we get for it come close home to most of us. Of all practical interests those of the purse are of necessity the most moving for all but the very rich.

Money interests, however, are far from being the only practical interests which concern us: there are many matters of convenience and comfort where an individual or a community is not thinking of the cost. Such questions as what kind of furnace to set up, whether to build a house of brick or of cement, which railroad to take between, two cities, are questions that draw arguments from other people than advertising agents. Of another sort are questions that concern education. What college shall a boy go to; shall he be prepared in a public school, or a private day school, or a boarding school? Shall a given college admit on certificate, or demand an examination of its own? Shall a certain public school drop Greek from its list of studies; shall it set up a course in manual training? All these are examples of another set of questions that

touch practical interests very closely. In arguments on such questions, therefore, if you are to have the power of persuading and so of influencing action, you must get home to the interests of the people you are trying to move. The question of schools is very different for a boy in a small country village and for one in New York City; the question of admission is different for a state university and for an endowed college; the question of Greek is different for a school which sends few pupils on to college and for one which sends many: and in each case if you want to influence action, you must set forth facts which bear on the problem as it faces that particular audience. Except perhaps for the highest eloquence, there is no such thing as universal persuasiveness. The questions which actively affect the average man usually concern small groups of people, and each group must be stirred to action by incentives adapted to its special interests.

57. The Appeal to Moral Interests. Still further from the interests that touch the pocket, and constantly in healthy and elevating action against them, are the moral interests. The appeal to moral motives is sometimes laughed at by men who call themselves practical, but in America it is in the long run the strongest appeal that can be made. We are still near enough to the men who fought through the Civil War, in which each, side held passionately to what it believed to be the moral right, for us to believe without too much complacency that moral forces are the forces that rule us as a nation. Mr. Bryan and Mr. Roosevelt have both been called preachers, and the hold they have had on great, though differing, parts of the American people is incontestable. If any question on which you have to argue has a moral side, it is not only

your duty, but it is also the path of expediency, to make appeal through the moral principle involved.

The chief difficulty with making an appeal to moral principles is to set them forth in other than abstract terms, since they are the product of a set of feelings which lie too deep for easy phrasing in definite words. In most cases we know what is right long before we can explain why it is right; and a man who can put into clear words the moral forces that move his fellows is a prophet and leader of men. Moreover, it must be remembered when one is appealing to moral principles that upright men are not agreed about all of them, and there is even more doubt and disagreement when one comes to the practical application of the principles. We have seen in Chapter I what bitter division arose in our fathers' time over the right and the righteousness of slavery; and how in many states to-day good and God-fearing people are divided on the question of prohibition.

But even where the two sides to a question agree on the moral principle which is involved, it by no means follows that they will agree on its application in a particular case. Church members accept the principle that one must forgive sinners and help them to reform; but it is another thing when it comes to getting work for a man who has been in prison, or help for a woman who has left her husband. How far is the condoning of offenses consistent with maintaining the standards of society? And in what cases shall we apply the principle of forgiveness? In a business transaction how far can one push the Golden Rule? Life would be a simpler matter if moral principles were always easy to apply to concrete

cases.

One must use the appeal to moral principles, therefore, soberly and with discretion. The good sense of readers will rebel if their moral sense is called on unnecessarily; and even when they cannot explain why they believe such an appeal unsound, yet their instincts will tell them that it is so. The creator whose right hand is always rising to heaven to call God to witness disgusts the right feeling of his audience. On the other hand, where moral principles are really concerned there should be no compromise. If in a political campaign the issue is between honesty and graft in the public service, or between an open discussion of all dealings which touch the public good, and private bargaining with party managers, the moral principles cannot be kept hidden. If a real moral principle is seriously involved in any question, the debate must rise to the level of that principle and let practical considerations go. And every citizen who has the advantage of having had more education than his fellows is thereby placed under obligation to hold the debate to this higher level.

58. The Appeal of Style. Finally, we have to consider the appeal to the emotions, which is the distinguishing essence of eloquence, and the attempts at it. In part this appeal is through the appeal to principles and associations which are close to the heart of the audience, in part through concrete and figurative language, in part through the indefinable thrill and music of style which lies beyond definition and instruction.

The appeal to venerated principle we have considered already, looked at from the side of morals rather than of emotions. But morality, so far as it is a coercive force in human conduct, is emotional; our moral standards lie beyond and above reason in that larger part of our nature that knows through feeling and intuition. All men have certain standards and principles whose names arouse strong and reverent emotions. Such standards are not all religious or moral in the stricter sense; some of them have their roots in systems of government. In a case at law, argued purely on a question of law, there does not seem much chance for the appeal to feeling; but Mr. Joseph H. Choate, in his argument on the constitutionality of the Income Tax of 1894, before the Supreme Court of the United States, made the following appeal to the principle of the sanctity of private property, and the words he used could not have failed to stir deep and strong feelings in the court.

No longer ago, if the Court please, than the day of the funeral procession of General Sherman in New York, it was my fortune to spend many hours with one of the ex-Presidents of the United States, who has since followed that great warrior to the bourne to which we were then bearing him. President Hayes expressed great solicitude as to the future fortunes of this people. In his retirement he had been watching the tendency of political and social purposes and events. He had observed how in recent years the possessors of political power had been learning to use it for the first time for the promotion of social and personal ends. He said to me, "You will probably live to see the day when in the case of the death of any man of large wealth the State will take for

itself all above a certain prescribed limit of his fortune and divide it, or apply it to the equal use of all the people, so as to punish the rich man for his wealth, and to divide it among those who, whatever may have been their sins, at least have not committed that." I looked upon it as the wanderings of a dreaming man; and yet if I had known that within less than five short years afterwards I should be standing before this tribunal to contest the validity of an alleged act of Congress, of a so-called law, which was defended here by the authorized legal representatives of the Federal Government upon the plea that it was a tax levied only upon classes and extremely rich men, I should have given altogether a different heed and ear to the warnings of that distinguished statesman.[62]

Our emotions do not rise, however, anymore surely in the case of our veneration for the basal principles of religion and government than in that of more personal emotions. The appeal to the Constitution is worn somewhat threadbare by the politicians who call on it at every election, small or great, as is the appeal to the principles of the Pilgrim Fathers. It takes eloquence now to rouse our feelings about these principles. If you have a case important enough to justify appeal to such great principles and the skill in language to give your appeal vitality, you may really arouse your readers. But, on the whole, it is sound advice to say, Wait a few years before you call on them.

The second mode of appeal to the feelings of your audience, that through concrete and figurative language, is more within the reach of advocates who are still of college age. This is particularly true of the use of

concrete language. It is a matter of common knowledge that men do not rouse themselves over abstract principles; they will grant their assent, often without really knowing what is implied by the general principle, and go away yawning. On the other hand, the man who talks about the real and actual things which you know is likely to keep your attention. This goes back to the truth that our emotions and feelings are primarily the reaction to the concrete things that happen to us. The spontaneous whistling and humming of tunes that indicate a cheerful heart rise naturally as a response to the sunlight in spring; the fear at the terror that flies in a nightmare is the instinctive and physical reaction to indigestion; we sorrow over the loss of our own friends, but not over the loss of some one else's. The stories that stir us are the stories that deal with actual, tangible realities in such terms that they make us feel that we are living the story ourselves. Stevenson has some wise words on this subject in his essay, "A Gossip on Romance." The doctrine holds true for the making of arguments.

Even where as in Burke's speech "On Conciliation with America," abstractness is not vagueness, the style would be more effective for the richer feeling that hangs over and around a concrete vocabulary. The great vividness of Macaulay's style, and its bold over so many readers, is largely due to his unfailing use of the specific word. If you will take the trouble to notice what arguments in the last few months have seemed to you especially persuasive, you will be surprised to find how definite and concrete the terms are that they use.

Accordingly, if you wish to keep the readers of your argument awake and

attentive, use terms that touch their everyday experience. If you are arguing for the establishment of a commission form of government, give in dollars and cents the sum that it cost under the old system to pave the three hundred yards of A Street, between 12th and 13th streets. The late Mr. Godkin of the New York _Evening Post_, in his lifelong campaign against corrupt government, to bring home to his readers the actual state of their city government and the character of the men who ran it, used their nicknames; "Long John" Corrigan, for example (if there had been such a personage); and "Bath-house John Somebody" has been a feature of campaigns in Chicago. The value of such names when skillfully used is that by their associations and connotation they do stir feeling. Likewise if you are arguing before an audience of graduates for a change from a group system to a free elective system in your college, you would use the names of courses with which they would be familiar and the names of professors under whom they had studied. If you were arguing for the introduction of manual training into a school, you would make taxpayers take an interest in the matter if you gave them the exact numbers of pupils from that school who have gone directly into mills or other work of the kind, and if you describe vividly just what is meant by manual training. If your description is in general terms they may grant you your principle, and then out of mere inertia and a vague feeling against change vote the other way.

A rough test for concreteness is your vocabulary: if your words are mostly Anglo-Saxon you will usually be talking about concrete things; if it is Latinate and polysyllabic it is probably abstract and general. Most of the things and actions of everyday life, the individual things

like "walls" and "puppies," "summer" and "boys," "buying" and "selling," "praying" and "singing," have names belonging to the Anglo-Saxon part of the language; and though there are many exceptions, like "tables," and "telephones," and "professors," yet the more your vocabulary consists of the non-Latinate words, the more likely it is to be concrete, and therefore to keep your readers' attention and feelings alive. Use the simple terms of everyday life, therefore, rather than the learned words which would serve you if you were generalizing from many cases. Stick to the single case before you and to the interests of the particular people you are trying to win over. To touch their feelings remember that you must talk about the things they have feelings about.

The use of similes and metaphors and other figurative language raises a difficult question. On the whole, perhaps the best advice about using them is, Don't unless you have to. In other words, where a figure of speech is a necessity of expression, where you cannot make your thought clear and impart to it the warmth of feeling with which it is clothed in your own mind except by a touch of imaginative color, then use a figure of speech, if one flashes itself on your mind. If you add it deliberately as adornment of your speech, it will strike a false note; if you laboriously invent it the effort will show. Unless your thought and your eagerness for your subject flow naturally and inevitably into an image, it is better to stick to plain speech, for any suggestion of insincerity is fatal to the persuasiveness of an argument.

The value of the figure of speech is chiefly in giving expression to feelings which cannot be set forth in abstract words, the whole of whose

meaning can be defined: in the connotation of words--that indefinable part of their meaning which consists in their associations, implications, and general emotional coloring--lies their power to clothe thought with the rich color of feeling which is the life. At the same time, they serve as a fillip to the attention. There are not very many people who can long keep the mind fixed on a purely abstract line of thought, and none can do it without some effort. Professor William James is a notable example of a writer whose thought flowed spontaneously into necessary figures of speech:

When one turns to the magnificent edifice of the physical sciences, and sees how it was reared; what thousands of disinterested moral lives of men lie buried in its mere foundations; what patience and postponement, what choking down of preference, what submission to the icy laws of outer fact are wrought into its very stones and mortar; how absolutely impersonal it stands in its vast augustness,--then how besotted and contemptible seems every little sentimentalist who comes blowing his voluntary smoke wreaths, and pretending to decide things out of his private dream.[63]

One cannot go to sleep over a style like that, for besides the obvious sincerity and rush of warm feeling, the vividness of the figures is like that of poetry. On the either hand, one must remember that it is given to few men to attain the unstudied eloquence of Professor James.

Fables and anecdotes serve much the same purpose, but more especially throw into memorable form the principle which they are intended to set forth. There are a good many truths which are either so complex or so subtle that they defy phrasing in compact form, yet their truth we all know by intuition. If for such a truth you can find a compact illustration, you can leave it much more firmly fixed in your readers' minds than by any amount of systematic exposition. Lincoln in his Springfield speech, for example, threw into striking form the feeling which was so common in the North, that each step forward in the advance of slavery so fitted into all earlier ones that something like a concerted plan must be assumed:

We cannot absolutely know that all these exact adaptations are, the result of preconcert. But when we see a lot of framed timbers, different portions of which we know have been gotten cut at different times and places and by different workmen,--Stephen, Franklin, Roger, and James, for instance,--and we see these timbers joined together, and see they exactly make the frame of a house or a mill, all the tenons and mortises exactly fitting, and all the lengths and proportions of the different pieces exactly adapted to their respective places, and not a piece too many or too few, not omitting even scaffolding,--or, if a single piece be lacking, we see the place in the frame exactly fitted and prepared yet to bring such piece in,--in such a case we find it impossible not to believe that Stephen and Franklin and Roger and James all understood one another from the beginning, and all worked upon a common plan or draft drawn up before the first blow was struck.

On the other hand, there is the danger of being florid or of playing the clown if you tell too many stories. Whether your style will seem florid or not depends a good deal on the part of the country you are writing for. There is no doubt that the taste of the South and of a good deal of the West is for a style more varied and highly colored than suits the soberer taste of the East. But whatever part of the country you are writing for, just so soon as your style seems to those special readers overloaded with ornament it will seem insincere. In the same way, if you stop too often to tell a story or to make your readers laugh, you will produce the impression of trifling with your subject. In both these respects be careful not to draw the attention of your readers away from the subject to your style.

The ultimate and least analyzable appeal of style is through that thrill of the voice which in written style appears as rhythm and harmony. Certain men are gifted with the capacity of so modulating their voices and throwing virtue into their tones that whoever hears them feels an indefinable thrill. So in writing: where sounds follow sounds in harmonious sequence, and the beat of the accent approaches regularity without falling into it, language takes on the expressiveness of music. It is well known that music expresses a range of feeling that lies beyond the powers of words: who can explain, for example, the thrill roused in him by a good brass band, or the indefinable melancholy and gloom created by the minor harmonies of one of the great funeral marches, or, in another direction, the impulse that sets him to whistling or singing on a bright morning in summer? There are many such

kinds of feeling, real and potent parts of our consciousness; and if we can bring them to expression at all, we must do so through the rhythm and other sensuous qualities of the style which are pure sensation.

How is that to be done? The answer is difficult, and like that concerning the use of figurative language: do not try for it too deliberately. If without your thinking of it you find yourself becoming more earnest in speech, and more impressed with the seriousness of the issue you are arguing, your voice will show it naturally. So when you are writing: your earnestness will show, if you have had the training and have the natural gift for expression in words, in a lengthening and more strongly marked rhythm, in an intangibly richer coloring of sound. In speech the rhythm is apt to be shown in what is called parallel structure, the repetition of the same form of sentence, and in rhetorical questions. In writing, these forms more easily tend to seem either excited or artificial. Sustained periodic structure, too, can be carried by the speaking voice, when it would lag if written. Every one recognizes this incommunicable thrill of eloquence in great speakers and writers, but it is so much a gift of nature that it is not wise consciously to cultivate it.

59. Fairness and Sincerity. In the long run, however, nothing makes an argument appeal more to readers than an air of fairness and sincerity. If it is evident in an argument of fact that you are seeking to establish the truth, or in an argument of policy that your single aim is the greatest good of all concerned, your audience will listen to you with favorable ears. If on the other hand you seem to be chiefly

concerned with the vanity of a personal victory, or to be thinking of selfish advantages, they will listen to you coolly and with jealous scrutiny of your points.

Accordingly, in making your preliminary survey to prepare the statement of the facts that are agreed on by both sides, go as far as you can in yielding points. If the question is worth arguing at all you will still have your hands full to get through it within your space. In particular waive all trivial points: nothing is more wearisome to readers than to plow through detailed arguments over points that no one cares about in the end. And meet the other side at least halfway in agreeing on the facts that do not need to be argued out. You will prejudice your audience if you make concessions in a grudging spirit. Likewise, wherever you have, to meet arguments put forward by the other side, state them with scrupulous fairness; if your audience has any reason to suppose that you are twisting the assertions of the other side to your own advantage, you have shaken their confidence in you, and thereby weakened the persuasive force of your argument. Use sarcasm with caution, and beware of any seeming of triumph. Sarcasm easily becomes cheap, and an air of triumph may look like petty smartness.

In short, in writing your argument, assume throughout the attitude of one who is seeking earnestly to bring the disagreement between the two sides to an end. If you are dealing with a question of fact, your sole duty is to establish the truth. If you are dealing with a question of policy, you know when you begin that whichever way the decision goes, one side will suffer some disadvantage; but aim to lessen that

disadvantage, and to discover a way that will bring the greatest gain to the greatest number. An obvious spirit of conciliation is a large asset in persuasion.

With the conciliation make clear your sincerity. A chief difficulty with making arguments written in school and college persuasive is that they so often deal with subjects in which it is obvious that the writer's own feelings are not greatly concerned. This difficulty will disappear when you get out into the world, and make arguments in earnest. A great part of Lincoln's success as an advocate is said to have been due to the fact that he always tried to compose his cases and to make peace between the litigants, and that he never took a case in which he did not believe. If you leave on your audience the impression that you are sincere and in earnest, you have taken a long step towards winning over their feelings.

On the whole, then, when one is considering the question of persuasion, the figure of speech of a battle is not very apt. It is all very well when you are laying out your brief to speak, of deploying your various points, of directing an attack on your opponent's weakest point, of bringing up reserve material in rebuttal; but if the figure gets you into the way of thinking that you must always demolish your opponent, and treat him as an enemy, it is doing harm. If you will take the trouble to follow the controversies which are going on in your own city and state over public affairs, you will soon see that in most of them the two sides break even, so far as intelligence and public-spiritedness go. In every transaction there are two sides; and the president of a street railroad may be as honest and as disinterested in seeking to get

the best of the bargain for his road as the representatives of the city are in trying to get the best of it for the public. There is no use going into a question of this sort with the assumption that you are on a higher moral plane than the other side. In some cases where a moral issue is involved there is only one view of what is right; if honesty is in the balance, there can be no other side. But, as we have seen, there are moral questions in which one must use his utmost strength for the right as he sees the right, and yet know all the time that equally honest men are fighting just as hard on the other side. No American who remembers the case of General Robert E. Lee can forget this puzzling truth. Therefore, unless there can be no doubt of the dishonesty of your opponent, turn your energies against his cause and not against him; and hold that the proper end of argument is not so much to win victories as to bring as many people as possible to agreement.

