

whereas the world will be permanently enriched by the success of the superior. The conditions of happiness are, however, too complex to be disposed of by *à priori* argument; it is safest to appeal to observation. I think it could be easily shown that when the differences between the races is [*sic*] not so great as to divide them into obviously different classes, and where their language, education, and general interests are the same, the substitution may take place gradually without any unhappiness. Thus the movements of commerce have introduced fresh and vigorous blood into various parts of England, the new-comers have intermarried with the residents, and their characteristics have been prepotent in the descendants of the mixed marriages. I have referred in the earlier part of the book to the changes of type in the English nature that have occurred during the last few hundred years. These have been effected so silently that we only know of them by the results."¹

Arguments that strengthen one another are used in the following passage:—

"The ordinary observer has many proofs of the general spherical form of the earth, among which may be mentioned the following: (1) As a vessel sails away from the land, we first lose sight of her hull, next of her lower or main sails, and lastly of her topsails and pennants, thus clearly showing that she is passing over a convex or bulging surface. (2) The reverse of this also holds true; for the mariner, as he approaches the land, first sees the mountain-tops, and on gradually nearing it, the lower grounds stage by stage make their appearance. (3) Had the earth's surface been flat, it would have been all at once illuminated by the rays of the sun; but being convex or round, each place, as it turns from west to east, has its sunrise, noon, sunset, and night in succession — one half of the globe being thus always in light while the other is in darkness. (4) In travelling any considerable distance, either north or south, new stars gradually come into view in the direction to which the traveller is advancing, while others disappear in the direction from which he is receding. (5) Many navigators, by constantly sailing in one direction, or nearly so, whether due east or

¹ Francis Galton: *Inquiries into Human Faculty and its Development; Influence of Man upon Race.*

due west, have returned to the port from which they set out, thus making what is termed the *circumnavigation* of the globe. (6) In consequence of the round form of the earth, the dip or depression of the horizon is about eight inches per mile, and on this account engineers in cutting canals have to make an allowance for a dip of this extent in order to keep the water at a uniform level. (7) The shadow which the earth casts on the moon during an eclipse is always circular. (8) And lastly, the earth belonging to a system or brotherhood [*sic*], the other members of which are globular, the fair presumption is, that she [*sic*] also is of the same form."¹

From all that has been said, it is plain that experience is the basis on which every argument rests. It is experience that puts us in possession of facts and teaches us how to draw valid inferences from them. Whether the foundations of belief rest ultimately upon something prior to experience or not, it is to experience that we habitually appeal. If, then, experience is, for practical purposes, the source of all arguments, it follows that absolute certainty is very rarely attainable; for there are few matters in which experience points one way and one way only. A reasonable probability sufficiently strong to act upon is, however, usually within our reach.

SECTION V.

ARRANGEMENT.

The object of every argumentative composition should be to prove, or to disprove, the proposition in dispute and that proposition only. Anything that does not help to prove, or to disprove, the proposition has no place in the argument; everything that does help should be so

¹ David Page: *Advanced Text-Book of Physical Geography*, revised and enlarged by Charles Lapworth, [chap.] ii.

stated that its bearing on the argument will be evident. The first requisite of an argument is, then, unity. Next in importance are clearness and force. These three qualities have been discussed in the chapters entitled "Choice of Words," "Number of Words," and "Arrangement." What is said in those chapters applies to argument as to other kinds of composition; but in regard to ARRANGEMENT it is necessary to add something that is applicable to argumentative composition alone.

The importance of so arranging the several parts of an argumentative composition that they may render effective support to one another can hardly be overestimated. Forces that might be beaten in detail will often be irresistible if skilfully drawn up and massed at the points of danger. Recognizing this fact, Demosthenes at the beginning of his "Oration on the Crown" demanded from his judges, as a condition of fair play, freedom in the arrangement as well as in the selection of his arguments. Had he been obliged to adopt the arrangement of his adversary Æschines, as Æschines desired, he would necessarily have given undue prominence to the arguments of his adversary and undue subordination to his own.

"You shall find," says John Quincy Adams, "hundreds of persons able to produce a crowd of good ideas upon any subject, for one that can marshal them to the best advantage. Disposition [methodical arrangement] is to the orator what tactics, or the discipline of armies, is to the military art. And as the balance of victory has almost always been turned by the superiority of tactics and of discipline, so the great effects of eloquence are always produced by the excellency of disposition. There is no part of the science, in which the consummate orator will be so decidedly marked out, as by the perfection of his disposition."¹

¹ J. Q. Adams: Lectures on Rhetoric and Oratory, lect. vii.

Since, then, the order which is most effective under some conditions is least effective under others, only the most general rules for arrangement can be given; but there will be no difficulty in applying these rules if the principles which underlie them are once thoroughly understood.

Should a reasoner begin by stating the proposition to be proved or disproved, or should he lead up to it through the proof?

Should the proposition or the proof come first?

We have already seen how important it is that a reasoner should at the outset¹ clearly understand the proposition which he is to maintain; but it by no means follows that he should hasten to announce that proposition to those whom he would convince of its truth. His first object should be to secure favorable attention. If the proposition is familiar to the persons addressed, there will usually be some advantage in beginning with what is novel in the proof; for an old conclusion acquires fresh interest when regarded from a new point of view or approached by a new path. If the proposition, whether familiar or not to the persons addressed, is likely to awaken hostility, it should not be announced until steps have been taken to procure for it a favorable reception. Often the best course to this end is to begin by stating the question at issue without indicating the desired conclusion until some of the arguments on each side have been presented; or it may be wise to begin by securing assent to general principles from which the desired conclusion can be logically deduced. In pursuing either course, a reasoner seems to invite his readers or hearers to join him in an inquiry for the truth. This inquiry results, if he is successful, in convincing them of the

¹ See pages 328, 329.

justness of his conclusion by leading them to convince themselves; it results, if he is unsuccessful, in inducing them to give attention to evidence to which they would have turned a deaf ear had they known to what conclusion it led.

