

provement is intimately related to subjects treated in other chapters, especially Chapter 1 on MAN, Chapter 5 on MIND, Chapter 6 on

KNOWLEDGE, Chapter 7 on LANGUAGE, Chapter 9 on ETHICS, and Chapter 16 on ART AND AESTHETICS.

8.1 | *The Ends and Means of Education*

That the goal of education is the improvement of human beings can hardly be disputed; but that does not preclude wide differences of opinion about what constitutes such improvement and what factors or devices contribute to it. The quotations here assembled conceive the educative process differently according as they define in a different manner the end it should be designed to achieve and outline different programs for accomplishing it. Associated with these differences are differences in the way that the ideal of an educated man is portrayed.

Some of the passages quoted get down to the nuts and bolts of specific programs of instruction—the order of studies, the materials of learning, in short, the content of the curriculum. Some are concerned with the order of learning and with the stages or periods into which the whole process of education should be divided. Still others deal with the responsibility of the family and the state

for the education of the young.

For the most part, the education of the young, under the tutelage of teachers, occupies the center of attention; but there are passages that concern themselves with education as the process of a lifetime, begun in school but not concluded there. Closely related to these are the biographical quotations in which men look back upon their early training and evaluate it in the light of what they have learned much later in life.

There are also quotations, for the most part written by very learned men, about the life of the scholar. It is interesting to note that many of these are uncomplimentary. The scholar or man of learning is often viewed as simple or vain, as hindered by the very weight of his learning from leading a normal, happy, successful life. Such animadversions are not universal, however, and there are texts that laud the scholar and recommend his way of life as the best of all.

1 *Socrates*. Indeed, Lysimachus, I should be very wrong in refusing to aid in the improvement of anybody. And if I had shown in this conversation that I had a knowledge which Nicias and Laches have not, then I admit that you would be right in inviting me to perform this duty; but as we are all in the same perplexity, why should one of us be preferred to another? I certainly think that no one should; and under these circumstances, let me offer you a piece of advice (and this need not go

further than ourselves). I maintain, my friends, that every one of us should seek out the best teacher whom he can find, first for ourselves, who are greatly in need of one, and then for the youth, regardless of expense or anything. But I cannot advise that we remain as we are. And if any one laughs at us for going to school at our age, I would quote to them the authority of Homer, who says, that "Modesty is not good for a needy man." Let us, then, regardless of what may be said of us,

make the education of the youths our own education.

Plato, *Laches*, 200B

- 2 *Socrates*. Calculation and geometry and all the other elements of instruction, which are a preparation for dialectic, should be presented to the mind in childhood. . . .

That is a very rational notion, he [Glaucón] said.

Do you remember that the children, too, were to be taken to see the battle on horseback; and that if there were no danger they were to be brought close up and, like young hounds, have a taste of blood given them?

Yes, I remember.

The same practice may be followed, I said, in all these things—labours, lessons, dangers—and he who is most at home in all of them ought to be enrolled in a select number.

At what age?

At the age when the necessary gymnastics are over: the period whether of two or three years which passes in this sort of training is useless for any other purpose; for sleep and exercise are unpropitious to learning; and the trial of who is first in gymnastic exercises is one of the most important tests to which our youth are subjected.

Certainly, he replied.

After that time those who are selected from the class of twenty years old will be promoted to higher honour, and the sciences which they learned without any order in their early education will now be brought together, and they will be able to see the natural relationship of them to one another and to true being.

Yes, he said, that is the only kind of knowledge which takes lasting root.

Yes, I said; and the capacity for such knowledge is the great criterion of dialectical talent: the comprehensive mind is always the dialectical.

I agree with you, he said.

These, I said, are the points which you must consider; and those who have most of this comprehension, and who are more steadfast in their learning, and in their military and other appointed duties, when they have arrived at the age of thirty will have to be chosen by you out of the select class, and elevated to higher honour; and you will have to prove them by the help of dialectic, in order to learn which of them is able to give up the use of sight and the other senses, and in company with truth to attain absolute being. . . .

Suppose, I said, the study of philosophy to take the place of gymnastics and to be continued diligently and earnestly and exclusively for twice the number of years which were passed in bodily exercise—will that be enough?

Would you say six or four years? he asked.

Say five years, I replied; at the end of the time they must be sent down again into the den and

compelled to hold any military or other office which young men are qualified to hold: in this way they will get their experience of life, and there will be an opportunity of trying whether, when they are drawn all manner of ways by temptation, they will stand firm or flinch.