EXERCISES

1. Compare the length of the introductory part of the argument of the specimens at the end of this book; point out reasons for the difference in length, if you find any.

2. Find two arguments, not in this book, in which the main points at issue are numbered.

3. Find an argument, not in this book, in which a history of the case is part of the introduction.

4. Find an argument, not in this book, in which the definitions of terms occupy some space.

5. In the argument on which you are working, what terms need definition? How much space should the definitions occupy in the completed argument? Why?

6. In the argument on which you are working, how much of the material in the introduction to the brief shall you use in the argument itself? Does the audience you have in mind affect the decision?

7. How do you intend to distribute your space between the main issues you will argue out?

8. How much will explanation enter into your argument?

9. Find an argument, not in this book, in which the explanation chiefly makes the convincing power.

10. In which of the arguments in this book does explanation play the smallest part?

11. Examine five consecutive paragraphs in Huxley's argument on

evolution, or _The Outlook_ argument on the Workman's Compensation Act, from the point of view of good explanation.

12. Find two examples of arguments, not in this book, whose chief appeal is to the feelings.

13. Find an argument, not in this book, which is a good illustration of the power of tact.

14. Name an argument which you have read within a few months which made a special impression on you by its clearness.

15. Find an argument in the daily papers, on local or academic affairs, which makes effective appeal to the practical interests of its audience. Analyze this appeal.

16. Name three subjects of local and immediate interest on which you could write an argument in which you would appeal chiefly to the practical interests of your readers.

17. Name two current political questions which turn on the practical interests of the country at large.

18. Name two public questions now under discussion into which moral

issues enter. Do both sides on these questions accept the same view of the bearing of the moral issues?

19. Find an argument, not in this book, in which the eloquence of the style is a distinct part of the persuasive power.

20. What do you think of the persuasive power of Burke's speech "On Conciliation with America"? of its convincing power?

21. Find an argument, not in this book, in which the concreteness of the language adds to the persuasive power.

22. Find two examples, not in this book, of apt and effective figures of speech in an argument.

23. Find an example of an apt anecdote or fable used in an argument.

24. In Lincoln's address at Cooper Institute, what do you think of his attitude towards the South as respects fairness?

25. In the argument on which you are at work, what chance would there be of inducing agreement between the two sides?

CHAPTER V

DEBATING

60. The Nature of Debate. The essential difference between debate and written argument lies not so much in the natural difference between all spoken and written discourse as in the fact that in a debate of any kind there is the chance for an immediate answer to an opponent. Quickness of wit to see the weak points on the other side, readiness in attacking them, and resource in defending one's own points make the debater, as distinguished from the man who, if he be given plenty of time, can make a formidable and weighty argument in writing. The best debating is heard in deliberative bodies which are not too large, and where the rules are not too elaborate. Perhaps the best in the world is in the British House of Commons, for there the room is not so large that hearing is difficult, and skill in thrust and parry has been valued and practiced for generations.

The military figure for argument is more apposite in debate than anywhere else, for in the taking of the vote there is an actual victory and defeat, very different in nature from the barren decision of judges in intercollegiate and interscholastic contests. It is undoubtedly rare that a particular debate in any legislative body actually changes the result; but in the long run the debates in such bodies do mold public opinion, and within the body amalgamate or break up party ties. The resource and the ready knowledge of the subject under debate necessary to hold one's own in such running contests of wit Is an almost essential

characteristic of a party leader. It is on these two qualities that I shall chiefly dwell in this chapter.

61. Subjects for Debate. Debate almost always deals with questions of policy. In trials before a jury there is something approaching a debate over questions of fact; but the rules of evidence are so special, and within their range so strict, that even though the arguments are spoken, they can have little of the free give and take which makes the life and the interest of a real debate. Accordingly I shall draw my illustrations here from questions of policy, and so far as is possible from the sort of question that students are likely to turn their attention to. The later years of school and the whole of the college course are often the molding years for a man's views on all sorts of public questions. It has been said that a man's views rarely change after he is twenty-five years old; and though one must not take such a dictum too literally, yet unquestionably it has truth. At any rate it is certain that a student, whether in high school or college, if he is to do his duty as a citizen, must begin to think out many of the questions which are being decided in Congress, in state legislatures, and in smaller, more local bodies. At the same time, in every school and college questions are constantly under discussion of a nature to provide good practice in debate. Some of these questions must be decided by school committee, principal, faculty, or trustees, and most of them call for some looking up of facts. They would provide admirable material for the development of judgment and resource in debating, and in some cases a debate on them might have effect on the actual decision.

The choice of subject is even more important for debating than for written argument. In a written argument if you have a question which has two defensible sides, it does not make much difference whether one is easier to defend than the other: in a debate such a difference might destroy the usefulness of the subject. Though to some older minds the abolition of football is a debatable question, before an audience of undergraduates who had to vote on the merits of the question the subject would be useless, since the side which had to urge the abolition would here have an almost impossible task. So in a debate on the "closed shop," in most workingmen's clubs the negative would be able to accomplish little, for the other side would be intrenched in the prejudices and prepossessions of the audience. In political bodies unevenness of sides is of common occurrence, for a minority must always defend its doctrines, no matter how overwhelming the vote is certain to be. In the formal debates of school and college, on the other hand, where the conditions must be more or less artificial, the first condition is to choose a question which will give the two sides an even chance.

A fair test of this evenness of sides is to see whether the public which is concerned with the question is evenly divided: if about the same number of men who are acquainted with the subject and are recognized as fair-minded take opposite sides, the question is probably a good subject for debate. Even this test, however, may be deceptive, since believing a policy to be sound and being able to show that it is so are very different matters. The reasons for introducing the honor system into a certain school or college are probably easier to state and to support

than the reasons against introducing it; yet the latter may be unquestionably weighty.

In general, arguments which rest on large and more or less abstract principles are at a disadvantage as against arguments based on some immediate and pressing evil or on some obvious expediency. Arguments for or against a protective tariff on general principles of political economy are harder to make interesting and, therefore, cogent to the average audience than are those based on direct practical gains or losses. This difference in the ease with which the two sides of a question can be argued must be taken into account in the choice of a subject.

In the second place, the subject should be so phrased that it will inevitably produce a "head-on" collision between the two sides. If such a proposition as "The present city government should be changed" were chosen for a debate, one side might argue it as a question of the party or of the men who happened to be in control at the time, and the other as a question of the form of government. So on the question of self-government for a college or school, unless the type of self-government were carefully defined, the two sides might argue through the debate and not come in sight of each other. What was said in Chapter II about framing the proposition for an argument applies with even more force to finding the proposition for a debate; for here if they do not meet on an irreconcilable difference, there is little use in their coming together.

In the third place, it is desirable that the proposition should be so framed as to throw the burden of proof on the affirmative. Unless the side which opens the debate has something definite to propose, the debate must open more or less lamely, for it is hard to attack or oppose something which is going to be set forth after you have finished talking. Here, however, as in the case of written arguments, it must be remembered that burden of proof is a vague and slippery term; "he who asserts must prove" is a maxim that in debate applies to the larger issues only, and the average audience will give themselves little trouble about the finer applications of it. If you are proposing a change in present conditions, and the present conditions are not very bad, they will expect you to show why there should be a change, and to make clear that the change you propose will work an improvement. It is only when conditions have become intolerable that an audience thinks first of the remedy. In the ordinary school or college, for example, there is little reason in current conditions for introducing the honor system in examinations: in such a case the burden of proof on the affirmative would be obvious, If, however, as occasionally happens, there has been an epidemic of dishonesty in written work, then the authorities of the school and the parents would want to know why there should not be a change. But it would both bore and confuse an audience to explain to them at length the theory of the shifting of the burden of proof; and the chances are that they would say, "Why doesn't he prove his point, and not spend his time beating about the bush?"

Finally, the proposition should, if possible, give to the negative as

well as to the affirmative some constructive argument. If one side occupies itself wholly with showing the weakness of the arguments on the other side, you get nowhere on the merits of the question; for all that has been shown in the debate, the proposition put forward by the affirmative may be sound, and the only weakness lie in its defenders. Moreover, where the negative side finds no constructive argument on the merits of the question, or elects to confine itself to destructive, arguments, it must beware of the fallacy "of objections"; that is, of assuming that when it has brought forward some objections to the proposition it has settled the matter. As I have so often pointed out in this treatise, no question is worth arguing unless it has two sides; and that is merely saying, in another way, that to both sides there are reasonable objections. Where a negative side confines itself to destructive arguments it must make clear that the objections it presents are really destructive, or at any rate are clearly more grave than those which can be brought against leaving things as they are. And if they confine themselves to destroying the arguments brought forward by the affirmative in this particular debate, they must make clear that these arguments are the strongest that can be brought forward on that side.

On all questions as to construction of terms and burden of proof, it should be understood beforehand that the judges of a formal debate will heavily penalize anything like pettifogging or quibbling. The two sides should do their best to come to a "head-on" issue; and any attempt at standing on precise definition, or sharp practice in leading the other side away from the main question, should be held to be not playing the game. Where the judges are drawn from men of experience in affairs, as

is usually the case, they will estimate such boyish smartnesses at their true value.

62. Technical Forms. The formal debates of school and college have certain forms and conventions which are partly based on parliamentary procedure, partly have been worked out to make these debates more interesting and better as practice; and there are certain preliminary arrangements that improve debating both as intellectual training and as fun. I shall speak first of the forms and conventions.

In debates in school and college it is usual to have two or three on a side, and for good reasons. In the first place, the labor of working up the subject is shared, and it is better fun working with some one else. Then, in the debate itself there is more variety. In class debates there are usually two speakers on each side, with provision of time for several four- or five-minute speeches from the floor before the closing speeches in rebuttal.[64] If there are as many speakers as this a two-hour period must be allowed. This allotment of time will naturally be adapted to special conditions; as, for example, where it is desirable that there shall be more speakers from the floor, or where it is desired to give the whole time to the regular debaters. In important intercollegiate debates there are usually three speakers, each of whom has ten minutes for his main speech and five minutes for rebuttal. This arrangement varies greatly, however, in different places, and not infrequently there is only one speech in rebuttal. The affirmative is usually given the last speech, on the theory that it is a disadvantage to have to open the debate. Obviously, however, in practice the reverse

may often be true, since a skillful speech in opening may largely determine the course of the debate; and for this reason many debating societies and colleges allow the closing speech to the negative. It is wise not to look on any of these rules as inviolable.[65]

The distribution of the points between the speakers on a side should be made beforehand, but always with the understanding that the exigencies of the debate may upset the arrangement. We shall see presently the advantage there is in having each member of a "team" prepared to defend all the points on his side. The only speech for which a fixed program can be made beforehand is the first speech on the affirmative: obviously this must at any rate expound the main facts which the audience must know in order to understand the speeches that follow. After that each speaker should be prepared either to answer directly what has just been said or to explain why he postpones the answer. At the same time, unless his hand has been forced, he must make the point or points which have been committed to him in the preliminary plan of campaign. Each speaker after the first generally takes a minute or two to sum up the position as his side sees it; and the final speaker on each side ought to save time to recapitulate and drive home the main points that his side has made and the chief objections to the arguments on the other side. Beyond these suggestions, which should not be allowed to harden into invariable rules, much must be left to the swift judgment of the debaters. It is a good test of skill in debating to know just when to stick to such rules, and when to break away from them.

A debater uses certain forms which have long been established in

parliamentary law. To begin with, he never uses the name of his opponent: if he has to refer to him he refers indirectly in some such form as "the last speaker," "the first speaker for the affirmative," "the gentlemen from Wisconsin," "our opponents," "my colleague who has just spoken." This is an inviolable rule of all debating bodies, whether a class in school or college or one of the Houses of Congress.

In a formal debate the subject is stated by the presiding officer, who is usually not one of the judges, and he also introduces each of the speakers in the order agreed on beforehand.

In class debates the subject is usually given out by the instructor, who may assign the speakers, or may call for volunteers, or may let each member of the class take his turn in regular rotation. This distribution will usually work itself out to suit the class and the circumstances. In interscholastic and intercollegiate debates the subject is generally chosen by letting one side offer a number of subjects from which the other selects one. Sometimes the team which does not have the choice of subject has the choice of sides after the other team has picked the subject. In a triangular debate two or three subjects are proposed by each team, and then one is selected by preferential voting of all the contestants, first choice counting three points, second two, and third one. In such a contest each institution has two teams, one of which supports the affirmative, and the other the negative; and the three debates take place on the same day or evening.

In class debates the two sides should unite in preparing an agreed statement of facts, which shall contain so much of the history of the case as is pertinent, facts and issues which it is agreed shall be waived, and a statement of the main issues. Furthermore, it is highly desirable that the sides should submit to each other outline briefs covering the main points of their case. With such preparations there is little probability that there can be any failure to meet. The same preparations would be useful in interscholastic and intercollegiate debates, wherever they are practicable. Anything which leads to a thorough discussion of identical points and to the consequent illumination of the question makes these entertainments more valuable.

For intercollegiate and interscholastic debates it is wise to have some sort of instructions for the judges, which should be agreed on beforehand. These instructions must make clear that the decision is to turn not on the merits of the question, as in real life, but on the merits of the debaters. Among those merits the substance should count much more than the form. Of the points that count in judging the substance of the debate the instructions may note keenness of analysis, power of exposition, thoroughness of preparation, judgment in the selection of evidence, readiness and effectiveness in rebuttal, and grasp of the subject as a whole. For form the instructions may mention bearing, ease and appropriateness of gesture, quality and expressiveness of voice, enunciation and pronunciation, and general effectiveness of delivery. Sometimes these points are drawn up with percentages to suggest their proportionate weight; but it is doubtful whether so exact a calculation can ever be of practical value. In most cases the judges

will decide from a much less articulate sense of which side has the advantage.[66]

63. Preparations for Debating. Since the chief value of debating, as distinguished from written arguments, is in cultivating readiness and flexibility of wit, the speaking should be as far as possible extemporaneous. This does not imply that the speaking should be without preparation: on the contrary, the preparation for good debating is more arduous than for a written argument, for when you are on your feet on the platform you cannot run to your books or to your notes to refresh your memory or to find new material. The ideal debater is the man who so carries the whole subject in his mind that the facts flow to his mind as he talks, and fit into the plan of his argument without a break. To the rare men who remember everything they read, such readiness is natural, but to far the largest number of speakers it comes only through hard study of the material. Daniel Webster declared that the material for his famous Reply to Hayne had been in his desk for months. In so far as debating consists in the recitation of set speeches written out and committed to memory beforehand, it throws away most of what makes debating valuable, and tends to become elocution. We shall consider here, therefore, ways in which speakers can make themselves so familiar with the subject to be debated that they can confidently cut loose from their notes.

In the first place, each debater on a team should prepare himself on the whole subject, not only on the whole of his own side, but also on the whole of the other side. It is usual to divide up the chief points that

a team is to make among its different members; but in the sudden turns to which every debate is liable such assignment may easily become impossible. If the other side presents new material or makes a point in such a way as manifestly to impress the audience, the next speaker may have to throw over the point assigned to him and give himself immediately to refuting the arguments just made. Then his points must be left to his colleagues, and they must be able to use them to effect. Likewise a team should know the strong points on the other side as well as on its own, and come to the platform primed with arguments to meet them. In intercollegiate contests, to insure this fore-knowledge of the other side the speakers as part of their preparation meet men from their own college who argue out the other side in detail and at length. In a triangular contest each team from a college has the advantage of having worked up the subject in actual debate against the other. The more thoroughly you have worked up both sides of the question, the less likely are you to be taken by surprise by some argument which you do not know how to meet.

64. On the Platform. When it comes to the actual debate experience shows that speeches committed to memory are almost always ineffective as compared with extemporaneous speaking. Even when your confidence is not disturbed by a slippery memory there is an impalpable touch of the artificial about the prepared speech which impairs its vitality. On the other hand, especially with the first speeches on each side, you cannot get to your feet and trust entirely to the inspiration of the moment; you must have something thought out. One of the most notable lecturers in Harvard University prepares his lectures in a way which is an

excellent model for debaters. He writes out beforehand a complete analytical and tabulated plan of his lecture, similar to the briefs which have been recommended here in Chapter II, with each of the main principles of his lecture, and with the subdivisions and illustrations inserted. Then he leaves this outline at home and talks from a full and well-ordered mind. Some such plan is the best possible one for the main speeches in a debate. Often the plan can be most easily prepared by writing out the argument in full; and this expansion of the argument has the added advantage of providing you with much of your phrasing. But it is better not to commit the complete argument to memory: the brief of it, if thoroughly digested and so studied as to come readily to mind, is enough. Then practice, practice, practice, will give the ease and fluency that you need.

The rebuttal should always be extemporaneous. Even if you have foreseen the strongest points made by your opponent and prepared yourself to meet them, you cannot foresee just the way he will make the points. Nothing is more awkward in a debate than to begin with a few obviously extemporaneous remarks, and then to let loose a little speech which has been kept, as it were, in cold storage, and which just misses fitting the speech to which it should be an answer. It is better to make the rebuttal a little less sweeping than it might be and have it fall pat on the speech which it is attacking. Ready and spontaneous skill in rebuttal is the final excellence of debating. At the same time the skill should be so natural that wit and good humor may have their chance. If from the beginning you practice making your speeches in rebuttal offhand, you will constantly gain in confidence when you are called on

to speak.

Whether to take notes on to the platform or not is a somewhat disputed question. If you can speak without them and hold without stumbling to the main course of your argument, so much the better. On the other hand, most lawyers have their briefs when they are arguing on points of law, and some sort of rough notes when they are arguing before a jury; and when unassumingly and naturally used, notes are hardly observed by an audience. Only, if you do have notes, do not try to conceal them: hold them so that the audience will know what they are, and will not wonder what you are doing when you peer into the palm of your hand.