In the absence of such considerations as these, the better course usually is first to state what is to be proved, and then to prove it. This course is particularly to be recommended if the subject is abstruse or if the arguments are numerous, for knowledge of the proposition serves as a clue to difficult reasoning. This course is usually followed by Burke. For example:—

“When Parliament repealed the Stamp Act in the year 1766, I affirm, first, that the Americans did *not* in consequence of this measure call upon you to give up the former Parliamentary revenue which subsisted in that country; or even any one of the articles which compose it. I affirm, also, that when, departing from the maxims of that repeal, you revived the scheme of taxation, and thereby filled the minds of the Colonists with new jealousy, and all sorts of apprehensions, then it was that they quarrelled with the old taxes, as well as the new; then it was, and not till then, that they questioned all the parts of your legislative power; and by the battery of such questions have shaken the solid structure of this Empire to its deepest foundations.

“Of those two propositions I shall, before I have done, give such convincing, such damning proof, that however the contrary [propositions] may be whispered in circles, or bawled in newspapers, they nevermore will dare to raise their voices in this House.”¹

If the proposition is given at the outset, it should be stated with the utmost clearness and brevity, in order that it may be at once understood and that it may be easily kept in mind from the beginning of the argument to the end.

Statement of
the proposition.

¹ Burke: Speech on American Taxation, April 19, 1774.

“I found from experience, as well as theory,” writes Scarlett (Lord Abinger), one of the most successful of English advocates, “that the most essential part of speaking is to make yourself understood. For this purpose it is absolutely necessary that the Court and jury should know as early as possible *de quâ re agitur*. It was my habit, therefore, to state in the simplest form that the truth and the case would admit the proposition of which I maintained the affirmative and the defendant’s counsel the negative.”¹

If the proposition is complex, it may need to be analyzed into its elements. When this is done, each part should be stated with the utmost brevity consistent with clearness, and all the parts should be arranged in logical order. In the subsequent discussion, the order in which the elements of the proposition were presented in the preliminary statement should be followed; otherwise that statement does more harm than good. No practice could be more faulty than that ascribed to a celebrated American preacher, — the practice of making a formal announcement of what is to come and then going on as if no such announcement had been made.

In the arrangement of proof, the most effective order is usually that which places arguments from antecedent probability first, those from example second, and those from sign last. If arguments from antecedent probability came last, they might be supposed to be not instruments of proof, but explanations of facts already proved; and as mere explanations they would of course have no weight with one who denied the proposition which they explain. Coming first, they raise a presumption² in favor of the proposition to be

Order of
arguments.

¹ Lord Abinger: Autobiography; in Peter Campbell Scarlett’s “Memoir of the Right Honourable James, First Lord Abinger,” chap. xvii.

² See page 332.

proved. This presumption is strengthened by arguments from example, which furnish evidence concerning similar occurrences, and by those from sign, which furnish evidence tending to show that what was likely to occur did occur. Arguments from antecedent probability, since they suggest a cause or causes, point to the principle which is applicable to the case in hand; those from example furnish instances of its application in other cases; those from sign tend to prove that it applies in the present case. "Mr. Burke, in his speech on the Nabob of Arcot's debts, in endeavoring to prove that India had been reduced to a condition of extreme want and wretchedness, first presents *the causes* in operation to produce it; then, *examples* of the operation of those causes; and finally particular *signs* of the fact. The mind very readily receives the whole statement, because, from the view of the cause, the effects are naturally anticipated."¹ In legal opinions, it is usually advisable first to lay down the principle that governs the case, — a form of the argument from antecedent probability, — and then to cite precedents, that is, examples of similar cases; in a treatise on medicine, it is usually advisable first to give the theory of a course of treatment, and then to cite examples from practice. If the examples came first, they might be regarded as exceptions to the general rule; coming after the general rule, they appear to be instances under it.

Other considerations come into play when a reasoner is obliged to meet a formidable opponent; for until he has weakened the impression produced by his opponent's argument he can make no headway with his own. It is, however, unwise to treat adverse arguments as if they were very serious, for this is to

Refutation.

¹ H. N. Day: The Art of Discourse, part ii. chap. v. sect. 161.

emphasize their importance; it is equally unwise to neglect them altogether, for entire neglect raises the suspicion that they are not answered because they cannot be; and it is a still greater error to misstate them, for misstatement is almost sure to be detected, and, if detected, is likely to be judged even more severely than the facts warrant. Prudence, as well as honesty, prescribes that the arguments of an opponent shall be fairly met.

Necessary as it is to answer objections, it is generally injudicious either to begin or to end an argument with an elaborate refutation of an opponent's; for to do so is to fix attention on that which we wish forgotten. As a rule, the refutation of objections should be near the middle of the discourse, so that the arguments refuted may not make either the first or the last impression. The beginning and the end of an argument, as of a play, are the most important parts.

It is often advantageous to begin by making a general answer to the arguments on the other side, but to postpone refutation in detail till a more convenient season. If this course is pursued, it is well to say distinctly that further discussion is waived for the time being only. After a reasoner has made out a *prima facie* case, he can dispose of objections with less trouble and with greater effect. Those who aim at victory rather than at truth sometimes make a dishonest use of their right to waive a point, by forgetting to take it up again; but this stratagem usually ensnares the contriver.