And how long is this stage of their lives to last?

Fifteen years, I answered; and when they have reached fifty years of age, then let those who still survive and have distinguished themselves in every action of their lives and in every branch of knowledge come at last to their consummation; the time has now arrived at which they must raise the eye of the soul to the universal light which lightens all things, and behold the absolute good; for that is the pattern according to which they are to order the State and the lives of individuals, and the remainder of their own lives also; making philosophy their chief pursuit, but, when their turn comes, toiling also at politics and ruling for the public good, not as though they were performing some heroic action, but simply as a matter of duty; and when they have brought up in each generation others like themselves and left them in their place to be governors of the State, then they will depart to the Islands of the Blest and dwell there; and the city will give them public memorials and sacrifices and honour them, if the Pythian oracle consent, as demigods, but if not, as in any case blessed and divine.

You are a sculptor, Socrates, and have made statues of our governors faultless in beauty.

Yes, I said, Glaucón, and of our governesses too; for you must not suppose that what I have been saying applies to men only and not to women as far as their natures can go.

Plato, *Republic*, VII, 536B

- 3 *Athenian Stranger*. Any one who would be good at anything must practise that thing from his youth upwards, both in sport and earnest, in its several branches: for example, he who is to be a good builder, should play at building children's houses; he who is to be a good husbandman, at tilling the ground; and those who have the care of their education should provide them when young with mimic tools. They should learn beforehand the knowledge which they will afterwards require for their art. For example, the future carpenter should learn to measure or apply the line in play; and the future warrior should learn riding, or some other exercise, for amusement, and the teacher should endeavour to direct the children's inclinations and pleasures, by the help of amusements, to their final aim in life. The most important part of education is right training in the nursery. The soul of the child in his play should be guided to the love of that sort of excellence in which when he grows up to manhood he will have to be perfected. Do you agree with me thus far?

Cleitias. Certainly.

4th. Then let us not leave the meaning of education ambiguous or ill-defined. At present, when we speak in terms of praise or blame, about the bringing-up of each person, we call one man educated and another uneducated, although the uneducated man may be sometimes very well educated for the calling of a retail trader, or of a captain of a ship, and the like. For we are not speaking of education in this narrower sense, but of that other education in virtue from youth upwards, which makes a man eagerly pursue the ideal perfection of citizenship, and teaches him how rightly to rule and how to obey. This is the only education which, upon our view, deserves the name; that other sort of training, which aims at the acquisition of wealth or bodily strength, or mere cleverness apart from intelligence and justice, is mean and illiberal, and is not worthy to be called education at all. But let us not quarrel with one another about a word, provided that the proposition which has just been granted hold good: to wit, that those who are rightly educated generally become good men. Neither must we cast a slight upon education, which is the first and fairest thing that the best of men can ever have, and which, though liable to take a wrong direction, is capable of reformation. And this work of reformation is the great business of every man while he lives.

Plato, *Laws*, I, 643A

- 4 *Athenian Stranger.* I mean by education that training which is given by suitable habits to the first instincts of virtue in children;—when pleasure, and friendship, and pain, and hatred, are rightly implanted in souls not yet capable of understanding the nature of them, and who find them, after they have attained reason, to be in harmony with her. This harmony of the soul, taken as a whole, is virtue; but the particular training in respect of pleasure and pain, which leads you always to hate what you ought to hate, and love what you ought to love from the beginning of life to the end, may be separated off; and, in my view, will be rightly called education.

Plato, *Laws*, II, 653A

- 5 Every systematic science, the humblest and the noblest alike, seems to admit of two distinct kinds of proficiency; one of which may be properly called scientific knowledge of the subject, while the other is a kind of educational acquaintance with it. For an educated man should be able to form a fair off-hand judgement as to the goodness or badness of the method used by a professor in his exposition. To be educated is in fact to be able to do this; and even the man of universal education we deem to be such in virtue of his having this ability. It will, however, of course, be understood that we only ascribe universal education to one who in his own individual person is thus crit-

ical in all or nearly all branches of knowledge, and not to one who has a like ability merely in some special subject. For it is possible for a man to have this competence in some one branch of knowledge without having it in all.

Aristotle, *Parts of Animals*, 639^a1

- 6 Moral excellence is concerned with pleasures and pains; it is on account of the pleasure that we do bad things, and on account of the pain that we abstain from noble ones. Hence we ought to have been brought up in a particular way from our very youth, as Plato says, so as both to delight in and to be pained by the things that we ought; for this is the right education.