If you have passages to quote from a book or other document, have the book on the table beside you; its appearance will add substance to your point, and the audience will have ocular proof that you are quoting exactly.

For purposes of rebuttal it is usual to have material on cards arranged under the principal subdivisions of the subject, so that they can readily be found. These cards can be kept in the small wooden or pasteboard boxes that are sold for the purpose at college stationers. If the cards have the proper kind of headings, you can easily look them over while your opponent is speaking and pull out the few that bear on the point you are to meet. Examples of these cards have been given in Chapter II. The important thing for their use in a debate is to have the headings so clear and pertinent that you can instantly find the

particular card you want. Naturally you will have made yourself thoroughly familiar with them beforehand.

When you have to use statistics, simplify them so that your hearers can take them in without effort. Large numbers should be given in round figures, except where some special emphasis or perhaps some semihumorous effect is to be gained by giving them in full. Quotations from books or speeches must of necessity be short: where you have only ten minutes yourself you cannot give five minutes to the words of another man.

Keep your audience in good humor; if you can occasion ally relieve the solemnity of the occasion by making them laugh, they will like you the better for it, and think none the worse of your argument. On the other hand, remember that such diversion is incidental, and that your main business is to deal seriously with a serious question. The uneasy self-consciousness that keeps a man always trying to be funny is nowhere more out of place than in a debate.

65. Voice and Position. The matter of delivery is highly important, and here no man can trust to the light of nature. Any voice can be made to carry further and to be more expressive, and the poorest and thinnest voice can be improved. Every student who has a dream of being a public speaker should take lessons in elocution or in singing or in both. The expressiveness as well as the carrying power and the endurance of a voice depend on a knowledge of how to use the muscles of the chest, throat, and face; and trainers of the voice have worked out methods for

the proper use of all these sets of muscles. A man who throws his breath from the top of his chest and does not use the great bellows that reach down to his diaphragm can get little carrying power. So with the throat: if it is stiff and pinched the tones will be high and forced, and listening to them will tire the audience nearly as much as making them will tire the speaker. Finally, the expressiveness of a voice, the thrill that unconsciously but powerfully stirs hearers, is largely a matter of the resonance that comes from the spaces above the mouth and behind the nose. A humorous singing teacher once declared that the soul resides in the bridge of the nose; and the saying is not so paradoxical as it sounds. Lessons in the use of all these parts, and faithful practice in the exercises which go with them, are essential for any man who wishes to make a mark in public speaking.

With the use of the voice, though less essential, goes the position and bearing on the platform. It is not necessary to insist that the more natural this is, the better. If you can wholly forget yourself and think only of your points, the chances are that your attitudes and position will take care of themselves. Only, before thus forgetting yourself, form the habit of talking without putting your hands in your pockets. You ought to need your hands to talk with, if not as much as a Frenchman or an Italian, yet enough to emphasize your points naturally. The mere physical stimulus to the eye of an audience in following your movements will help to keep their attention awake. Every one who has tried lecturing to a large class knows how much easier it is to hold them if he stands up and moves a little from time to time. Learn to stand easily and naturally, with your chest well expanded, and your weight

comfortably balanced on your feet. If it comes natural to you, move about the stage slightly from time to time; but be careful not to look each time you move as if a string had been pulled. In attitude and gesture the only profitable council is, Be natural.

For all these matters of preparation, both of what you are going to say, the use of your voice, and your attitude and action on the platform, be prepared for hard practice with competent criticism. It is a good plan to practice talking from your outlines with your watch open, until you can bring your speech to an end in exactly the time allowed you. The gain in confidence when you go to the debate will in itself be worth the time. Again, practice speaking before a glass to make sure that you have no tricks of scowling or of making faces when you talk, and to get used to standing up straight and holding yourself well. What you see for yourself of your own ways will help you more than the advice of a critic.

But in all your preparation think beyond the special debate you are preparing for. What you are or should be aiming at is habit--the instinctive, spontaneous execution of rules which you have forgotten. When the habit is established you can let all these questions of voice, of attitude, of gesture, drop from your mind, and give your whole attention to the ideas you are developing, and the language in which you shall clothe them. Then the tones of your voice will respond to the earnestness of your feeling, and your gestures will be the spontaneous response to the emphasis of your thought. You will not be a perfect debater until all these matters are regulated from the unconscious

depths of your mind.

In your attitude towards the debaters on the other side be scrupulously fair and friendly. In class debates the matter is finished when the debate is over; and what you are after is skill, and not beating some one. In interscholastic and intercollegiate debates victory is the end; but even there, after the debate you will often go out to supper with your opponents. Therefore demolish their arguments, but do not smash their makers.

If the first speech falls to you, set forth the facts in such a way that not only your opponents will have no corrections or protests to make, but that they will be wholly willing to make a start from your foundation. Yield all trivial points: it is a waste of your time and proof of an undeveloped sense of proportion to haggle over points that in the end nobody cares about. You have won a point if you can make the audience and the judges feel that you are anxious to allow everything possible to the other side.

If your opponent trips on some small point of fact or reasoning, don't heckle him; let it pass, or, at the most, point it out with some kindly touch of humor. If his facts or his reasoning are wrong on important points, that is your opportunity, and you must make the most of it. Even then, however, stick to the argument, and keep away from any appearance of being personal.

66. The Morals of Debating. There is a moral or ethical side to practice in debating which one cannot ignore. It is dangerous to get into the habit of arguing lightly for things in which one does not believe; and students may be forced into doing this if great care is not taken in the choice of subjects and sides. The remedy lies in using, so far as they can be kept interesting, questions in which there is no moral element; but still better in assigning sides to correspond with the actual views and preferences of the debaters. Where a question of principle is involved no one should ever argue against his beliefs. The better class of lawyers are scrupulous about this: they will not accept a brief which they believe to be in a cause which ought not to win. If you have clearly made up your mind on a question of public policy, you are in a false position if you argue, even for practice, against what you believe to be the right.

The formal debates of school and college are of necessity barren of practical result; yet even here your discussions have a potent effect in molding your opinions. It is a habit of mankind to start idly talking on a subject, and as idly taking sides; then, when the talk grows warmer, in the natural desire to carry a point to talk themselves into belief. This is a human, though not a very reasonable way of framing your views on public questions; and it does not make either for consistency or for usefulness as a voter. It is not good to back one's self into opinions of what makes for the common weal.

Furthermore, debate is something very different from dispute: to talk

round and round a subject, contradicting blindly and asserting without bringing forward facts, has its place in our life with our friends, so long as it is good-natured; but it does not bring illumination. The essence of debate, whether in a classroom, in a city council, or in Congress, should be to throw light into dark corners, and to disentangle the view that most makes for the general good. For us in America _noblesse oblige_ applies to every educated man. The graduate of a high school, and, even more, the graduate of a college, has taken exceptional benefits from the community. This obligation he can in part repay by helping all citizens to a better understanding of the issues on which the progress of the nation turns.

Finally, debating should share the zest that comes of any good game that means hard work and an honorable struggle with opponents one respects and likes. It is preeminently a social occupation. The House of Commons has long been noted as the best club in England; and this sense of fellowship, of continuing friendship and intimacy, gives a charm to English parliamentary life which is hardly possible with the unwieldy numbers and huge hall of our own House of Representatives, but does spring out of the smaller and continuing membership of the Senate. A class in debating should have the sense of comradeship which comes of hard work together and the trying out of one's own powers against one's equals and betters, and from the memory of hard-fought contests; and intercollegiate and interscholastic contests should be carried on in the same spirit of zest in the hard work, of a sane desire to win, and of comradeship with worthy opponents.

EXERCISES

1. Name three questions in national affairs which have been debated within a month, on which you could profitably debate; three in state affairs; three in local affairs.

2. Name two subjects affecting your school or college which are under debate at the present time.

3. Name two subjects on which you could write an argument, but which would not be profitable for debate. Explain the reason.

4. Name two good subjects for a debate drawn from athletics; two from some current academic question; two from local or municipal affairs.

5. Find a proposition in which the two sides to a debate might in good faith pass each other without meeting. Make it over so that the issue would be unavoidable.

6. Frame a proposition in which the burden of proof would not be on the affirmative. Make it over so that the burden of proof would fall on the affirmative.

7. Draw up a scheme for a debate on one of the propositions in Exercise

4, with a tentative assignment of points to three debaters on a side.

8. Draw up a set of instructions to judges for an intercollegiate or interscholastic debate, so framed as to produce a decision on the points which seem to you the most important.

9. Prepare yourself for a five-minute extemporaneous speech on a subject on which you have written an argument.

10. Name three questions on which you could not, without violence to your convictions, argue on more than one side.

APPENDIX I

EXAMPLES OF ARGUMENT

THE THREE HYPOTHESES RESPECTING THE HISTORY OF NATURE[67]

THOMAS H. HUXLEY

This is the first of three lectures which make a continuous argument, which were delivered in New York. September 18, 20, and 22, 1876. It should therefore be regarded as the introductory part of the argument; and as a matter of fact it does not get to Huxley's positive proof, but

is occupied with disposing of the other theories. This refutation finished, Huxley was then at liberty to go ahead with the affirmative argument, as he indicates in the last paragraph of the lecture.

The argument is a notable piece of reasoning on a scientific subject, in terms which make it intelligible to all educated men. When Huxley spoke, the heat which had been kindled by the first announcement of the theory of evolution in Darwin's "Origin of Species" was still blazing; and there were many church people who held that the theory was subversive of religion, without giving themselves the trouble to understand it. This timid frame of mind explains Hurley's mode of approach to the subject.

We live in and form part of a system of things of immense diversity and perplexity, which we call Nature; and it is a matter of the deepest interest to all of us that we should form just conceptions of the constitution of that system and of its past history. With relation to this universe, man is, in extent, little more than a mathematical point: in duration but a fleeting shadow: he is a mere reed shaken in the winds of force. But, as Pascal long ago remarked, although a mere reed, he is a thinking reed; and in virtue of that wonderful capacity of thought, he has the power of framing for himself a symbolic conception of the universe, which, although doubtless highly imperfect and inadequate as a picture of the great whole, is yet sufficient to serve him as a chart for the guidance of his practical affairs. It has taken long ages of toilsome and often fruitless labor to enable man to look steadily at the shifting scenes of the phantasmagoria of Nature, to notice what is fixed among her fluctuations, and what is regular among her apparent

irregularities; and it is only comparatively lately, within the last few centuries, that the conception of a universal order and of a definite course of things, which we term the course of Nature, has emerged.

But, once originated, the conception of the constancy of the order of Nature has become the dominant idea of modern thought. To any person who is familiar with the facts upon which that conception is based, and is competent to estimate their significance, it has ceased to be conceivable that chance should have any place in the universe, or that events should depend upon any but the natural sequence of cause and effect. We have come to look upon the present as the child of the past and as the parent of the future; and, as we have excluded chance from a place in the universe, so we ignore, even as a possibility, the notion of any interference with the order of Nature. Whatever may be men's speculative doctrines, it is quite certain that every intelligent person guides his life and risks his fortune upon the belief that the order of Nature is constant, and that the chain of natural causation is never broken.

In fact, no belief which we entertain has so complete a logical basis as that to which I have just referred. It tacitly underlies every process of reasoning; it is the foundation of every act of the will. It is based upon the broadest induction, and it is verified by the most constant, regular, and universal of deductive processes. But we must recollect that any human belief, however broad its basis, however defensible it may seem, is, after all, only a probable belief, and that our widest and safest generalizations are simply statements of the highest, degree of

probability. Though we are quite clear about the constancy of the order of Nature, at the present time, and in the present state of things, it by no means necessarily follows that we are justified in expanding this generalization into the infinite past, and in denying, absolutely, that there may have been a time when Nature did not follow a fixed order, when the relations of cause and effect were not definite, and when extranatural agencies interfered with the general course of Nature. Cautious men will allow that a universe so different from that which we know may have existed; just as a very candid thinker may admit that a world in which two and two do not make four, and in which two straight lines do inclose a space, may exist. But the same caution which forces the admission of such possibilities demands a great deal of evidence before it recognizes them to be anything more substantial. And when it is asserted that, so many thousand years ago, events occurred in a manner utterly foreign to and inconsistent with the existing laws of Nature, men, who without being particularly cautious, are simply honest thinkers, unwilling to deceive themselves or delude others, ask for trustworthy evidence of the fact. Did things so happen or did they not? This is a historical question, and one the answer to which must be sought in the same way as the solution of any other historical problem.

* * * * *

So far as I know, there are only three hypotheses which ever have been entertained, or which well can be entertained, respecting the past history of Nature. I will, in the first place, state the hypotheses, and then I will consider what evidence bearing upon them is in our

possession, and by what light of criticism that evidence is to be interpreted.

Upon the first hypothesis, the assumption is, that phenomena of Nature similar to those exhibited by the present world have always existed; in other words, that the universe has existed from all eternity in what may be broadly termed its present condition.

The second hypothesis is, that the present state of things has had only a limited duration; and that, at some period in the past, a condition of the world, essentially similar to that winch we now know, came into existence, without any precedent condition from which it could have naturally proceeded. The assumption that successive stales of Nature have arisen, each without any relation of natural causation to an antecedent state, is a mere modification of this second hypothesis.

The third hypothesis also assumes that the present state of things has had but a limited duration; but it Supposes that this state has been evolved by a natural process from an antecedent state, and that from another, and so on; and, on this hypothesis, the attempt to assign any limit to the series of past changes is, usually, given up.

It is so needful to form clear and distinct notions of what is really meant by each of these hypotheses that I will ask you to imagine what, according to each, would have been visible to a spectator of the events which constitute the history of the earth. On the first hypothesis,

however far back in time that spectator might be placed, he would see a world essentially, though perhaps not in all its details, similar to that which now exists. The animals which existed would be the ancestors of those which now live, and similar to them; the plants, in like manner, would be such as we know; and the mountains, plains, and waters would foreshadow the salient features of our present land and water. This view was held more or less distinctly, sometimes combined with the notion of recurrent cycles of change, in ancient times; and its influence has been felt down to the present day. It is worthy of remark that it is a hypothesis which is not inconsistent with the doctrine of Uniformitarianism, with which geologists are familiar. That doctrine was held by Hutton, and in his earlier days by Lyell. Hutton was struck by the demonstration of astronomers that the perturbations of the planetary bodies, however great they may be, yet sooner or later right themselves; and that the solar system possesses a self-adjusting power by which these aberrations are all brought back to a mean condition. Hutton imagined that the like might be true of terrestrial changes; although no one recognized more clearly than he the fact that the dry land is being constantly washed down by rain and rivers and deposited in the sea; and that thus, in a longer or shorter time, the inequalities of the earth's surface must be leveled, and its high lards brought down to the ocean. But, taking into account the internal forces of the earth, which, upheaving the sea bottom, give rise to new land, he thought that these operations of degradation and elevation might compensate each other: and that thus, for any assignable time, the general features of our planet might remain what they are. And inasmuch as, under these circumstances, there need be no limit to the propagation of animals and plants, it is clear that the consistent working out of the uniformitarian idea might

load to the conception of the eternity of the world. Not that I mean to say that either Hutton or Lyell held this conception--assuredly not; they would have been the first to repudiate it. Nevertheless, the logical development of their arguments lends directly towards this hypothesis.

The second hypothesis supposes that the present order of things, at some no very remote time, had a sudden origin, and that the world, such as it now is, had chaos for its phenomenal antecedent. That is the doctrine which you will find stated most fully and clearly in the immortal poem of John Milton,--the English _Divina Commedia,_--"Paradise Lost." I believe it is largely to the influence of that remarkable work, combined with the daily teachings to which we have all listened in our childhood, that this hypothesis owes its general wide diffusion as one of the current beliefs of English-speaking people. If you turn to the seventh book of "Paradise Lost," you will find there stated the hypothesis to which I refer, which is briefly this: That this visible universe of ours came into existence at no great distance of time from the present; and that the parts of which it is composed made their appearance, in a certain, definite order, in the space of six natural days, in such a manner that, on the first of these days, light appeared; that, on the second, the firmament, or sky, separated the waters above, from the waters beneath the firmament; that, on the third day, the waters drew away from the dry land, and upon it a varied vegetable life, similar to that which now exists, made its appearance; that the fourth day was signalized by the apparition of the sun, the stars, the moon, and the planets; that, on the fifth day, aquatic animals originated within the

waters; that, on the sixth day, the earth gave rise to our four-footed terrestrial creatures, and to all varieties of terrestrial animals except birds, which had appeared on the preceding day; and, finally, that man appeared upon the earth, and the emergence of the universe from chaos was finished. Milton tells us, without the least ambiguity, what a spectator of these marvelous occurrences would have witnessed. I doubt not that his poem is familiar to all of you, but I should like to recall one passage to your minds, in order that I may be justified in what I have said regarding the perfectly concrete, definite picture of the origin of the animal world which Milton draws. He says:

"The sixth, and of creation last, arose
With evening harps and matin, when God said,
'Let tine earth bring forth soul living in her kind,
Cattle and creeping things, and beast of the earth,
Each in their kind!' The earth obeyed, and, straight
Opening her fertile womb, teemed at a birth.
Innumerous living creatures, perfect forms,
Limbed and full-grown. Out of the ground uprose,
As from his lair, the wild beast, where he wons
In forest wild, in thicket, brake, or den:
Among the trees in pairs they rose, they walked;
The cattle in the fields and meadows green;
Those rare and solitary; these in flocks
Pasturing at once, and in broad herds upsprung.
The grassy clods now calved; now half appears
The tawny lion, pawing to get free

His hinder parts--then springs, as broke from bonds,

And rampant shakes his brinded mane; the ounce,

The libbard, and the tiger, as the mole

Rising, the crumbled earth above them threw

In hillocks; the swift stag from underground

Bore up his branching head; scarce from his mould

Behemoth, biggest born of earth, upheaved

His vastness; fleeced the flocks and bleating rose

As plants; ambiguous between sea and land,

The river-horse and scaly crocodile.