Aristotle, *Ethics*, 1104^b9

- 7 The legislator should direct his attention above all to the education of youth; for the neglect of education does harm to the constitution. The citizen should be moulded to suit the form of government under which he lives. For each government has a peculiar character which originally formed and which continues to preserve it. The character of democracy creates democracy, and the character of oligarchy creates oligarchy; and always the better the character, the better the government. . . .

And since the whole city has one end, it is manifest that education should be one and the same for all, and that it should be public, and not private. . . . The training in things which are of common interest should be the same for all. Neither must we suppose that any one of the citizens belongs to himself, for they all belong to the state, and are each of them a part of the state, and the care of each part is inseparable from the care of the whole.

Aristotle, *Politics*, 1337^b9

- 8 That education should be regulated by law and should be an affair of state is not to be denied, but what should be the character of this public education, and how young persons should be educated, are questions which remain to be considered. As things are, there is disagreement about the subjects. For mankind are by no means agreed about the things to be taught, whether we look to virtue or the best life. Neither is it clear whether education is more concerned with intellectual or with moral virtue. The existing practice is perplexing; no one knows on what principle we should proceed—should the useful in life, or should virtue, or should the higher knowledge, be the aim of our training; all three opinions have been entertained. Again, about the means there is no agreement; for different persons, starting with different ideas about the nature of virtue, naturally disagree about the practice of it.

Aristotle, *Politics*, 1337^a33

- 9 Nature herself . . . requires that we should be

able, not only to work well, but to use leisure well; for . . . the first principle of all action is leisure. Both are required, but leisure is better than occu-

pation and is its end; and therefore the question must be asked, what ought we to do when at leisure? Clearly we ought not to be amusing ourselves, for then amusement would be the end of life. . . . It is clear then that there are branches of learning and education which we must study merely with a view to leisure spent in intellectual activity, and these are to be valued for their own sake; whereas those kinds of knowledge which are useful in business are to be deemed necessary, and exist for the sake of other things.

Aristotle, *Politics*, 1337a31

- 10 What greater or more beneficial service can I render the republic than to teach and train the youth, considering how far astray our young men have gone because of the prevailing moral looseness. The greatest effort will be needed to restore them and to point them in the right direction.

Cicero, *Divination*, II, 2

- 11 If you want a man to keep his head when the crisis comes you must give him some training before it comes.

Seneca, *Letters to Lucilius*, 18

- 12 Why 'liberal studies' are so called is obvious: it is because they are the ones considered worthy of a free man. But there is really only one liberal study that deserves the name—because it makes a person free—and that is the pursuit of wisdom. Its high ideals, its steadfastness and spirit make all other studies puerile and puny in comparison.

Seneca, *Letters to Lucilius*, 88

- 13 A father should, as soon as his son is born, conceive the greatest possible hopes for the child's future. He will thereby grow the more solicitous about his improvement from the very beginning. For it is an assertion without foundation that claims that "to very few people is granted the faculty of comprehending what is imparted to them, and that most, through dulness of understanding, lose their labour and their time." On the contrary, you will find that the greater number of men are both ready in apprehending and quick in learning, since such a faculty is natural to man. As birds are born to fly, horses to run, and wild beasts to show fierceness, so to us peculiarly belong activity and sagacity of understanding. Therefore the mind is considered to be a gift from heaven. Dull and unteachable persons are no more produced in the course of nature than are persons marked by deformity or monstrosity. Such are certainly few. A simple proof of this assertion is that among boys, most of them show good promise. And if it turns out that this promise never materializes, it is not usually for lack of latent

ability, but because care was never taken in nurturing it. You may respond that some surpass others in ability. I grant this to be true, in that some accomplish more and others less. But there is no one who does not gain by some studying.

Quintilian, *Institutio Oratoria*, I, 1

- 14 When a wise man like Numa had received the sovereignty over a new and docile people, was there anything that would better deserve his attention than the education of children, and the training up of the young, not to contrariety and discordance of character, but to the unity of the common model of virtue, to which from their cradle they should have been formed and moulded? One benefit among many that Lycurgus obtained by his course was the permanence which it secured to his laws. The obligation of oaths to preserve them would have availed but little, if he had not, by discipline and education, infused them into the children's characters, and imbued their whole early life with a love of his government.

Plutarch, *Lycurgus and Numa Compared*

- 15 Ingenious men have long observed a resemblance between the arts and the bodily senses. And they were first led to do so, I think, by noticing the way in which, both in the arts and with our senses, we examine opposites. Judgment once obtained, the use to which we put it differs in the two cases. Our senses are not meant to pick out black rather than white, to prefer sweet to bitter, or soft and yielding to hard and resisting objects; all they have to do is to receive impressions as they occur, and report to the understanding the impressions as received. The arts, on the other hand, which reason institutes expressly to choose and obtain some suitable, and to refuse and get rid of some unsuitable object, have their proper concern in the consideration of the former; though, in a casual and contingent way, they must also, for the very rejection of them, pay attention to the latter. . . .

In the same manner, it seems to me likely enough that we shall be all the more zealous and more emulous to read, observe, and imitate the better lives, if we are not left in ignorance of the blameworthy and the bad.

Plutarch, *Demetrius*

- 16 Socrates, the great sage of antiquity, used to say, and very aptly, that if such a thing were possible he would ascend to the loftiest height of the city and cry out: "Where, mankind are you heading? Upon the acquisition of money you bestow every zeal, but of your sons, to whom you will leave this money, you take little thought." For my part I should add that the procedure of such fathers is very like that of a man who would take thought for his shoe but neglect his foot. But many fathers reach such a pitch in their love of money as well as hatred of children that to avoid paying a larger

stipend they choose as teachers for their children men worth nothing at all, shopping for ignorance at bargain prices. On this point Aristippus very neatly and with great cleverness made a jesting remark to a father who had no sense and no brains. When the man asked him his price for educating his son, he replied "A thousand drachmas." "By Heracles," the man said, "what an exorbitant figure! I can buy a slave for a thousand." "Then you will have two slaves," Aristippus retorted, "your son and the fellow you buy."

Plutarch, *Education of Children*

- 17 Education is the learning how . . . to distinguish that of things some are in our power, but others are not; in our power are will and all acts which depend on the will; things not in our power are the body, the parts of the body, possessions, parents, brothers, children, country, and, generally, all with whom we live in society.

Epictetus, *Discourses*, I, 22

- 18 We must not believe the many, who say that free persons only ought to be educated, but we should rather believe the philosophers, who say that the educated only are free.

Epictetus, *Discourses*, II, 1

- 19 The carpenter does not come and say, "Hear me talk about the carpenter's art"; but having undertaken to build a house, he makes it, and proves that he knows the art. You also ought to do something of the kind; eat like a man, drink like a man, dress, marry, beget children, do the office of a citizen, endure abuse, bear with an unreasonable brother, bear with your father, bear with your son, neighbour, companion. Show us these things that we may see that you have in truth learned something from the philosophers.

Epictetus, *Discourses*, III, 21

- 20 My parents seemed to be amused at the torments inflicted upon me as a boy by my masters, though I was no less afraid of my punishments or zealous in my prayers to You for deliverance. But in spite of my terrors I still did wrong, by writing or reading or studying less than my set tasks. It was not, Lord, that I lacked mind or memory, for You had given me as much of these as my age required; but the one thing I revelled in was play; and for this I was punished by men who after all were doing exactly the same things themselves. But the idling of men is called business; the idling of boys, though exactly like, is punished by those same men: and no one pities either boys or men. Perhaps an unbiased observer would hold that I was rightly punished as a boy for playing with a ball: because this hindered my progress in studies—studies which would give me the opportunity as a man to play at things more degraded. And what difference was there between me and the master

who flogged me? For if on some trifling point he had the worst of the argument with some fellow-master, he was more torn with angry vanity than I when I was beaten in a game of ball.

Augustine, *Confessions*, I, 9

- 21 A clerk from Oxford was with us also, Who'd turned to getting knowledge, long ago. As meagre was his horse as is a rake, Nor he himself too fat, I'll undertake, But he looked hollow and went soberly. Right threadbare was his overcoat; for he Had got him yet no churchly benefice, Nor was so worldly as to gain office. For he would rather have at his bed's head Some twenty books, all bound in black and red, Of Aristotle and his philosophy Than rich robes, fiddle, or gay psaltery. Yet, and for all he was philosopher, He had but little gold within his coffer; But all that he might borrow from a friend On books and learning he would swiftly spend, And then he'd pray right busily for the souls Of those who gave him wherewithal for schools. Of study took he utmost care and heed. Not one word spoke he more than was his need; And that was said in fullest reverence And short and quick and full of high good sense. Pregnant of moral virtue was his speech; And gladly would he learn and gladly teach.