At once came forth whatever creeps the ground,

Insect or worm."

There is no doubt as to the meaning of this statement, nor as to what a man of Milton's genius expected would have been actually visible to an eyewitness of this mode of origination of living things.

The third hypothesis, or the hypothesis of evolution, supposes that, at any comparatively late period of past time, our imaginary spectator would meet with a state of things very similar to that which now obtains; but that the likeness of the past to the present would gradually become less and less, in proportion to the remoteness of his period of observation from the present day: that the existing distribution of mountains and plains, of rivers and seas, would show itself to be the product of a slow process of natural change operating upon more and more widely different antecedent conditions of the mineral framework of the earth; until, at length, in place of that framework, he

would behold only a vast nebulous mass, representing the constituents of the sun and of the planetary bodies. Preceding the forms of life which now exist, our observer would see animals and plants not identical with them, but like them: increasing their differences with their antiquity, and at the same time becoming simpler and simpler; until, finally, the world of life would present nothing but that undifferentiated protoplasmic matter which, so far as our present knowledge goes, is the common foundation of all vital activity.

The hypothesis of evolution supposes that in all this vast progression there would be no breach of continuity, no point at which we could say "This is a natural process," and "This is not a natural process"; but that the whole might be compared to that wonderful process of development which may be seen going on every day under our eyes, in virtue of which there arises, out of the semifluid, comparatively homogeneous substance which we call an egg, the complicated organization of one of the higher animals. That, in a few words, is what is meant by the hypothesis of evolution.

* * * * *

I have already suggested that in dealing with these three hypotheses, in endeavoring to form a judgment as to which of them is the more worthy of belief, or whether none is worthy of belief--in which case our condition of mind should be that suspension of judgment which is so

difficult to all but trained intellects,--we should be indifferent to all _a priori_ considerations. The question is a question of historical fact. The universe has come into existence somehow or other, and the problem is, whether it came into existence in one fashion, or whether it came into existence in another; and, as an essential preliminary to further discussion, permit me to say two or three words as to the nature and the kinds of historical evidence.

The evidence as to the occurrence of any event in past time may be ranged under two heads, which, for convenience' sake, I will speak of as testimonial evidence and as circumstantial evidence. By testimonial evidence I mean human testimony; and by circumstantial evidence I mean evidence which is not human testimony. Let me illustrate by a familiar example what I understand by these two kinds of evidence, and what is to be said respecting their value.

Suppose that a man tells you that he saw a person strike another and kill him; that is testimonial evidence of the fact of murder. But it is possible to have circumstantial evidence of the fact of murder; that is to say, you may find a man dying with a wound upon his head having exactly the form and character of the wound which is made by an ax, and, with due care in taking surrounding circumstances into account, you may conclude with the utmost certainty that the man has been murdered; that his death is the consequence of a blow inflicted by another man with that implement. We are very much in the habit of considering circumstantial evidence as of less value than testimonial evidence, and it may be that, where the circumstances are not perfectly clear and

intelligible, it is a dangerous and unsafe kind of evidence; but it must not be forgotten that, in many cases, circumstantial evidence is quite as conclusive as testimonial evidence, and that, not unfrequently, it is a great deal weightier than testimonial evidence. For example, take the case to which I referred just now. The circumstantial evidence may be better and more convincing than the testimonial evidence; for it may be impossible, under the conditions that I have defined, to suppose that the man met his death from any cause but the violent blow of an ax wielded by another man. The circumstantial evidence in favor of a murder having been committed, in that case, is as complete and as convincing as evidence can be. It is evidence which is open to no doubt and to no falsification. But the testimony of a witness is open to multitudinous doubts. He may have been mistaken. He may have been actuated by malice. It has constantly happened that even an accurate man has declared that a thing has happened in this, that, or the other way, when a careful analysis of the circumstantial evidence has shown that it did not happen in that way, but in some other way.

We may now consider the evidence in favor of or against the three hypotheses. Let me first direct your attention to what is to be said about the hypothesis of the eternity of the state of things in which we now live. What will first strike you is, that it is a hypothesis which, whether true or false, is not capable of verification by any evidence. For, in order to obtain either circumstantial or testimonial evidence sufficient to prove the eternity of duration of the present state of nature, you must have an eternity of witnesses or an infinity of circumstances, and neither of these is attainable. It is utterly

impossible that such evidence should be carried beyond a certain point of time; and all that could be said, at most, would be, that so far as the evidence could be traced, there was nothing to contradict the hypothesis. But when you look, not to the testimonial evidence--which, considering the relative insignificance of the antiquity of human records, might not be good for much in this case--but to the circumstantial evidence, then you will find that this hypothesis is absolutely incompatible with such evidence as we have; which is of so plain and so simple a character that it is impossible in any way to escape from the conclusions which it forces upon us.

You are, doubtless, all aware that the outer substance of the earth, which alone is accessible to direct observation, is not of a homogeneous character, but that it is made up of a number of layers or strata, the titles of the principal groups of which are placed upon the accompanying diagram.[68] Each of these groups represents a number of beds of sand, of stone, of clay, of slate, and of various other materials.

On careful examination, it is found that the materials of which each of these layers of more or less hard rock are composed are, for the most part, of the same nature as those which are at present being formed under known conditions on the surface of the earth. For example, the chalk, which constitutes a great part of the Cretaceous formation in some parts of the world, is practically identical in its physical and chemical characters with a substance which is now being formed at the bottom of the Atlantic Ocean, and covers an enormous area; other beds of

rock are comparable with the sands which art; being formed upon seashores, packed together, and so on. Thus, omitting rocks of igneous origin, it is demonstrable that all these beds of stone, of which a total of not less than seventy thousand feet is known, have been formed by natural agencies, either out of the waste and washing of the dry land, or else by the accumulation of the exuviae of plants and animals. Many of these strata are full of such exuviae--the so-called "fossils."

Remains of thousands of species of animals and plants, as perfectly recognizable as those of existing forms of life which you meet with in museums, or as the shells which you pick up upon the seabeach, have been embedded in the ancient sands, or muds, or limestones, just as they are being embedded now, in sandy, or clayey, or calcareous subaqueous deposits. They furnish us with a record, the general nature of which cannot be misinterpreted, of the kinds of things that have lived upon thy surface of the earth during the time that is registered by this great thickness of stratified rocks. But even a superficial study of these fossils shows us that the animals and plants which live at the present time have had only a temporary duration; for the remains of such modern forms of life are met with, for the most part, only in the uppermost or latest tertiaries, and their number rapidly diminishes in the lower deposits of that epoch. In the older tertiaries, the places of existing animals and plants are taken by other forms, as numerous and diversified as those which live now in the same localities, but more or less different from them; in the Mesozoic rocks, these are replaced by others yet more divergent from modern types; and in the Paleozoic

formations the contrast is still more marked. Thus the circumstantial evidence absolutely negatives the conception of the eternity of the present condition of things. We can say with certainly that the present condition of things has existed for a comparatively short period; and that, so far as animal and vegetable nature are concerned, it has been preceded by a different condition. We can pursue this evidence until we reach the lowest of the stratified rocks, in which we lose the indications of life altogether. The hypothesis of the eternity of the present state of nature may therefore be put out of court.

We now come to what I will term Milton's hypothesis--the hypothesis that the present condition of things has endured for a comparatively short time; and, at the commencement of that time, came into existence within the course of six days. I doubt not that it may have excited some surprise in your minds that I should have spoken of this as Milton's hypothesis, rather than that I should have chosen the terms which are more customary, such as "the doctrine of creation," or the "Biblical doctrine," or "the doctrine of Moses," all of which denominations, as applied to the hypothesis to which I have just referred, are certainly much more familiar to you than the title of the Miltonic hypothesis. But I have had what I cannot but think are very weighty reasons for taking the course which T have pursued. In the first place, I have discarded the title of the doctrine of "creation," because my present business is not with the question why the objects which constitute Nature came into existence, but when they came into existence, and in what order. This is as strictly a historical question as the question when the Angles and the Jutes invaded England, and whether they preceded or followed the

Romans. But the question about creation is a philosophical problem, and one which cannot be solved, or even approached, by the historical method. What we want to learn is, whether the facts, so far as they are known, afford evidence that things arose in the way described-by Milton, or whether they do not; and, when that question is settled, it will be time enough to inquire into the causes of their origination.

In the second place, I have not spoken of this doctrine as the Biblical doctrine, It is quite true that persons as diverse in their general views as Milton the Protestant and the celebrated Jesuit Father Suarez, each put upon the first chapter of Genesis the interpretation embodied in Milton's poem. It is quite true that this interpretation is that which has been instilled into every one of us in our childhood; but I do not for one moment venture to say that it can properly be called the Biblical doctrine. It is not my business, and does not lie within my competency, to say what the Hebrew text does, and what it does not signify; moreover, were I to affirm that this is the Biblical doctrine, I should be met by the authority of many eminent scholars, to say nothing of men of science, who, at various times, have absolutely denied that any such doctrine is to be found in Genesis. If we are to listen to many expositors of no mean authority, we must believe that what seems so clearly defined in Genesis--as if very great pains had been taken that there should be no possibility of mistake--is not the meaning of the text at all. The account is divided into periods that we may make just as long or short as convenience requires. We are also to understand that it is consistent with the original text to believe that the most complex plants and animals may have been evolved by natural processes, lasting

for millions of years, out of structureless rudiments. A person who is not a Hebrew scholar can only stand aside and admire the marvelous flexibility of a language which admits of such diverse interpretations. But assuredly, in the face of such contradictions of authority upon matters respecting which he is incompetent to form any judgment, he will abstain, as I do, from giving any opinion.

In the third place, I have carefully abstained from speaking of this as the Mosaic doctrine, because we are now assured upon the authority of the highest critics, and even of dignitaries of the Church, that there is no evidence that Moses wrote the Book of Genesis, or knew anything about it. You will understand that I give no judgment--it would be an impertinence upon my part to volunteer even a suggestion--upon such a subject. But, that being the state of opinion among the scholars and the clergy, it is well for the unlearned in Hebrew lore, and for the laity, to avoid entangling themselves in such a vexed question. Happily, Milton leaves us no excuse for doubting what he means, and I shall therefore be safe in speaking of the opinion in question as the Miltonic hypothesis.

Now we have to test that hypothesis. For my part, I have no prejudice one way or the other. If there is evidence in favor of this view, I am burdened by no theoretical difficulties in the way of accepting it: but there must be evidence. Scientific men get an awkward habit--no, I won't call it that, for it is a valuable habit--of believing nothing unless there is evidence for it; and they have a way of looking upon belief which is not based upon evidence, not only as illogical, but as immoral. We will, if you please, test this view by the circumstantial evidence

alone; for, from what I have said, you will understand that I do not propose to discuss the question of what testimonial evidence is to be adduced in favor of it. If those whose business it is to judge are not at one as to the authenticity of the only evidence of that kind which is offered, nor as to the facts to which it bears witness, the discussion of such evidence is superfluous.

But I may be permitted to regret this necessity of rejecting the testimonial evidence the less, because the examination of the circumstantial evidence leads to the conclusion, not only that it is incompetent to justify the hypothesis, but that, so far as it goes, it is contrary to the hypothesis.

The considerations upon which I base this conclusion are of the simplest possible character. The Miltonic hypothesis contains assertions of a very definite character relating to the succession of living forms. It is stated that plants, for example, made their appearance upon the third day, and not before. And you will understand that what the poet means by plants are such plants as now live, the ancestors, in the ordinary way of propagation of like by like, of the trees and shrubs which flourish in the present world. It must needs be so; for, if they were different, either the existing plants have been the result of a separate origination since that described by Milton, of which we have no record, nor any ground for supposition that such an occurrence has taken place; or else they have arisen by a process of evolution from the original stocks.

In the second place, it is clear that there was no animal life before the fifth day, and that, on the fifth day, aquatic animals and birds appeared. And. it is further clear that terrestrial living things, other than birds, made their appearance upon the sixth day, and not before. Hence, it follows that, if, in the large mass of circumstantial evidence as to what really has happened in the past history of the globe, we find indications of the existence of terrestrial animals, other than birds, at a certain period, it is perfectly certain that all that has taken place since that time must be referred to the sixth day.

In the great Carboniferous formation,[69] whence America derives so vast a proportion of her actual and potential wealth, in the beds of coal which have been formed from the vegetation of that period, we find abundant evidence of the existence of terrestrial animals. They have been described, not only by European but by your own naturalists. There are to be found numerous insects allied to our cockroaches. There are to be found spiders and scorpions of large size, the latter so similar to existing scorpions that it requires the practiced eye of the naturalist to distinguish them. Inasmuch as these animals can be proved to have been alive in the Carboniferous epoch, it is perfectly clear that, if the Miltonic account is to be accepted, the huge mass of rocks extending from the middle of the Paleozoic formations to the uppermost members of the series, must belong to the day which is termed by Milton the sixth. But, further, it is expressly stated that aquatic animals took their origin upon the fifth day, and not before; hence, all formations in which remains of aquatic animals can be proved to exist, and which

therefore testify that such animals lived at the time when these formations were in course of deposition, must have been deposited during or since the period which Milton speaks of as the fifth. But there is absolutely no fossiliferous formation in which the remains of aquatic animals are absent. The oldest fossils in the Silurian rocks[70] are exuviae of marine animals; and if the view which is entertained by Principal Dawson and Dr. Carpenter respecting the nature of the _eozooen_ be well founded, aquatic animals existed at a period as far antecedent to the deposition of the coal as the coal is from us; inasmuch as the _eozooen_ is met with in those Laurentian strata which lie at the bottom of the series of stratified rocks. Hence it follows, plainly enough, that the whole series of stratified rocks, if they are to be brought into harmony with Milton, must be referred to the fifth and sixth days, and that we cannot hope to find the slightest trace of the products of the earlier days in the geological record. When we consider these simple facts, we see how absolutely futile are the attempts that have been made to draw a parallel between the story told by so much of the crust of the earth as is known to us and the story which Milton tells. The whole series of fossiliferous stratified rocks must be referred to the last two days; and neither the Carboniferous, nor any other, formation can afford evidence of the work of the third day.

Not only is there this objection to any attempt to establish a harmony between the Miltonic account and the facts recorded in the fossiliferous rocks, but there is a further difficulty. According to the Miltonic account, the order in which animals should have made their appearance in the stratified rocks would be this: Fishes, including the great whales,

and birds; after them, all varieties of terrestrial animals except birds.

Nothing could be further from the facts as we find them; we know of not the slightest evidence of the existence of birds before the Jurassic, or perhaps the Triassic, formation;[71] while terrestrial animals, as we have just seen, occur in the Carboniferous rocks.

If there were any harmony between the Miltonic account and the circumstantial evidence, we ought to have abundant evidence of the existence of birds in the Carboniferous, the Devonian, and the Silurian rocks. I need hardly say that this is not the case, and that not a trace of birds makes its appearance until the Tar later period which I have mentioned.

And again, if it be true that all varieties of fishes and the great whales, and the like, made their appearance on the fifth day, we ought to find the remains of these animals in the older rocks--in those which were deposited before the Carboniferous epoch. Fishes we do find, in considerable number and variety; but the great whales are absent, and the fishes are not such as now live. Not one solitary species of fish now in existence is to be found in the Devonian or Silurian formations. Hence we are introduced afresh to the dilemma which I have already placed before you: either the animals which came into existence on the fifth day were not such as those which are found at present, are not the direct and immediate ancestors of those which now exist; in which case

either fresh creations of which nothing is said, or a process of evolution must have occurred; or else the whole story must be given up as not only devoid of any circumstantial evidence, but contrary to such evidence as exists.

I placed before you in a few words, some little time ago, a statement of the sum and substance of Milton's hypothesis. Let me now try to state as briefly, the effect of the circumstantial evidence bearing upon the past history of the earth which is furnished, without the possibility of mistake, with no chance of error as to its chief features, by the stratified rocks. What we find is, that the great series of formations represents a period of time of which our human chronologies hardly afford us a unit of measure. I will not pretend to say how we ought to estimate this time, in millions or in billions of years. For my purpose, the determination of its absolute duration is wholly unessential. But that the time was enormous there can be no question.

It results from the simplest methods of interpretation, that leaving out of view certain patches of metamorphosed rocks, and certain volcanic products, all that is now dry land has once been at the bottom of the waters. It is perfectly certain that, at a comparatively recent period of the world's history--the Cretaceous epoch--none of the great physical features which at present mark the surface of the globe existed. It is certain that the Rocky Mountains were not. It is certain that the Himalaya Mountains were not. It is certain that the Alps and the Pyrenees had no existence. The evidence is of the plainest possible character, and is simply this:--We find raised up on the flanks of these

mountains, elevated by the forces of upheaval which have given rise to them, masses of Cretaceous rock which formed the bottom of the sea before those mountains existed. It is therefore clear that the elevatory forces which gave rise to the mountains operated subsequently to the Cretaceous epoch; and that the mountains themselves are largely made up of the materials deposited in the sea which once occupied their place. As we go back in time, we meet with constant alternations of sea and land, of estuary and open ocean; and, in correspondence with these alternations, we observe the changes in the fauna and flora to which I have referred.

But the inspection of these changes gives us no right to believe that there has been any discontinuity in natural processes. There is no trace of general cataclysms, of universal deluges, or sudden destructions of a whole fauna or flora. The appearances which were formerly interpreted in that way have all been shown to be delusive, as our knowledge has increased and as the blanks which formerly appeared to exist between the different formations have been filled up. That there is no absolute break between formation and formation, that there has been no sudden disappearance of all the forms of life and replacement of them by others, but that changes have gone on slowly and gradually, that one type has died out and another has taken its place, and that thus, by insensible degrees, one fauna has been replaced by another, are conclusions strengthened by constantly increasing evidence. So that within the whole of the immense period indicated by the fossiliferous stratified rocks, there is assuredly not the slightest proof of any break in the uniformity of Nature's operations, no indication that

events have followed other than a clear and orderly sequence.

That, I say, is the natural and obvious teaching of the circumstantial evidence contained in the stratified rocks. I leave you to consider how far, by any ingenuity of interpretation, by any stretching of the meaning of language, it can be brought into harmony with the Miltonic hypothesis.

There remains the third hypothesis, that of which I have spoken as the hypothesis of evolution; and I purpose that, in lectures to come, we should discuss it as carefully as we have considered the other two hypotheses. I need not say that it is quite hopeless to look for testimonial evidence of evolution. The very nature of the case precludes the possibility of such evidence, for the human race can no more be expected to testify to its own origin, than a child can be tendered as a witness of its own birth. Our sole inquiry is, what foundation circumstantial evidence lends to the hypothesis, or whether it lends none, or whether it controverts the hypothesis. I shall deal with the matter entirely as a question of history. I shall not indulge in the discussion of any speculative probabilities. I shall not attempt to show that Nature is unintelligible unless we adopt some such hypothesis. For anything I know about the matter, it may be the way of Nature to be unintelligible; she is often puzzling, and I have no reason to suppose that she is bound to fit herself to our notions.

I shall place before you three kinds of evidence entirely based upon

what is known of the forms of animal life which are contained in the series of stratified rocks. I shall endeavor to show you that there is one kind of evidence which is neutral, which neither helps evolution nor is inconsistent with it. I shall then bring forward a second kind of evidence which indicates a strong probability in favor of evolution, but does not prove it; and, lastly, I shall adduce a third kind of evidence which, being as complete as any evidence which we can hope to obtain upon such a subject, and being wholly and strikingly in favor of evolution, may fairly be called demonstrative evidence of its occurrence.

THE TRANSMISSION OF YELLOW FEVER BY MOSQUITOES

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This article is a scientific demonstration of a new fact. It shows clearly the processes of scientific reasoning based on the methods known to Logic as the Methods of Agreement and Difference. The theory that the germs of the disease are carried by mosquitoes seems first to have suggested itself to Dr. Sternberg and to Dr. Finlay through noticing a similarity of phenomena in many cases under different conditions. Yet, however plausible, the theory, neither of them could declare that he had discovered the fact until the experiments carried on under rigorous precautions had been tried. By these experiments all other causes were ruled out of consideration.

The discoveries which have been made in the past twenty-five years with reference to the etiology[73] of infectious diseases constitute the greatest achievement of scientific medicine and afford a substantial basis for the application of intelligent measures of prophylaxis.[74] We know the specific cause ("germ") of typhoid fever, of pulmonary consumption, of cholera, of diphtheria, of erysipelas, of croupous pneumonia, of the malarial fevers, and of various other infectious diseases of man and of the domestic animals, but, up to the present time, all efforts to discover the germ of yellow fever have been without success. The present writer, as a member of the Havana Yellow Fever Commission, in 1879, made the first systematic attempt to solve the unsettled questions relating to yellow fever etiology by modern methods of research.

Naturally the first and most important question to engage my attention was that relating to the specific infectious agent, or "germ," which there was every reason to believe must be found in the bodies of infected individuals. Was this germ present in the blood, as in the case of relapsing fever; or was it to be found in the organs and tissues which upon post-mortem examination give evidence of pathological changes, as in typhoid fever, pneumonia, and diphtheria; or was it to be found in the alimentary canal, as in cholera and dysentery?

The clinical history of the disease indicated a general blood infection. As my equipment included the best microscopical apparatus made, I had strong hopes that in properly stained preparations of blood

taken from the circulation of yellow fever patients my Zeiss 1-18 oil immersion objective would reveal to me the germ I was in search of. But I was doomed to disappointment. Repeated examinations of blood from patients in every stage of the disease failed to demonstrate the presence of microorganisms of any kind. My subsequent investigations in Havana, Vera Cruz, and Rio de Janeiro, made in 1887, 1888, and 1889, were equally unsuccessful. And numerous competent microscopists of various nations have since searched in vain for this elusive germ. Another method of attacking this problem consists in introducing blood from yellow fever patients or recent cadavers into various "culture media" for the purpose of cultivating any germ that might be present. Extended researches of this kind also gave a negative result, which in my final report I stated as follows:

The specific cause of yellow fever has not yet been demonstrated.

It is demonstrated that microorganisms, capable of development in the culture media usually employed by the bacteriologists, are only found in the blood and tissues of yellow fever cadavers in exceptional cases, when cultures are made very soon after death.

Since this report was made, various investigators have attacked the question of yellow fever etiology, and one of them has made very positive claims to the discovery of the specific germ. I refer to the Italian bacteriologist, Sanarelli. His researches were made in Brazil, and, singularly enough, he found in the blood of the first case examined

by him a bacillus. It was present in large numbers, but this case proved to be unique, for neither Sanarelli nor any one else has since; found it in such abundance. It has been found in small numbers in the blood and tissues of yellow fever cadavers in a certain number of the cases examined. But carefully conducted researches by competent bacteriologists have failed to demonstrate its presence in a considerable proportion of the cases, and the recent researches of Reed, Carroll, and Agramonte, to which I shall shortly refer, demonstrate conclusively that the bacillus of Sanarelli has nothing to do with the etiology of yellow fever.

So far as I am aware, Dr. Carlos Finlay, of Havana, Cuba, was the first to suggest the transmission of yellow fever by mosquitoes. In a communication made to the Academy of Sciences of Havana, in October, 1881, he gave an account of his first attempts to demonstrate the truth of his theory. In a paper contributed to _The Edinburgh Medical Journal_ in 1894, Dr. Finlay gives a summary of his experimental inoculations up to that date as follows:

A summary account of the experiments performed by myself (and some also by my friend, Dr. Delgado), during the last twelve years, will enable the reader to judge for himself. The experiment has consisted in first applying a captive mosquito to a yellow fever patient, allowing it to introduce its lance and to fill itself with blood; next, after the lapse of two or more days, applying the same mosquito to the skin of a person who is considered susceptible to yellow fever: and, finally, observing the effects, not only during the first two weeks, but during periods of

several years, so as to appreciate the amount of immunity that should follow.

Between the 30th of June, 1881, and the 2d of December, 1893, eighty-eight persons have been so inoculated. All were white adults, uniting the conditions which justify the assumption that they were susceptible to yellow fever. Only three were women. The chronological distribution of the inoculations was as follows: seven in 1881, ten in 1883, nine in 1885, three in 1886, twelve in 1887, nine in 1888, seven in 1889, ten in 1890, eight in 1891, three in 1892, and ten in 1893.

The yellow fever patients upon whom the mosquitoes were contaminated were, almost in every instance, well-marked cases of the albuminuric or melanoalbuminuric forms, in the second, third, fourth, fifth, or sixth day of the disease. In some of the susceptible subjects, the inoculation was repeated when the source of the contamination appeared uncertain.

Among the eighty-seven who have been under observation, the following results have been recorded:

Within a term of days, varying between five and twenty-five after the inoculation, _one_ presented a mild albuminuric attack, and _thirteen, only_ "acclimation fevers."

* * * * *

While Finlay's theory appeared to be plausible and to explain many of the facts relating to the etiology of yellow fever, his experimental inoculations not only failed to give it substantial support, but the negative results, as reported, by himself, seemed to be opposed to the view that yellow fever is transmitted by the mosquito. It is true that he reports one case which "presented a mild albuminuric attack" which we may accept as an attack of yellow fever. But in view of the fact that this case occurred in the city of Havana, where yellow fever is endemic, and of the eighty-six negative results from similar inoculations, the inference seemed justified that in this case the disease was contracted in some other way than as a result of the so-called "mosquito inoculation." The thirteen cases in which only "acclimation fevers" occurred "within a term of days varying between five and twenty-five after the inoculation" appeared to me to have no value as giving support to Finlay's theory; first, because these "acclimation fevers" could not be identified as mild cases of yellow fever; second, because the ordinary method of incubation in yellow fever, is less than five days; and, third, because these individuals, having recently arrived in Havana, were liable to attacks of yellow fever, or of "acclimation fever" as a result of their residence in this city and quite independently of Dr. Finlay's mosquito inoculations. For these reasons Dr. Finlay's experiments failed to convince the medical profession generally of the truth of his theory relating to the transmission of yellow fever, and this important question remained in doubt and a subject of controversy. One party regarded the disease as personally contagious and supposed it to be communicated directly from the sick to

the well, as in the case of other contagious diseases, such as smallpox, scarlet fever, etc. Opposed to this theory was the fact that in innumerable instances nonimmune persons had been known to care for yellow-fever patients as nurses, or physicians, without contracting the disease; also the fact that the epidemic extension of the disease depends upon external conditions relating to temperature, altitude, rainfall, etc. It was a well-established fact that the disease is arrested by cold weather and does not prevail in northern latitudes or at considerable altitudes. But diseases which are directly transmitted from man to man by personal contact have no such limitations. The alternate theory took account of the above-mentioned facts and assumed that the disease was indirectly transmitted from sick to well, as is the case in typhoid fever and cholera, and that its germ was capable of development external to the human body when conditions were favorable. These conditions were believed to be a certain elevation of the temperature, the presence of moisture and suitable; organic pabulum (filth) for the development of the germ. The two first-mentioned conditions were known to be essential, the third was a subject of controversy.

Yellow fever epidemics do not occur in the winter months in the temperate zone and they do not occur in arid regions. As epidemics have frequently prevailed in seacoast cities known to be in an insanitary condition, it has been generally assumed that the presence of decomposing organic material is favorable for the development of an epidemic and that, like typhoid fever and cholera, yellow fever is a "filth disease." Opposed to this view, however, is the fact that

epidemics have frequently occurred in localities (e.g. at military posts) where no local insanitary conditions were to be found. Moreover, there are marked differences in regard to the transmission of the recognized filth diseases--typhoid fever and cholera--and yellow fever. The first-mentioned diseases are largely propagated by means of a contaminated water supply, whereas there is no evidence that yellow fever is ever communicated in this way. Typhoid fever and cholera prevail in all parts of the world and may prevail at any season of the year, although cholera, as a rule, is a disease of the summer months. On the other hand, yellow fever has a very restricted area of prevalence and is essentially a disease of seaboard cities and of warm climates. Evidently neither of the theories referred to accounts for all of the observed facts with reference to the endemic prevalence and epidemic extension of the disease under consideration.

Having for years given much thought to this subject, I became some time since impressed with the view that probably in yellow fever, as in the malarial fevers, there is an "intermediate host." I therefore suggested to Dr. Reed, president of the board appointed upon my recommendation for the study of this disease in the island of Cuba, that he should give special attention to the possibility of transmission by some insect, although the experiments of Finlay seemed to show that this insect was not a mosquito of the genus _Culex_, such as he had used in his inoculation experiments. I also urged that efforts should be made to ascertain definitely whether the disease can be communicated from man to man by blood inoculations. Evidently if this is the case the blood must contain the living infectious agent upon which the propagation of the

disease depends, notwithstanding the fact that all attempts to demonstrate the presence of such a germ in the blood, by means of microscope and culture methods, have proved unavailing. I had previously demonstrated by repeated experiments that inoculations of yellow fever blood into lower animals--dogs, rabbits, guinea pigs--give a negative result, but this negative result might well be because these animals were not susceptible to the disease and could not be accepted as showing that the germ of yellow fever was not present in the blood. A single inoculation experiment on man had been made in my presence in the city of Vera Cruz, in 1887, by Dr. Daniel Ruiz, who was in charge of the civil hospital in that city. But this experiment was inconclusive for the reason that the patient from whom the blood was obtained was in the eighth day of the disease, and it was quite possible that the specific germ might have been present at an earlier period and that after a certain number of days the natural resources of the body are sufficient to effect its destruction, or in some way to cause its disappearance from the circulation.

This was the status of the question of yellow fever etiology when Dr. Reed and his associates commenced their investigations in Cuba during the summer of 1900. In a "Preliminary Note," read at the meeting of the American Public Health Association, October 22, 1900, the board gave a report of three cases of yellow fever which they believed to be direct results of mosquito inoculations. Two of these were members of the board, viz., Dr. Jesse W. Lazear and Dr. James Carroll, who voluntarily submitted themselves to the experiment. Dr. Carroll suffered a severe attack of the disease and recovered, but Dr. Lazear fell a victim to his

enthusiasm and died in the cause of science and humanity. His death occurred on September 25, after an illness of six days' duration. About the same time nine other individuals who volunteered for the experiment were bitten by infected mosquitoes--i.e. by mosquitoes which had previously been allowed to fill themselves with blood from yellow fever cases--and in these cases the result was negative. In considering the experimental evidence thus far obtained, the attention of the members of the board was attracted by the fact that in the nine inoculations with a negative result "the time elapsing between the biting of the mosquito and the inoculation of the healthy subject varied in seven cases from two to eight days, and in the remaining two from ten to thirteen days, whereas in two of the three successful cases the mosquito had been kept for twelve days or longer." In the third case, that of Dr. Lazear, the facts are stated in the report of the board as follows:

Case 3. Dr. Jesse W. Lazear, Acting Assistant Surgeon U.S. Army, a member of this board, was bitten on August 16, 1900 (Case 3, Table III) by a mosquito (_Culex fasciatus_), which ten days previously had been contaminated by biting a very mild case of yellow fever (fifth day). No appreciable disturbance of health followed this inoculation.

On September 13, 1900 (forenoon), Dr. Lazear, while on a visit to Las Animas Hospital, and while collecting blood from yellow fever patients for study, was bitten by a _Culex_ mosquito (variety undetermined). As Dr. Lazear had been previously bitten by a contaminated insect without after effects, he deliberately allowed this particular mosquito, which had settled on the back of his hand, to remain until it had satisfied

its hunger.

On the evening of September 18, five days after the bite, Dr. Lazear complained of feeling "out of sorts," and had a chill at 8 P.M.

On September 19, twelve o'clock noon, his temperature was 102.4 deg., pulse 112; his eyes were injected and his face suffused; at 3 P.M. temperature was 103.4 deg., pulse 104; 6 P.M., temperature 103.8 deg. and pulse 106; albumin appeared in the urine. Jaundice appeared on the third day. The subsequent history of this case was one of progressive and fatal yellow fever, the death of our much-lamented colleague having occurred on the evening of September 25, 1900.

Evidently in this case the evidence is not satisfactory as to the fatal attack being the result of the bite by a mosquito "while on a visit to Las Animas Hospital," although Dr. Lazear himself was thoroughly convinced that this was the direct cause of his attack.

The inference by Dr. Reed and his associates, from the experiments thus far made, was that yellow fever may be; transmitted by mosquitoes of the genus _Culex_, but that in order to convey the infection to a nonimmune individual the insect must be kept for twelve days or longer after it has filled itself with blood from a yellow fever patient in the earlier stages of the disease. In other words, that a certain period of incubation is required in the body of the insect before the germ reaches its salivary glands, and consequently before it is able to inoculate any

individual with the germs of yellow fever. This inference, based upon experimental data, received support from other observations, which have been repeatedly made, with reference to the introduction and spread of yellow fever in localities favorable to its propagation. When a case is imported to one of our southern seaport cities, from Havana, Vera Cruz, or some other endemic focus of the disease, an interval of two weeks or more occurs before secondary cases are developed as a result of such importation. In the light of our present knowledge this is readily understood. A certain number of mosquitoes having filled themselves with blood from this first case after an interval of twelve days or more bite nonimmune individuals living in the vicinity, and these individuals after a brief period of incubation fall sick with the disease; being bitten by other mosquitoes they serve to transmit the disease through the "intermediate host" to still others. Thus the epidemic extends, at first slowly from house to house, then more rapidly, as by geometrical progression.

It will be seen that the essential difference between the successful experiments of the board of which Dr. Reed is president and the unsuccessful experiments of Finlay consists of the length of time during which the mosquitoes were kept after filling themselves with blood from a yellow fever patient. In Finlay's experiments the interval was usually short,--from two to five or six days,--and it will be noted that in the experiments of Reed and his associates the result was invariably negative when the insect had been kept less than eight days (7 cases).

Having obtained what they considered satisfactory evidence that yellow

fever is transmitted by mosquitoes, Dr. Reed and his associates proceeded to extend their experiments for the purpose of establishing the fact in such a positive manner that the medical profession and the scientific world generally might be convinced of the reliability of the experimental evidence upon which their conclusions were based. These conclusions, which have been fully justified by their subsequent experiments, were stated in their "Preliminary Note" as follows:

1. Bacillus icteroides (Sanarelli) stands in no causative relation to yellow fever, but, when present, should be considered as a secondary invader in this disease.

2. The mosquito serves as the intermediate host for the parasite of yellow fever.

In "An Additional Note" read at the Pan-American Medical Congress held in Havana, Cuba, February 4,-7, 1901, a report is made of the further experiments made up to that date. In order that the absolute scientific value of these experiments may be fully appreciated I shall quote quite freely from this report with reference to the methods adopted for the purpose of excluding all sources of infection other than the mosquito inoculation:

In order to exercise perfect control over the movements of those individuals who were to be subjected to experimentation, and to avoid any other possible source of infection, a location was selected in an

open and uncultivated field, about one mile from the town of Quemados, Cuba. Here an experimental sanitary station was established under the complete control of the senior member of this board. This station was named Camp Lazear, in honor of our late colleague, Dr. Jesse W. Lazear, Acting Assistant Surgeon U.S.A., who died of yellow fever, while courageously investigating the causation of this disease. The site selected was well drained, freely exposed to sunlight and winds, and from every point of view satisfactory for the purposes intended.

The personnel of this camp consisted of two medical officers, Dr. Roger P. Ames, Acting Assistant Surgeon U.S.A., an immune, in immediate charge; Dr. R. P. Cooke, Acting Assistant Surgeon U.S.A., nonimmune; one acting hospital steward, an immune; nine privates of the hospital corps, one of whom was immune, and one immune ambulance driver.

For the quartering of this detachment, and of such nonimmune individuals as should be received for experimentation, hospital tents, properly floored, were provided. These were placed at a distance of about twenty feet from each other, and numbered 1 to 7 respectively.