Chaucer, *Canterbury Tales*: The Prologue

- 22 We can get along without burgomasters, princes, and noblemen, but we can't do without schools, for they must rule the world.

Luther, *Table Talk*, 5247

- 23 He put himself into such a road and way of studying that he lost not any one hour in the day, but employed all his time in learning, and honest knowledge. Gargantua awak'd, then about four o'clock in the morning. Whilst they were in rubbing of him, there was read unto him some chapter of the Holy Scripture aloud and clearly, with a pronunciation fit for the matter, and hereunto was appointed a young page born in Basché, named Anagnostes. According to the purpose and argument of that lesson, he oftentimes gave himself to worship, adore, pray, and send up his supplications to that good God, whose word did show his majesty and marvellous judgment. Then went he into the secret places to make excretion of his natural digestions. There his master repeated what had been read, expounding unto him the most obscure and difficult points. In returning, they considered the face of the sky, if it was such as they had observed it the night before, and into what signs the sun was entering, as also the moon for that day. This done, he was appareled, combed, curled, trimmed and perfumed, during which time they repeated to him the lessons of the

day before. He himself said them by heart, and upon them would ground some practical cases concerning the estate of man, which he would prosecute sometimes two or three hours, but ordinarily they ceased as soon as he was fully clothed. Then for three good hours he had a lecture read unto him. This done, they went forth, still conferring of the substance of the lecture, either unto a field near the university called the Brack, or unto the meadows where they played at the ball, the long-tennis, and at the pile trigone, most gallantly exercising their bodies, as formerly they had done their minds. All their play was but in liberty, for they left off when they pleased, and that was commonly when they did sweat over all their body, or were otherwise weary. Then were they very well wiped and rubbed, shifted their shirts, and walking soberly, went to see if dinner was ready. Whilst they stayed for that, they did clearly and eloquently pronounce some sentences that they had retained of the lecture. In the meantime Master Appetite came, and then very orderly sat they down at table. At the beginning of the meal, there was read some pleasant history of the warlike actions of former times, until he had taken a glass of wine. Then, if they thought good, they continued reading, or began to discourse merrily together; speaking first of the virtue, propriety, efficacy and nature of all that was served in at that table; of bread, of wine, of water, of salt, of flesh, fishes, fruits, herbs, roots, and of their dressing. By means whereof, he learned in a little time all the passages competent for this, that were to be found in Pliny, Athenæus, Dioscorides, Julius Pollux, Galen, Porphyrius, Oppian, Polybius, Heliodorus, Aristotle, Ælian, and others. Whilst they talked of these things, many times, to be the more certain, they caused the very books to be brought to the table, and so well and perfectly did he in his memory retain the things above said, that in that time there was not a physician that knew half so much as he did. Afterwards they conferred of the lessons read in the morning, and, ending their past with some conserve or marmalade of quinces, he picked his teeth with mastic tooth-pickers, washed his hands and eyes with fair fresh water, and gave thanks unto God in some fine canticks, made in praise of the divine bounty and munificence. This done, they brought in cards, not to play, but to learn a thousand pretty tricks, and new inventions, which were all grounded upon arithmetic. By this means he fell in love with that numerical science, and every day after dinner and supper he passed his time in it as pleasantly, as he was wont to do at cards and dice: so that at last he understood so well both the theory and practical part thereof, that Tunstal the Englishman, who had written very largely of that purpose, confessed that verily in comparison of him he had no skill at all. And not only in that, but in the other mathematical sciences, as geometry, astronomy, music,

etc. For in waiting on the concoction, and attending the digestion of his food, they made a thousand pretty instruments and geometrical figures, and did in some measure practice the astronomical canons.