Camp Lazear was established November 20, 1900, and from this date was strictly quarantined, no one being permitted to leave or enter camp except the three immune members of the detachment and the members of the board. Supplies were drawn chiefly from Columbia Barracks, and for this purpose a conveyance under the control of an immune acting hospital steward, and having an immune driver, was used.

A few Spanish immigrants recently arrived at the port of Havana were received at Camp Lazear, from time to time, while these observations were being carried out. A nonimmune person, having once left the camp, was not permitted to return to it under any circumstances whatsoever.

The temperature and pulse of all nonimmune residents were carefully recorded three times a day. Under these circumstances any infected individual entering the camp could be promptly detected and removed. As a matter of fact, only two persons, not the subject of experimentation, developed any rise of temperature; one, a Spanish immigrant, with probable commencing pulmonary tuberculosis, who was discharged at the end of three days: and the other, a Spanish immigrant, who developed a temperature of 102.6 deg. F. on the afternoon of his fourth day in camp. He was at once removed with his entire bedding and baggage and placed in the receiving ward at Columbia Barracks. His fever, which was marked by daily intermissions for three days, subsided upon the administration of cathartics and enemata. His attack was considered to be due to intestinal irritation. He was not permitted, however, to return to the camp.

No nonimmune resident was subjected to inoculation who had not passed in this camp the full period of incubation of yellow fever, with one exception, to be hereinafter mentioned.

For the purpose of experimentation subjects were selected as follows:

From Tent No. 2, 2 nonimmunes, and from Tent No. 5, 3 nonimmunes. Later, 1 nonimmune in Tent No. 6 was also designated for inoculation.

It should be borne in mind that at the time when these inoculations were begun, there were only 12 nonimmune residents at Camp Lazear, and that 5 of those were selected for experiment, viz., 2 in Tent No. 2, and 3 in Tent No. 5. Of these we succeeded in infecting 4, viz., 1 in Tent No. 2. and 3 in Tent No. 5, each of whom developed an attack of yellow fever within the period of incubation of this disease. The one negative result, therefore, was in Case 2--Moran--inoculated with a mosquito on the fifteenth day after the insect had bitten a case of yellow-fever on the third day. Since this mosquito failed to infect Case 4, three days after it had bitten Moran, it follows that the result could not have been otherwise than negative in the latter case. We now know, as the result of our observations, that in the case of an insect kept at room temperature during the cool weather of November, fifteen or even eighteen days would, in all probability, be too short a time to render it capable of producing the disease.

As bearing upon the source of infection, we invite attention to the period of time during which the subjects had been kept under rigid quarantine, prior to successful inoculation, which was as follows: Case 1, fifteen days; Case 3, nine days; Case 4, nineteen days; Case 5, twenty-one days. We further desire to emphasize the fact that this epidemic of yellow fever, which affected 33.33 per cent of the nonimmune residents of Camp Lazear, did not concern the seven nonimmunes occupying Tents Nos, 1, 4, 6 and 7, _but was strictly limited to those individuals

who had been bitten by contaminated mosquitoes._

Nothing could point more forcibly to the source of this infection than the order of the occurrence of events at this camp. The precision with which the infection of the individual followed the bite of the mosquito left nothing to be desired in order to fulfill the requirements of a scientific experiment.

In summing up their results at the conclusion of this report the following statement is made:

Out of a total or eighteen nonimmunes whom we have inoculated with contaminated mosquitoes, since we began this line of investigation, eight, or 44.4 per cent, have contracted yellow fever. If we exclude those individuals bitten by mosquitoes that had been kept less than twelve days after contamination, and which were therefore probably incapable of conveying the disease, we have to record eight positive and two negative results--80 per cent.

In a still later report (May, 1901) Dr. Reed says, "We have thus far succeeded in conveying yellow fever to twelve individuals by means of the bites of contaminated mosquitoes."

The nonimmune individuals experimented upon were all fully informed as to the nature of the experiment and its probable results and all gave

their full consent. Fortunately no one of these brave volunteers in the cause of science and humanity suffered a fatal attack of the disease, although several were very ill and gave great anxiety to the members of the board, who fully appreciated the grave responsibility which rested upon them. That these experiments were justifiable under the circumstances mentioned is, I believe, beyond question. In no other way could the fact established have been demonstrated, and the knowledge gained is of inestimable value as a guide to reliable measures of prevention. Already it is being applied in Cuba, and without doubt innumerable lives will be saved as a result of these experiments showing the precise method by which yellow fever is contracted by those exposed in an "infected locality." Some of these volunteers were enlisted men of the United States Army and some were Spanish immigrants who had recently arrived in Cuba. When taken sick they received the best possible care, and after their recovery they had the advantage of being "immunes" who had nothing further to fear from the disease which has caused the death of thousands and tens of thousands of Spanish soldiers and immigrants who have come to Cuba under the orders of their government or to seek their fortunes.

The experiments already referred to show in the most conclusive manner that the blood of yellow fever patients contains the infectious agent, or germ, to which the disease is due, and this has been further demonstrated by direct inoculations from man to man. This experiment was made by Dr. Reed at "Camp Lazear" upon four individuals, who freely consented to it; and in three of the four a typical attack of yellow fever resulted from the blood injection. The blood was taken from a vein

at the bend of the elbow on the first or second day of sickness and was injected subcutaneously into the four nonimmune individuals, the amount being in one positive case 2 cc, in one 1.5 cc, and in one O.5 cc. In the case attended with a negative result, a Spanish immigrant, a mosquito inoculation also proved to be without effect, and Dr. Reed supposes that this individual "probably possesses a natural immunity to yellow fever." Dr. Reed says with reference to these experiments:

It is important to note that in the three cases in which the injection of the blood brought about an attack of yellow fever, careful culture from the same blood, taken immediately after injection, failed to show the presence of Sanarelli's bacillus.

Having demonstrated the fact that yellow fever is propagated by mosquitoes, Dr. Reed and his associates have endeavored to ascertain whether it may also be propagated, as has been commonly supposed, by clothing, bedding, and other articles which have been in use by those sick with this disease. With reference to the experiments made for the solution of this question I cannot do better than to quote _in extensa_ from Dr. Reed's paper read at the Pan-American Medical Congress in Havana.

[This extract from Dr. Reed's paper describes in careful scientific detail the experiments which finally established the fact that the contagion came through mosquitoes, and in no other way. Into a small house, thoroughly air-proof, were brought bedclothes, clothing, and

other articles which had been contaminated by yellow fever patients. Then for twenty days men who were nonimmune to the fever slept in this building, with no evil effects. This experiment was repeated several times. Then in another building similar, except that it was ventilated by mosquito-proof windows, and had been thoroughly disinfected, another volunteer was bitten by mosquitoes which had first bitten patients suffering with yellow fever; and he developed the disease. The last paragraph of the extract is as follows:]

"Thus at Camp Lazear, of seven nonimmunes whom we attempted to infect by means of the bites of contaminated mosquitoes, we have succeeded in conveying the disease to six, or 85.71 per cent. On the other hand, of seven nonimmunes whom we tried to infect by means of fomites [cloth and other material generally capable of carrying germs] under particularly favorable circumstances, we did not succeed in a single instance."

It is evident that in view of our present knowledge relating to the mode of transmission of yellow fever, the preventive measures which have heretofore been considered most important, that is, isolation of the sick, disinfection of clothing and bedding, and municipal sanitation, are either of no avail or of comparatively little value. It is true that yellow fever epidemics have resulted, as a rule, from the introduction to a previously healthy locality of one or more persons suffering from the disease. But we now know that its extension did not depend upon the direct contact of the sick with the nonimmune individuals and that isolation of the sick from such contact is unnecessary and without

avail. On the other hand, complete isolation from the agent which is responsible for the propagation of the disease is all-important. In the absence of a yellow fever patient from which to draw blood the mosquito is harmless, and in the absence of the mosquito the yellow fever patient is harmless--as the experimental evidence now stands. Yellow fever epidemics are terminated by cold weather because the mosquitoes die or become torpid. The sanitary condition of our southern seaport cities is no better in winter than in summer, and if the infection attached to clothing and bedding it is difficult to understand why the first frosts of autumn should arrest the progress of an epidemic. But all this is explained now that the mode of transmission has been demonstrated.

Insanitary local conditions may, however, have a certain influence in the propagation of the disease, for it has been ascertained that the species of mosquito which serves as an intermediate host for the yellow fever germ may breed in cesspools and sewers, as well as in stagnant pools of water. If, therefore, the streets of a city are unpaved and ungraded and there are open spaces where water may accumulate in pools, as well as open cesspools to serve as breeding places for _Culex fasciatus_, the city will present conditions more favorable for the propagation of yellow fever than it would if well paved and drained and sewered.

The question whether yellow fever may be transmitted by any other species of mosquito than _Culex fasciatus_ has not been determined. Facts relating to the propagation of the disease indicate that the mosquito which serves as an intermediate host for the yellow fever germ

has a somewhat restricted geographical range and is to be found especially upon the seacoast and the margins of rivers in the so-called "yellow fever zone." While occasional epidemics have occurred upon the southwest coast of the Iberian Peninsula, the disease, as an epidemic, is unknown elsewhere in Europe, and there is no evidence that it has ever invaded the great and populous continent of Asia. In Africa it is limited to the west coast. In North America, although it has occasionally prevailed as an epidemic in every one of our seaport cities as far north as Boston, and in the Mississippi Valley as far north as St. Louis, it has never established itself as an epidemic disease within the limits of the United States. Vera Cruz, and probably other points on the Gulf coast of Mexico, are, however, at the present time, endemic foci of the disease. In South America it has prevailed as an epidemic at all of the seaports on the Gulf and Atlantic coasts, as far south as Montevideo and Buenos Aires, and on the Pacific along the coast of Peru.

The region in which the disease has had the greatest and most frequent prevalence is bounded by the shores of the Gulf of Mexico, and includes the West India islands. Within the past few years yellow fever has been carried to the west coast of North America, and has prevailed as an epidemic as far north as the Mexican port of Guaymas, on the Gulf of California.

It must be supposed that _Culex fasciatus_ is only found where yellow fever prevails. The propagation of the disease depends upon the introduction of an infected individual to a locality where this mosquito is found, at a season of the year when it is active. Owing to the short

period of incubation (five days or less), the brief duration of the disease and especially of the period during which the infectious agent (germ) is found in the blood, it is evident that ships sailing from infected ports, upon which cases of yellow fever develop, are not likely to introduce the disease to distant seaports. The continuance of an epidemic on shipboard, as on the land, must depend upon the presence of infected mosquitoes and of nonimmune individuals. Under these conditions we can readily understand why the disease should not be carried from the West Indies or from South America to the Mediterranean, to the east coast of Africa, or to Asiatic seaport cities. On the other hand, if the disease could be transmitted by infected clothing, bedding, etc., there seems no good reason why it should not have been carried to these distant localities long ago.

The restriction as regards altitude, however, probably depends upon the fact that the mosquito which serves as an intermediate host is a coast species, which does not live in elevated regions. It is a well-established fact that yellow fever has never prevailed in the City of Mexico, although the city has constant and unrestricted intercourse with the infected seaport, Vera Cruz. Persons who have been exposed in Vera Cruz during the epidemic season frequently fall sick after their arrival in the City of Mexico, but they do not communicate the disease to those in attendance upon them or to others in the vicinity. Evidently some factor essential for the propagation of the disease is absent, although we have the sick man, his clothing and bedding, and the insanitary local conditions which have been supposed to constitute an essential factor. I am not aware that any observations have been made

with reference to the presence or absence of _Culex fasciatus_ in high altitudes, but the inference that it is not to be found in such localities as the City of Mexico seems justified by the established facts already referred to.

As pointed out by Hirsch, "the disease stops short at many points in the West Indies where the climate is still in the highest degree tropical." In the Antilles it has rarely appeared at a height of more than seven hundred feet. In the United States the most elevated locality in which the disease has prevailed as an epidemic is Chattanooga, Tennessee, which is seven hundred and forty-five feet above sea level.

It will be remembered that the malarial fevers are contracted as a result of inoculation by mosquitoes of the genus _Anopheles_, and that the malarial parasite has been demonstrated not only in the blood of those suffering from malarial infection, but also in the stomach and salivary glands of the mosquito. If the yellow fever parasite resembled that of the malarial fevers, it would no doubt have been discovered long ago. But, as a matter of fact, this parasite, which we now know is present in the blood of those sick with the disease, has thus far eluded all researches. Possibly it is ultramicroscopic. However this may be, it is not the only infectious disease germ which remains to be discovered. There is no doubt a living germ in vaccine lymph and in the virus from smallpox pustules, but it has not been demonstrated by the microscope. The same is true of foot and mouth disease and of infectious pleuropneumonia of cattle, although we know that a living element of some kind is present in the infectious material by which these diseases

are propagated. In Texas fever, of cattle, which is transmitted by infected ticks, the parasite is very minute, but by proper staining methods and a good microscope it may be detected in the interior of the red blood corpuscles. Drs. Reed and Carroll are at present engaged in a search for the yellow fever germ in the blood and in the bodies of infected mosquitoes. What success may attend their efforts remains to be seen, but at all events the fundamental facts have been demonstrated that this germ is present in the blood and that the disease is transmitted by a certain species of mosquito--_Culex fasciatus_.

[At the end of the article General Sternberg reproduces the general orders issued to the army in Cuba with directions for the precautions to be taken against the disease.]

THE WORKMAN'S COMPENSATION ACT[75]

This is a good example of the high quality of argumentative writing which is being turned out by daily and weekly journals in great quantities throughout the year. This article, being from a weekly journal, is longer and more searching than the editorial in a daily paper, and to some extent partakes of the nature of an essay. It is notable for the thoroughness of the analysis of the question, for the careful review of the history of the case, and for the precise statement of the points at issue. There is little space for the presentation of evidence, though the specific statement of facts and the quotations from authorities, so far as they go, serve as evidence.

We purpose in this article to give to our readers an interpretation of the recent decision of the New York Court of Appeals declaring that the Workman's Compensation Act is unconstitutional. We regard this decision as of very great importance, because, if the Court has correctly interpreted the Constitution of the United States, that document prevents America from adopting an industrial reform which has been adopted as just and necessary by practically the entire civilized world. We do not believe that the interpretation of the Court is correct. It is, in our opinion, in conflict alike with the progress of civilization, the spirit of democracy, the principles of social justice, and the analogies and tendencies of law. And we believe that this unconscious attempt to fasten upon the workingman an unjust and intolerable burden from which all other civilized nations, with one exception, have relieved him, will ultimately prove as futile as was the conscious and deliberate attempt of the United States Supreme Court, under the lead of Chief Justice Taney, to halt the movement for the emancipation of the slaves.

In the earlier stages of industrial development, when industry was unorganized, machinery hardly existed, and labor was an individual handicraft, the courts naturally assumed that accidents occurring to a workman were probably due to his own negligence.

If he were mowing in a field and cut himself with his scythe, if he were digging a ditch and sprained his ankle, if he were cutting down a

tree and it fell upon him and broke his leg, he could recover from his employer only on proof that his employer was at fault. Nor could he recover if the accident were due to the carelessness of a fellow workman. There was always a natural presumption that he could better guard against such carelessness than could the probably absent employer. If he were turning a grindstone and his awkward fellow workman so held the scythe as to cut him, if he were in the forest and his fellow workman gave no notice of the falling tree, it was natural to presume that the carelessness was shared between the two, and the law would neither attribute blame to the employer nor levy the damage upon him when he was not blameworthy.

But the organization of labor and the creation of elaborate machinery has destroyed this presumption of the common sense, and therefore in all civilized countries has destroyed this presumption of law. When a railway train runs off the track because of a misplaced switch or a defective rail, there is no presumption that the engineer was careless or could have guarded against the carelessness of the switch tender or of the manufacturer of the rail. When a fire breaks out in a room where scores of shirt-waist makers are confined at their work and a hundred and forty of them are burned to death, there is no presumption that the impossibility of their escape through narrow passageways and a locked door was due to their carelessness, or that they were to blame because the tables at which they were working were wood, not metal, or that they could have prevented the careless fellow workman from throwing his cigarette down in the inflammable material which surrounded them. In fact, only a very limited number of modern accidents are due to the

carelessness of the injured party; probably a somewhat larger number are due to the carelessness of some other employee; while a very considerable proportion are incidents of the trade and due to no definite culpability which it is possible to trace home either to the employer or the employed.

The Christian nations of the world have, with singular unanimity, recognized this change, and have changed their laws to meet the new conditions. The change which they have made was indicated to them by their maritime laws, which in this respect have been alike in all civilized nations and from a very early period. An accident occurring to a sailor on shipboard has always been regarded as an accident to the ship; and the ship has always been required to bear the burden of his care and keep and cure. This right to be cared for does not rest on any assumption that the master of the ship has been negligent, nor is the seaman deprived of his right to care and keep and cure by proof that the accident was due in part, or even altogether, to his negligence. He is not debarred from recovery by proof of his carelessness; he is not given larger damages upon proof of the negligence of the master. His right to be cared for rests, says Mr. Justice Story, upon the fact that "seamen are in some sort co-adventurers upon the voyage." Modern jurisprudence throughout Christendom recognizes that under modern industrial conditions the workman in the railway, the mine, and the factory is a co-adventurer in the enterprise, and that the hazards incident to his employment should be borne, not by the individual, but by the industry. This principle is now recognized and incorporated in their legal, systems by every country in Europe (including Russia but not Turkey)

with the single exception of Switzerland.[76]

The justice and importance of this reform have been recognized by such statesmen as the President of the United States and his predecessor in office, by such lawyers as Elihu Root, by workmen who desire some better insurance against accident than is furnished them by a right to sue their employers, by employers who desire to be protected from vexatious lawsuits and the peril of verdicts for great sums, and by about half a dozen states, including Kansas, New Jersey, Massachusetts, and New York, all of which have passed Workmen's Compensation Acts. Such an act, shifting the responsibility for the risks which are incident to the trade in organized industry from the individual to the organization, the New York Court of Appeals declares no state in the Union has authority to enact, because the Constitution of the United States forbids its enactment. The Court recognizes the need for a change in the Law. "We desire," says the Court, "to present no purely technical or hypercritical obstacles to any plan for the beneficent reformation of a branch of our jurisprudence in which, it may be conceded, reform is a consummation devoutly to be wished." It presents forcibly, appreciatively, and apparently with entire approbation, the arguments which have brought about this reform in other lands: "There can be no doubt as to the theory of this law. It is based upon the proposition that the inherent risks of an employment should, in justice, be placed upon the shoulders of the employer, who can protect himself against loss by insurance, and by such an addition to the price of his wares as to cast the burden ultimately upon the consumer; that indemnity to an injured employee should be as much a charge upon the business as the

cost of replacing or repairing disabled or defective machinery, appliances, or tools; that under our present system the loss falls immediately upon the employee, who is almost invariably unable to bear it, and ultimately upon the community, which is taxed for the support of the indigent; and that our present system is uncertain, unscientific, and wasteful, and fosters a spirit of antagonism between employer and employee which it is for the interest of the state to remedy."

To these considerations the Court suggests no reply, and upon them it offers no criticism. On the contrary, it in terms concedes "the strength of this appeal to recognized and widely prevalent sentiment." It declares that "no word of praise could overstate the industry and Intelligence of the Commission" which prepared the New York law, and it apparently agrees with the conclusion of the Commission, based on "a most voluminous array of statistical tables, extracts from the works of philosophical writers, and the industrial laws of many countries"--the conclusion that "our own system of dealing with industrial accidents is economically, morally, and legally unsound." But all these considerations of public policy, social justice, and world-wide conviction are set aside "as subordinate to the primary question whether they can be molded into statutes without infringing upon the letter or spirit of our own written Constitution." The countries which have adopted this desirable reform, it is said, "are so-called constitutional monarchies in which, as in England, there is no written constitution, and the Parliament or lawmaking body is supreme. In our country the Federal and State Constitutions are the charters which demark the extent and the limitation of legislative power."

In brief: The change in the law is just: it is demanded by the change which has taken place in our industrial system; it is all but universally desired; the experience and the conscience of the civilized world call for it; but America is powerless to make it under her present Constitution. Other countries can make it because they are monarchies: America cannot make it because she is free.

The clause in the Constitution which, in the opinion of the Court of Appeals, prohibits the legislature from making this wise and just reform in our law is the clause which provides that "no person shall be ... deprived of life, liberty, or property without due process of law"--a prohibition which occurs twice in our Federal Constitution (Amendments V and XIV), and is to be found in many, very probably in most, State Constitutions. We believe that the Court of Appeals, in its contention that this clause in our Constitution prohibits this just and necessary reform in our industrial laws, is sustained neither by the spirit nor by the letter of this clause in the Constitution, neither by the history of its origin and significance nor by the course of judicial interpretation which has been given to it by the United Slates Supreme Court.

Let the reader stop a moment here and reflect upon the principle involved in the law enacted in other civilized countries and proposed in ours. It is not that an employer should be mulcted in damages when he has been guilty of no fault. It is not that he should be compelled to pay for his carelessness without an opportunity to prove to the court

that he has not been careless. It is that accidents occurring in the course of organized industry should be held to have occurred, not to the individual, but to the industry.

"In everything within the sphere of human activity," says the Court of Appeals, "the risks which are inherent and unavoidable must fall upon those who are exposed to them." The jurists of all the civilized countries of Europe agree that in modern organized industries it is the industry, not the individual, that is exposed to the accidents. The law applies to the factory hand for the future the principle heretofore applied to the seaman in maritime law. The factory hand is henceforth to be regarded as a "co-adventurer" with the employer in the industry.

Nor is "due process of law" denied by the Workman's Compensation Act. No damages can be recovered from the employer against his consent without a suit at law. The statute in terms provides that "any question which shall arise under this act shall be determined either by agreement or by arbitration as provided in the Code of Civil Procedure, or by an action at law as herein provided." And what is provided is that, if the employer fail to make compensation as provided by the Act, the injured party or his guardian or executor may sue for the amount. The law does not deny the employer his day in court. But it redefines the question for the court to decide. It has not to decide whether the employer is guilty of fault. His liability does not depend on his fault. The court has simply to decide whether the accident occurred in the due course of the business, and, if the employer chooses to raise the question, whether it was "caused in whole or in part by the serious and willful

misconduct of the workman." If not, the workman is entitled to recover, and the amount which he is entitled to recover is fixed by the statute. The question, then, is this:

Does a law which, for accidents in certain carefully defined and especially dangerous employments, transfers the liability from the individual to the organization, and which carefully preserves the right of the employer to submit any questions which arise under the law to the courts for adjudication, deprive the employer of his property without due process of law? The Court of Appeals of New York State affirms that it does. _The Outlook_ affirms that it does not.

To state this question appears to us to answer it. Certainly there is nothing in the Workman's Compensation Act which violates the _letter_ of the Constitution. It does not in terms take the property of the employer without due process of law. How any one can find in the act a violation of the _spirit_ of the Constitution we find it difficult to conceive. And that difficulty is enhanced, not relieved, by a careful study of the opinions of the Court. For in those opinions it is assumed that on its face the law is unconstitutional, and the Court devotes all its intellectual energies to an attempt to show that the authorities cited in opposition are exceptional. That the law and the Constitution are not inconsistent is, however, established both by a consideration of the object and intent of the Constitutional provision and by judicial decisions interpreting it. To these two considerations we now direct the attention of the reader.

The provision in the federal Constitution that "no person shall be ... deprived of life, liberty, or property, except by due process of law" (Fifth Amendment), and the provision, "nor shall any state deprive any person of life, liberty, or property without due process of law" (Fourteenth Amendment), are derived from the Great Charter wrested from King John by the Barons in 1215. "No freeman shall be taken or imprisoned, or disseized, or outlawed, or banished, or any ways destroyed, nor will we pass upon him, nor will we send upon him, unless by the lawful judgment of his peers, or by the law of the land." This is perhaps the most important of those general clauses in the Great Charter which, says Hallam in his "History of the Middle Ages," "protect the personal liberty and property of all freemen by giving security from arbitrary imprisonment and arbitrary spoliation." Hume gives some intimation of the abuses that led to this provision: merchants had been subjected to arbitrary tolls and impositions; the property of the dying had been seized and their lawful heirs dispossessed; officers of the Crown had levied on horses and carts in time of peace for their own or the public service. Green, in his "History of the English People," gives the picture of John's despotism and of the growing spirit of liberty in the English common people with greater detail The King's exactions drove the Barons into alliance with the people. "Illegal exactions, the seizure of their castles, the preference shown to foreigners, were small provocations compared with his attacks on the honor of their wives and daughters." The demand of the common people to substitute due process of law for wager by battle, and to be secure in their lives, their liberties, and their property from acts of lawless and irresponsible power, the Barons made their own, and by the same act claimed for others

what they claimed for themselves. "The under tenants were protected against all exactions of their lords in precisely the same terms as they were protected against the lawless exactions of the Crown."

From such a provision for the protection of the fundamental rights of person and property it is a far cry to the conclusion that the people cannot remedy the injustice which inflicts all the consequences of accidents which occur in extrahazardous trades upon the individual who, in practicing that trade, happens to be subjected to the peril. Common sense, as well as frequent decisions of the courts, sustain Daniel Webster's definition of the scope of the Constitutional provision embodying in our law this provision of the Great Charter: "The meaning is that every citizen shall hold his life, liberty, and property and immunities under the protection of general rules which govern society." That society can never make new rules for the better protection of life, liberty, and property and immunities, is a doctrine as repugnant to reason as it is to social progress. It is equally repugnant to the principle of interpretation laid down by the Supreme Court of the United States: "The law is perfectly well settled that the first ten amendments to the Constitution, commonly known as the Bill of Rights, were not intended to lay down any novel principles of government, but simply to embody certain guarantees and immunities which we had inherited from our English ancestors."[77] And it seems never even to have occurred to English law makers that the Workman's Compensation Act is inconsistent with this provision of their Great Charter--a charter which is as much a part of the British constitution as the Fifth and Tenth Amendments are of ours. In the English Constitution, as in the American, the principle

is carefully defined in writing. The only difference is that in England the Parliament is the final judge of its meaning; in the United States that final judge is the Supreme Court of the United States.

At least it ought to be. But the New York Court of Appeals does not allow that it is the final authority. In this particular case it is not, for no appeal lies by the plaintiff in this case from the state to the national court. But an appeal does lie by the public. _The Outlook_ takes such an appeal. And it declares without hesitation that the decision of the New York Court of Appeals is in conflict, not only with the trend of judicial decisions in that Court, but also with its very explicit statement of the fundamental principles to be applied in interpreting the Constitution.

We have already noted the fact that maritime law regards a seaman as a co-adventurer with the shipowner, and therefore makes the ship liable for his care, keep, and cure in case any accident occurs to him, even though it be produced by his own fault. We now add that the Supreme Court of the United States has decided that such a law does not take the shipowner's property without due process of law. That, says the Court of Appeals, is different, for "the contract and services of seamen are exceptional in character ... When he is sick or injured he is entitled to be cared for at the expense of the ship, and for the failure of the master to perform his duty in this regard the ship or the owner is liable." No doubt there is a difference between a seaman on a ship and a factory hand in a factory. Very probably that difference ought to weigh with the representatives of the people in determining what difference

there should be in their respective treatment. But if making a ship liable for accidents happening to a seaman does not take the shipowner's property without due process of law, then rendering a factory liable for accidents happening to a factory hand does not lake the factory owner's property without due process of law. The Constitution of the United States is precisely the same on sea as on land; but to the Constitution of the United Slates the Court of Appeals gives one meaning on shipboard and another meaning in the town.

The right of the legislature to impose new responsibilities upon property is not confined by the United States Supreme Court to the sea. It is equally sustained upon the land. The State of Oklahoma provided for an assessment on all banks in the State in order to create a fund for the purpose of guaranteeing the depositors in all banks in the State. The Noble State Bank brought suit against the State to prevent it from collecting this assessment, on the ground that it was taking property without due process of law. The Supreme Court, without a dissenting opinion, held that the act was constitutional, on two grounds: first, because "it is established by a series of cases that an ulterior public advantage may justify a comparatively insignificant taking of private property for what in its immediate purpose is a private use"; and, second, because "it may be said in a general way that the police power extends to all the great public needs. It may be put forth in aid of what is sanctioned by usage or held by the prevailing morality or strong and preponderant opinion to be greatly and immediately necessary to the public welfare." A similar case coming before the Court from the State of Kansas was decided with the same

unanimity by the Court at the same time.[78]

This definition of Constitutional law by the unanimous opinion of the Supreme Court of the United Slates, if accepted, clearly determines the constitutionality of the Workman's Compensation Act. That this Act "is sanctioned by usage and held by the prevailing morality and strong and preponderant opinion to be greatly and immediately necessary to the public welfare" is proved by the fact that it is demanded alike by employer and employee, that it has been approved by the general public, that it is apparently regarded by the Court of Appeals itself as a reform much to be desired, and that it has been adopted by every civilized country in Europe except Switzerland. The New York Court of Appeals can find only one escape from this declaration of principle by the highest tribunal in the land, in these two cases, namely, a repudiation of the authority of that tribunal in these cases: "We cannot recognize them as controlling our construction of our Constitution."

In this review of the decision of the New York Court of Appeals we have passed by without comment some extraordinary statements which should not be passed by in any complete review--the statement that "practically all of these [European] countries are so-called constitutional monarchies in which, as in England, there is no written constitution," whereas, in fact, practically all of the European nations have written constitutions; and the statement that the Workman's Compensation Act "does nothing to conserve the health, safety, or morals of the employee," whereas, in fact, it is aimed and purposed to accomplish all three results, and was urged in the English House of Lords by Lord

Salisbury specifically on the ground that "to my mind the great attraction of this bill is that I believe it will turn out a great machinery for the saving of human life."

But we have deliberately neglected all minor details in an endeavor to put before our lay readers a true interpretation, and what we hope they will generally believe to be a just criticism, of this decision of the highest court of the Empire State. In that decision, in our opinion, the Court has disregarded all considerations of social justice and public policy, has set itself against the conscience and judgment of the civilized world, and in its forced interpretation of the Constitution has disregarded alike the history of the Constitution's origin and of its judicial interpretation by the highest court in the land.

APPENDIX II

SOME SUGGESTIONS TO INSTRUCTORS

What is the purpose of a course in the writing of arguments? The arguments which it turns out cannot convince any one, since there is no one for them to convince; so that the immediate and tangible product of the course must be looked on as a by-product, and a by-product from which there can be no salvage.

What products, then, can teachers aim to produce? First, a vital respect

for facts and for sound reasoning therefrom; second, the power so to analyze and marshal the facts in an obscure and complicated case as to bring order and light out of confusion; and third, the appreciation of other men's point of view and training in the tact which will influence them. Incidentally a good course in argumentation should leave with its students an acquaintance with certain effective and economical devices for going to work that should serve them well in later life.

I will take up each of these points in order, and speak of a few methods which I have found useful in practice.

In the first place, how can a teacher establish and strengthen the veneration for fact and the suspicion of all unsupported assertion and _a priori_ reasoning? Partly by judicious exercises, partly by quiet guidance in the choice of subjects. Let a class cross-examine each other on their exact knowledge of the ultimate facts on some familiar subject. On the question of the value of Latin, for example, just how many of the class know no Latin? In a piece of their own writing, how many of the words are derived from the Latin? and what kind of words are they? Of the leaders in scholarship in the class how many know Latin? Of the best writers? Of the authors whose works they are studying in English literature, how many were trained in Latin? Of the authors of the textbooks in science how many? A few such questions as these will suggest others; and the members of the class should keep a record of how many such questions they can answer with precision. Very few people have any exact command of facts on subjects about which they talk freely and with authority; and a young man who has had this truth borne in on him

by personal examination will come to writing an argument with more modesty and scrupulousness.

Then a class can be guided away from the large subjects where of necessity their knowledge of facts is second-hand, and in which their arguments, being of necessity short, can touch only the surface of the subject. Here, I think, is where much of the ineffectiveness of courses in argument is to be found. "Judges should be elected by direct vote of the people," "The right of suffrage should be limited by an educational test," "Corporations engaged in interstate commerce should be required to take out a federal license," are samples of propositions recommended as subjects for arguments of two thousand words or less. No undergraduate has the practical knowledge of affairs to judge the value of facts adduced in support of such propositions, and except for the members of debating teams, who spend time on their contests comparable to that given by athletes to their sports, no undergraduate can make himself acquainted with the vast fields of economics and governmental theory covered by such subjects. To write an argument of twelve hundred words on such a subject will weaken rather than strengthen the respect for facts.

What sort of subjects, then, can be used? This is, I confess, a question not altogether easy to answer; but I have had a try at an answer in the list of Subjects which is given in Chapter I, which can be adapted to special conditions of time or place. In general a question which a student would discuss of his own accord and with some warmth is the best subject for him. There are many such subjects in athletics: at this date

the rules of football seem not yet settled beyond amendment, and the material for hunting facts in the records of past games is large; Dean Briggs of Harvard is making an appeal to players to raise the level of manners and of ethics in baseball; do all your students agree with him? Should the universities be allowed to use men in their graduate schools as members of their teams? And what are the facts about the playing of such men in the universities in which your students would be interested?

Then there are various educational questions, on which the views of students have real value, especially if they are based on some examination of facts in the course of writing an argument. President Lowell of Harvard told a body of students whom he was consulting that it did not make much difference what they wanted, but that their views when set forth for the purpose of helping the authorities of the college were of great value. The views of your class on examinations for entrance would be based on knowledge which a member of the faculty cannot have at first-hand. What is the estimate of the relative difficulty of getting into various colleges, and on what figures from schools is the estimate based? For how many boys are languages easier or harder than history or mathematics or science? Does admission by certificate provide sufficient safeguard for the standards of the college? Does a rigid prescription of subjects for examination distort the course for the high school? How many boys, who can be named, had their education injured by such prescription? Should the standard for entrance or for graduation be raised, or lowered, at your college? Should honor students be excused from final examinations? Should they have special privileges? Should freshmen be required to be within college bounds at a fixed hour every

night? Should class rushes be abolished? Here are only a few suggestions of subjects which can be adapted to the needs and the knowledge of special classes. They are of no value, however, unless the students are driven to gather facts, and to reason from these facts, not from general impressions. School catalogues, college catalogues, informal censuses, reports of presidents and of committees, and other printed or oral sources will help in the gathering of facts.

Then there are the innumerable local and state questions that touch the fathers of at least half of any class, and that the sons may be in the way of hearing discussed at home, or may be sent to hear discussed in legislatures and city councils. Every instructor who takes a daily newspaper will be provided with more of these subjects than his class can use. For their facts the students can go to the newspapers, to printed reports, to the persons who are concerned with the questions which they are going to argue. In some cases the students will get valuable interest and advice from the older men who have the active charge of the questions under discussion; and it is not inconceivable, that if some of the latter happen to be graduates of the college or school, they will even read the arguments and make helpful criticisms on them. The grateful interest of graduates is a source which has not been overdrawn for aid in the processes of instruction.

Many of the subjects which I have here offered as suggestions can be discussed in part, at any rate, within the space of an editorial article; and that I conceive to be about the length which most arguments written by students, except those in special courses, will run to. In so

short a space, it is hardly necessary to point out, evidence cannot be presented and discussed with the detail, say, of Webster's "Speech in the White Murder Case." It would be a good separate exercise to call for such detailed presentation of evidence on some single point in the argument. With most classes, however, the instructor cannot do much more than rule out wholly unsupported assertion, and insist that the distinction between fact and inference from fact shall be kept in sight.