After this they recreated themselves with singing musically, in four or five parts, or upon a set theme or ground at random, as it best pleased them. In matter of musical instruments, he learned to play upon the lute, the virginals, the harp, the Allman flute with nine holes, the violin, and the sackbut. This hour thus spent, and digestion finished, he did purge his body of natural excrements, then betook himself to his principal study for three hours together, or more, as well to repeat his matutinal lectures, as to proceed in the book wherein he was, as also to write handsomely, to draw and form the antique and Roman letters. This being done, they went out of their house, and with them a young gentleman of Touraine, named the Esquire Gymnast, who taught him the art of riding. Changing then his clothes, he rode a Naples courser, Dutch roussin, a Spanish gennet, a barbed or trapped steed, then a light fleet horse, unto whom he gave a hundred carieres, made him go the high saults, bounding in the air, free a ditch with a skip, leap over a stile or pale, turn short in a ring both to the right and left hand. There he broke not his lance; for it is the greatest foolery in the world to say, I have broken ten lances at tilts or in fight. A carpenter can do even as much. But it is a glorious and praiseworthy action, with one lance to break and overthrow ten enemies. Therefore with a sharp, stiff, strong, and well-steeled lance, would he usually force up a door, pierce a harness, beat down a tree, carry away the ring, lift up a cuirassier saddle, with the mail-coat and gauntlet. All this he did in complete arms from head to foot. As for the prancing flourishes, and smacking popisms, for the better cherishing of the horse, commonly used in riding, none did them better than he. The voltiger of Ferrara was but as an ape compared to him. He was singularly skilful in leaping nimbly from one horse to another without putting foot to ground, and these horses were called desultories. He could likewise from either side, with a lance in his hand, leap on horseback without stirrups, and rule the horse at his pleasure without a bridle, for such things are useful in military engagements. Another day he exercised the battle-axe, which he so dexterously wielded, both in the nimble, strong, and smooth management of that weapon, and that in all the feats practicable by it, that he passed knight of arms in the field, and at all essays.

Then tossed he the pike, played with the two-handed sword, with the back sword, with the Spanish tuck, the dagger, poniard, armed, unarmed, with a buckler, with a cloak, with a target. Then would he hunt the hart, the roebuck, the

bear, the fallow deer, the wild boar, the hare, the pheasant, the partridge and the bustard. He played at the balloon, and made it bound in the air, both with fist and foot. He wrestled, ran, jumped, not at three steps and a leap, called the hops, nor at *cloche pied*, called the hare's leap, nor yet at the *Almanes*; for, said Gymnast, these jumps are for the wars altogether unprofitable, and of no use: but at one leap he would skip over a ditch, spring over a hedge, mount six paces upon a wall, ramp and grapple after this fashion up against a window, of the full height of a lance. He did swim in deep waters on his belly, on his back, sideways, with all his body, with his feet only, with one hand in the air, wherein he held a book, crossing thus the breadth of the River Seine, without wetting, and dragging along his cloak with his teeth, as did Julius Cæsar; then with the help of one hand he entered forcibly into a boat, from whence he cast himself again headlong into the water, sounded the depths, hollowed the rocks, and plunged into the pits and gulfs. Then turned he the boat about, governed it, led it swiftly or slowly with the stream and against the stream, stopped it in his course, guided it with one hand, and with the other laid hard about him with a huge great oar, hoisted the sail, hied up along the mast by the shrouds, ran upon the edge of the decks, set the compass in order, tackled the bowlines, and steered the helm. Coming out of the water, he ran furiously up against a hill, and with the same alacrity and swiftness ran down again. He climbed up trees like a cat, leaped from the one to the other like a squirrel. He did pull down the great boughs and branches, like another Milo; then with two sharp well-steeled daggers, and two tried bodkins, would be run up by the wall to the very top of a house like a rat; then suddenly come down from the top to the bottom with such an even composition of members, that by the fall he would catch no harm.

He did cast the dart, throw the bar, put the stone, practise the javelin, the boar spear or partisan, and the halbert. He broke the strongest bows in drawing, bended against his breast the greatest cross-bows of steel, took his aim by the eye with the hand-gun, and shot well, traversed and planted the cannon, shot at but-marks, at the papgay from below upwards, or to a height from above downwards, or to a descent; then before him sideways, and behind him, like the Parthians. They tied a cable-rope to the top of a high tower, by one end whereof hanging near the ground he wrought himself with his hands to the very top; then upon the same tract came down so sturdily and firm that you could not on a plain meadow have run with more assurance. They set up a great pole fixed upon two trees. There would he hang by his hands, and with them alone, his feet touching at nothing, would go back and fore along the aforesaid rope with so great swiftness,