The second of the results which an instructor in a course in argumentation should aim for is the power to analyze complicated masses of facts and so arrange them and present them as to bring order out of confusion. President Taft has said that Justice Hughes "won his reputation at the bar by his gift of boring to the innermost core of a subject"; and that is what the drill on the introduction to the brief should to some degree impart to students. The orderly analysis of the question, step by step, according to the admirable scheme devised by Professor Baker, cannot help implanting some understanding of what it means to go to the heart of a question. Every man sooner or later, must face complicated and puzzling questions; and the ordinary man will give himself a long start if he will thus put down on paper the points that can be urged on the two sides of a question, and then study them until the real points at issue emerge. Then the drill in laying out the logical skeleton of an argument, so plainly that no false or broken connection can escape detection, will strengthen the conscience for clearness and coherence of thought; and the necessity for getting back to ultimate facts for every assertion, and putting down the source from which the facts are derived, will help to implant a wholesome respect

for facts as something different from assertion.

Since the argument written out is the final test of the thinking, some care must be taken that students do not obscure by careless paragraphing and slovenly sentences such clearness of thought as they have attained in their brief. I have found it useful to prescribe marginal titles to the paragraphs: a student who has struggled to find a single phrase that will cover all of a sprawling paragraph will have learned some respect for firmness of paragraphing. In general, an instructor has a right to insist that his class shall apply in practice all that they have learned about the ordinary devices for getting clearness and emphasis.

In the third place, this practice in writing arguments ought to leave with students a more developed idea of how to make readers look favorably on a proposition which they are urging. I have insisted, at the risk of seeming repetitious, on the need of considering the audience whose minds are to be won over; for what persuasiveness can mean apart from specific persons to persuade I cannot conceive. Much of the perfunctory emptiness of the textbooks when they get to this part of the subject comes from neglecting this very practical and obvious side of making an argument. The difficulty it raises for arguments written in class work is just as obvious; more than most kinds of composition written for practice, arguments run the risk of having no touch with reality. Something may be done, however, if an instructor guides his class toward the kind of questions I have suggested above: an argument on the rules of football would be addressed to the Rules Committee, and most youths would know something of the prepossessions of so famous a

man as Mr. Camp; an argument on a college question would be addressed to the faculty or the president, and it may be assumed that students have some idea of their general attitude on such matters. I have followed the practice in my own sections of freshmen of requiring them to put at the head of their brief and of their argument the audience which they had in mind. Then when one comes to criticism and conference one can by a little cross-examination bring home to them the very practical nature of this matter of persuasion.

One must be careful not to insist too strictly on the model and the scheme of work laid down here, and in practically the same form in other books. It is the best that has yet been devised, but any student who is set to making a brief of one of the examples of argument at the end of this book will see for himself that there is no one infallible way of making an argument. Each argument must adapt itself to its occasion and its audience; and an instructor will be wise to keep himself awake to this truth by noting divergencies from the model. The rules which are here set forth and the model which is built on them are serviceable just so long as they are serviceable, and no longer. Their chief service is done when they have set up in the minds of students a standard of effectiveness in singling out and emphasizing the critical issues of a question.

As to the exercises which should accompany the work in argument my experience with classes of five to six hundred freshmen leads me to think that their value to the student can hardly be overestimated. I will speak here of a few of them.

The exercises in the use of reference books is something that every student ought to be put through. I found it simple and not too extravagant of time to take my sections to the library in squads of ten or a dozen, and show them and let them handle the principal books on the list. Then on the spot I gave each of them a sheet of theme paper on which I had written some sort of fact drawn from one of these books, and told them to look up that fact and report on it. My object was to convince them that most ordinary facts can be looked up in less than five minutes. The material for this exercise I got by turning over the reference books and jotting down almost anything that caught my eye. One can in this way get a great variety of facts in a very short time. In some libraries it might be possible to get members of the library staff to share in this instruction; in all libraries one will find active cooperation.

For the preliminary work on the argument we found that it was often practicable and advisable to let the students pair off on the two sides of the question, and work together through all the preliminaries. Two men thus working together often discuss themselves into the liveliest kind of interest in their question; and almost always they come closer to the important issues involved by sharpening their wits against each other. Their arguments, too, are better, especially in the refutation, from their knowing just what points can be made on the other side.

It is excellent practice, not only for the brief and the argument, but

also for all other college work, to set the students to making briefs of parts or wholes of the arguments printed here as examples, or of other arguments found outside. Not only lawyers, but other men of affairs, constantly have to digest and summarize papers; and skill in picking out essential facts and the thread of thought from a document is a highly valuable asset for practical life. The exercise is sometimes irksome to students, for it is hard work at first and calls for concentration of mind: but it can be sweetened and made livelier by the competition of classroom discussion.

All through the work on the argument students may well be set to watching the daily papers and the magazines for examples of arguments, and of good and bad reasoning. Very often an instructor can get, at the cost of a cent or two apiece, a set of arguments printed in a newspaper for his class to analyze. Senators and representatives in Congress are notably willing to send copies of speeches, and these sometimes furnish good examples of both sound and unsound reasoning.

If time serves, instructors will do well to give a grounding in logic. I have inserted a brief discussion of the subject with the hope that it will furnish a basis for a short study; it can be reenforced by a few weeks on such a manual as Jevons's "Primer of Logic," or Bode's "Outline of Logic" if there is time. Whatever be one's view of the positive value of deductive logic, there can be no doubt that every student should have some knowledge of the canons of inductive logic, and that a study of propositions and syllogisms is a mighty sharpener of the discrimination for the real meaning of words and sentences.

The short chapter on debating I have added for the use of classes where a moderate amount of training in this most useful of exercises is practicable. Debating may be looked at in two ways, either as training in alertness and effectiveness in discussion, or as a form of intercollegiate or interscholastic sport. On the latter aspect a recognized authority has said: "Formal debate is a kind of game. In the time limit, the order of speakers, the alternation of sides, the give and take of rebuttal, the fixed rules of conduct, the ethics of the contest, the qualifications for success, and the final awarding of victory, debate has much in common with tennis";[79] and he develops the likeness through a page of rather fine print. From this point of view debating has keenly interested a small body of students; in some colleges it has been recognized by hatbands or other emblems of distinction for the successful "teams"; and it has developed an elaborate apparatus of rules and of "coaches." With the game in this full bloom I have not space to deal in this small book; for such elaborate work of analysis and preparation one must go to special manuals which deal with it at length. I have confined myself to an application of the general principles of the subject to the spoken argument, and to a few suggestions for preparing for and carrying on the not very formal discussions which the average man gets into in the ordinary run of life.

Even where there is not time for systematic practice in debating, much may be done by extemporaneous five-minute speeches. There is unquestionably an active movement among the best teachers of English for

more stress on oral composition; they recognize that the power to stand quietly and at one's ease on one's feet and explain one's views clearly and cogently will help any man in his life work.

In some cases there may be local or academic subjects under discussion at the time the class is working on argument on which they can prepare themselves to speak. It may be possible to interest graduates of the school and college, so that they will give help in getting material, and perhaps in judging and criticizing. Occasionally, perhaps, a man who has the actual settlement of a local question or a share in the settlement may be willing to hear the discussion. Any aid of this sort that will bring the debate within the bounds of reality will add zest to it.

For the use of this book when a comparatively short time, perhaps six weeks, is at the disposal of the instructor, my advice, based on the practice worked out with my colleagues in the freshman course at Harvard, would be to begin with Chapter I, and at the same time ask the class to hand in subjects for approval. This should be done a fortnight ahead of the main work, in order to allow changes of subject, after consultation if necessary. In connection with Chapter II would come exercises in making briefs of one or more of the arguments in the back of the book or of others provided for the purpose. Then would come the preliminary work on the brief, the introduction to the brief. This it is profitable to treat as a separate piece of work, with a grade of its own. At this stage would be the place for the exercises in the use of reference books, which will lead naturally to looking up the material for the brief. If possible a conference should be given on the

introduction to the brief. Then comes the next main step in the work, the brief. The work for this would naturally be accompanied by study of Chapter III, and by such exercises in the correction of bad briefing and in correction of fallacies as the instructor finds time for. There should be another conference on the brief, and it should be rewritten if necessary. Instructors who have been through the subject will know from sad experience that one rewriting and one conference may be only starters. Then comes the argument itself: this should be the climax, and not merely a perfunctory filling out of the brief. If it be at all possible, the argument should be rewritten after a conference, and the conference can hardly be too long. If the argument is fifteen hundred or two thousand words long, a half an hour will be found a short time to go over the whole with any thoroughness. No instructor in English needs to have it pointed out that conferences are his most efficient means of education.

FOOTNOTES:

[Footnote 1: See Lincoln's speech at Galesburg and at Quincy, in the Lincoln-Douglas debates.]

[Footnote 2: O. W. Holmes, Jr., The Common Law, Boston, 1881, p. 35.]

[Footnote 3: For such changes of fashion in literature see Stevenson's Gossip on Romance and A Humble Remonstrance in "Memories and Portraits," and The Lantern Bearers in "Across the Plains."]

[Footnote 4: From the speech on the Repeal of the Union with Ireland; quoted by W. T. Foster, Argumentation and Debating, Boston, 1908, p, 90.]

[Footnote 5: A. Sidgwick, The Application of Logic, London, 1910, pp. 40, 44.]

[Footnote 6: From the speech of Senator Depew, January 24, 1911.]

[Footnote 7: C. R. Woodruff, City Government by Commission, New York, 1911, p. 11.]

[Footnote 8: A. Sidgwick, The Application of Logic, London, 1910, p. 248.]

[Footnote 9: W. Bagchot, The Metaphysical Basis of Toleration, "Works," Hartford, Connecticut, 1889, Vol. II, p. 339.]

[Footnote 10: From Huxley's first Lecture on Evolution (see p. 233).]

[Footnote 11: C.R. Woodruff, City Government by Commission, New York, 1911, p. 6]

[Footnote 12: See Lincoln's speech at Ottawa.]

[Footnote 13: _The Outlook_, November 20, 1909. See also the example quoted on page 180, from William James's Will to Believe.]

[Footnote 14: A full and very readable account of the growth of the law of evidence and the changes in the system of trial by jury will be found in J. B. Thayer's Preliminary Treatise on the Law of Evidence, Boston, 1896.]

[Footnote 15: George Bemis, Report of the Case of John W. Webster, Boston, 1850, p. 462. Quoted in part by A.S. Hill, Principles of Rhetoric, p. 340.]

[Footnote 16: H. Muensterberg. On the Witness Stand, New York, 1908, p. 51.]

[Footnote 17: _The Nation_, New York, Vol. XCI, p. 603, In a review of J. Bigelow, Jr.'s Campaign of Chancellorsville.]

[Footnote 18: Mr. Gardiner was answering Father Gerard's book on the Gunpowder Plot.]

[Footnote 19: S. R. Gardiner, What Gunpowder Plot Was, London, 1897, pp. 4-11.]

[Footnote 20: Wines and Koren, The Liquor Problem. Published by the Committee of Fifty, Boston, 1897.]

[Footnote 21: Reprinted in Educational Reform, New York, 1898. See p. 381.]

[Footnote 22: A committee appointed by the National Educational Association to recommend a course of study for secondary schools.]

[Footnote 23: H. Muensterberg, On the Witness Stand, New York, 1908, p. 39.]

[Footnote 24: W. James, Psychology, New York, 1890, Vol. II, p. 330; B.H. Bode, An Outline of Logic, New York. 1910, p. 216.]

[Footnote 25: B. H. Bode, An Outline of Logic, New _York_, 1910, p. 170.]

[Footnote 26: C. R. Woodruff, City Government by Commission, p. 184.]

[Footnote 27: Professor John Trowbridge, in the _Harvard Graduates

Magazine_, for March, 1911.]

[Footnote 28: W. James, Human Immortality, Boston, 1898, p. 11.]

[Footnote 29: B. H. Bode, An Outline of Logic, New York, 1910, p. 162.]

[Footnote 30: The Origin of Species, London, 1875, p. 63.]

[Footnote 31: "There is only one aim in all generalization--the finding of signs that are fit to be trusted, so that, given one fact, another may be inferred."--A. Sidgwick, The Process of Argument, London, 1893, p. 108.

"The whole object of any class name is to group together (for the purpose of making general assertions) individual members which are not only alike but different; and so to give unity in spite of difference."--A. Sidgwick, The Use of Words in Reasoning, London, 1901, p. 165.]

[Footnote 32: W. James, Psychology, New York, 1890, Vol. II, p. 342.]

[Footnote 33: See B. Bosanquet, The Essentials of Logic, London, 1895, p. 162; A. Sidgwick, The Process of Argument, London, 1893, chap. vi; B.H. Bode, An Outline of Logic, New York, 1910, p. 234.]

[Footnote 34: A. Sidgwick, Fallacies, New York, 1884, p. 342.]

[Footnote 35: A. Sidgwick, Fallacies, New York, 1884, P. 345.]

[Footnote 36: A. Sidgwick, The Use of Words in Reasoning, London, 1901, p. 91.]

[Footnote 37: J.S. Mill, A System of Logic, Book III, chap. iii, sect. 2; quoted by E.H. Bode, An Outline of Logic, New York, 1910, p. 109.]

[Footnote 38: Quoted by A. Sidgwick, The Use of Words in Reasoning, London, 1901, p. 28, note.]

[Footnote 39: See also the next to last paragraph of the argument on The Workman's Compensation Act, p. 268.]

[Footnote 40: New York, March 9, 1911, p. 241.]

[Footnote 41: B. H. Bode, An Outline of Logic, New York, 1910, p. 71.]

[Footnote 42: W. James, Psychology, New York, 1890, Vol. II, p. 365.]

[Footnote 43: Abraham Lincoln, Complete Works, edited by Nicolay and Hay, New York, 1894, p. 445.]

[Footnote 44: C. R. Woodruff, City Government by Commission, New York, 1911, p. 186.]

[Footnote 45: B. H. Bode, An Outline of Logic, New York, 1910, p. 86. For another example see Luke XX, I 8.]

[Footnote 46: From the Essay on Warren Hastings, The Works of Lord Macaulay, London, 1879, Vol. VI, p. 567.]

[Footnote 47: The Works of Daniel Webster, Boston, 1851, Vol. VI, p. 62.]

[Footnote 48: B.H. Bode, An Outline of Logic, New York, 1910, p. 30.]

[Footnote 49: Sidgwick, The Use of Words in Reasoning, London, 1901, p. 192.]

[Footnote 50: See, for example, his Apologia pro Vita Sua, London, 1864, pp. 192, 329.]

[Footnote 51: Newman, The Idea of a University, London, 1875, p. 20.]

[Footnote 52: Felix Adler; quoted by Foster. Argumentation and Debating, Boston, 1908, p. 168.]

[Footnote 53: From the Essay on Milton, The Works of Lord Macaulay, London, 1879, Vol. V, p. 28.]

[Footnote 54: C.W. Eliot, Educational Reform, New York, 1898, p. 375.]

[Footnote 55: W. James, The Will to Believe, New York, 1897, p. 3.]

[Footnote 56: _The Atlantic Monthly_, Vol. CVII, p, 14.]

[Footnote 57: It was invented and developed by Professor George P. Baker in the first edition of his Principles of Argumentation, Boston, 1895.]

[Footnote 58: Lamont, Specimens of Exposition.]

[Footnote 59: See the passage from James's Psychology, p. 150.]

[Footnote 60: Reprinted in Baker's Specimens of Argumentation, New York, 1897.]

[Footnote 61: _World's Work_, Vol. XXI, p. 14242]

[Footnote 62: From the stenographic report of the argument; reprinted in the author's Forms of Prose Literature, New York, 1900, p. 316.]

[Footnote 63: W. James, The Will to Believe, New York, 1897, p. 7.]

[Footnote 64: See Baker and Huntington, Principles of Argumentation, Boston, 1305, p. 415.]

[Footnote 65: Fuller discussion of the rules for the distribution of the speakers and the time will be found in Baker and Huntington, Principles of Argumentation, p. 415; and an elaborate, almost legal, set of instructions to judges, and the agreement of a tricollegiate league, in Foster, Argumentation and Debating, Boston, 1908, pp. 466, 468.]

[Footnote 66: Suggestions of points for the judges to consider will be found in Pattee, Practical Argumentation, p. 300; and format instructions in Foster, Argumentation and Debating, Boston, 1908, p. 466.]

[Footnote 67: Lecture I of three Lectures on Evolution. From American Addresses, London, 1877.]

[Footnote 68: The diagram, which is not reproduced here, gives an ideal section of the crust of the earth, showing the various strata lying one under the other. The strata are divided by geologists into three groups: the Primary, which is the oldest and deepest; the Secondary, above that; and the Tertiary and Quaternary on top. The Cretaceous is the lowest stratum of the Tertiary.]

[Footnote 69: One of the upper strata of the Primary rocks.]

[Footnote 70: The Silurian rocks occur about the middle of the Primary formations. The _eozooen_ was formerly supposed by some geologists to be a form of fossil. The Laurentian rocks are the lowest strata of the Primary formations.]

[Footnote 71: The Jurassic formation occurs about the middle, the Triassic, just below it, in the lower half of the Secondary rocks. The Devonian occurs just above the middle of the Secondary, between the Carboniferous above and the Silurian below.]

[Footnote 72: From _The Popular Science Monthly_, July, 1901.]

[Footnote 73: Knowledge of the cause.]

[Footnote 74: Prevention.]

[Footnote 75: _The Outlook_, April 29, 1911.]

[Footnote 76: Probably the reason why it has not yet been adopted by Switzerland is because her organized manufacturing Industries are so few that no pressure has been brought upon the state to change the law.]

[Footnote 77: Robertson _vs_. Baldwin, United States, 281.]

[Footnote 78: Noble State Bank _vs_. Haskell; Shallenberger _vs_. Bank of Holstein, January 3, 1911. Lawyers' Cooperative Publishing Company, Rochester, New York.]

[Footnote 79: Foster, Argumentation and Debating, p. 281.]