that hardly could one overtake him with running; and then, to exercise his breast and lungs, he would shout like all the devils in hell. I heard him once call Eudemon from St. Victor's gate to Montmartre. Stentor never had such a voice at the siege of Troy. Then for the strengthening of his nerves or sinews, they made him two great sows of lead, each of them weighing eight thousand and seven hundred quintals, which they called Alteres. Those he took up from the ground, in each hand one, then lifted them up over his head, and held them so without stirring three quarters of an hour or more, which was an inimitable force. He fought at barriers with the stoutest and most vigorous champions; and when it came to the cope, he stood so sturdily on his feet, that he abandoned himself unto the strongest, in case they could remove him from his place, as Milo was wont to do of old. In whose imitation likewise he held a pomegranate in his hand, to give it unto him that could take it from him. The time being thus bestowed, and himself rubbed, cleansed, wiped and refreshed with other clothes, he returned fair and softly; and passing through certain meadows, or other grassy places, beheld the trees and plants, comparing them with what is written of them in the books of the ancients, such as Theophrast, Dioscorides, Marinus, Pliny, Nicander, Macer, and Galen, and carried home to the house great handfuls of them, whereof a young page called Rizotomos had charge; together with little mattocks, pickaxes, grubbing hooks, cabbies, pruning knives, and other instruments requisite for herborising. Being come to their lodging, whilst supper was making ready, they repeated certain passages of that which had been read, and then sat down at table. Here remark, that his dinner was sober and thrifty, for he did then eat only to prevent the gnawings of his stomach, but his supper was copious and large; for he took then as much as was fit to maintain and nourish him; which indeed is the true diet prescribed by the art of good and sound physic, although a rabble of loggerheaded physicians, muzzled in the brabbling shop of sophisters, counsel the contrary. During that repast was continued the lesson read at dinner as long as they thought good: the rest was spent in good discourse, learned and profitable. After that they had given thanks, he set himself to sing vocally, and play upon harmonious instruments, or otherwise passed his time at some pretty sports, made with cards and dice, or in practising the feats of legerdemain with cups and balls. There they staid some nights in frolicking thus, and making themselves merry till it was time to go to bed; and on other nights they would go make visits unto learned men, or to such as had been travellers in strange and remote countries. When it was full night before they retired themselves, they went unto the most open place of the house to see the face of the sky, and there beheld

the comets, if any were, as likewise the figures, situations, aspects, oppositions and conjunctions of both the fixed stars and planets.

Then with his master did he briefly recapitulate, after the manner of the Pythagoreans, that which he had read, seen, learned, done and understood in the whole course of that day.

Then prayed they unto God the Creator, in falling down before him, and strengthening their faith towards him, and glorifying him for his boundless bounty; and, giving thanks unto him for the time that was past, they recommended themselves to his divine clemency for the future. Which being done, they went to bed, and betook themselves to their repose and rest.

Rabelais, *Gargantua and Pantagruel*, I, 23

- 24 Since it is philosophy that teaches us to live, and since there is a lesson in it for childhood as well as for the other ages, why is it not imparted to children? . . . They teach us to live, when life is past. A hundred students have caught the syphilis before they came to Aristotle's lesson on temperance. . . . Our child is in much more of a hurry: he owes to education only the first fifteen or sixteen years of his life; the rest he owes to action. Let us use so short a time for the necessary teachings. The others are abuses: away with all those thorny subtleties of dialectics, by which our lives cannot be amended. Take the simple teachings of philosophy, know how to choose them and treat them at the right time; they are easier to understand than a tale of Boccaccio. A child is capable of that when he leaves his nurse, much more than of learning to read and write. Philosophy has lessons for the birth of men as well as for their decrepitude.

Montaigne, *Essays*, I, 26, Education of Children

- 25 My late father, having made all the inquiries a man can make, among men of learning and understanding, about a superlative system of education, became aware of the drawbacks that were prevalent; and he was told that the long time we put into learning languages which cost the ancient Greeks and Romans nothing was the only reason we could not attain their greatness in soul and in knowledge. I do not think that that is the only reason. At all events, the expedient my father hit upon was this, that while I was nursing and before the first loosening of my tongue, he put me in the care of a German, who has since died a famous doctor in France, wholly ignorant of our language and very well versed in Latin. This man, whom he had sent for expressly, and who was very highly paid, had me constantly in his hands. There were also two others with him, less learned, to attend me and relieve him. These spoke to me in no other language than Latin. As for the rest of my father's household, it was an

inviolable rule that neither my father himself, nor my mother, nor any valet or housemaid, should speak anything in my presence but such Latin words as each had learned in order to jabber with me.

It is wonderful how everyone profited from this. My father and mother learned enough Latin in this way to understand it, and acquired sufficient skill to use it when necessary, as did also the servants who were most attached to my service. Altogether, we Latinized ourselves so much that it overflowed all the way to our villages on every side, where there still remain several Latin names for artisans and tools that have taken root by usage. As for me, I was over six before I understood any more French or Perigordian than Arabic.

Montaigne, *Essays*, I, 26, Education of Children

- 26 The ignorance that was naturally in us we have by long study confirmed and verified. To really learned men has happened what happens to ears of wheat: they rise high and lofty, heads erect and proud, as long as they are empty; but when they are full and swollen with grain in their ripeness, they begin to grow humble and lower their horns. Similarly, men who have tried everything and sounded everything, having found in that pile of knowledge and store of so many various things nothing solid and firm, and nothing but vanity, have renounced their presumption and recognized their natural condition.

Montaigne, *Essays*, II, 12, Apology for Raymond Sebond

- 27 *Tranio. Mi perdonato*, gentle master mine,
I am in all affected as yourself;
Glad that you thus continue your resolve
To suck the sweets of sweet philosophy.
Only, good master, while we do admire
This virtue and this moral discipline,
Let's be no stoics nor no stocks, I pray;
Or so devote to Aristotle's checks
As Ovid be an outcast quite abjured:
Balk logic with acquaintance that you have
And practise rhetoric in your common talk;
Music and poesy use to quicken you;
The mathematics and the metaphysics,
Fall to them as you find your stomach serves you;
No profit grows where is no pleasure ta'en:
In brief, sir, study what you most affect.

Shakespeare, *Taming of the Shrew*, I, i, 25

- 28 *Biron. Study is like the heaven's glorious sun*
That will not be deep-search'd with saucy
looks:
Small have continual plodders ever won
Save base authority from others' books.
These earthly godfathers of heaven's lights
That give a name to every fixed star
Have no more profit of their shining nights

Than those that walk and wot not what they are.

Too much to know is to know nought by fame;
And every godfather can give a name.

Shakespeare, *Love's Labour's Lost*, I, i, 84

- 29 Sir, said he, you seem to me to have frequented the Schools; pray what Science has been your particular Study? That of Knight-Errantry, answer'd Don *Quixote*, which is as good as that of Poetry, and somewhat better too. I don't know what sort of a Science that is, said Don *Lorenzo*, nor indeed did I ever hear of it before. 'Tis a Science answer'd Don *Quixote*, that includes in itself all the other Sciences in the World, or at least the greatest Part of them: Whoever professes it, ought to be learned in the laws, and understand distributive and commutative Justice, in order to right all Mankind. He ought to be a Divine, to give a Reason of his Faith, and vindicate his Religion by Dint of Argument. He ought to be skill'd in Physick, especially in the Botanick Part of it, that he may know the Nature of Simples, and have recourse to those Herbs that can cure Wounds; for a Knight-Errant must not expect to find Surgeons in the Woods and Desarts. He must be an Astronomer, to understand the Motions of the Celestial Orbs, and find out by the Stars the Hour of the Night, and the Longitude and Latitude of the Climate on which Fortune throws him: and he ought to be well instructed in all the other Parts of the Mathematicks, that Science being of constant use to a Professor of Arms, on many Accounts too numerous to be related. I need not tell you, that all the divine and moral Virtues must center in his Mind. To descend to less material Qualifications; he must be able to swim like a Fish, know how to shooe a Horse, mend a Saddle or Bridle: and returning to higher Matters, he ought to be inviolably devoted to Heaven and his Mistress, Chaste in his Thoughts, Modest in Words, and Liberal and Valiant in Deeds; Patient in Afflictions, Charitable to the Poor; and finally a Maintainer of Truth, though it cost him his Life to defend it. These are the Endowments to constitute a good Knight-Errant; and now, Sir, be you a Judge, whether the Professors of Chivalry have an easy Task to perform, and whether such a Science may not stand in Competition with the most celebrated and best of those that are taught in Colleges?

Cervantes, *Don Quixote*, II, 18

- 30 Studies serve for delight, for ornament, and for ability. Their chief use for delight is in privateness and retiring; for ornament, is in discourse; and for ability, in the judgment and disposition of business. For expert men can execute, and perhaps judge of particulars, one by one; but the general counsels, and the plots and marshalling of affairs, come best from those that are learned. To spend

too much time in studies is sloth; to use them too much for ornament is affectation; to make judgment wholly by their rules is the humour of a scholar. They perfect nature, and are perfected by experience: for natural abilities are like natural plants, that need pruning by study; and studies themselves do give forth directions too much at large, except they be bounded in by experience.

Bacon, *Of Studies*

- 31 Crafty men contemn studies; simple men admire them; and wise men use them: for they teach not their own use; but that is a wisdom without them and above them, won by observation.

Bacon, *Of Studies*

- 32 Histories make men wise; poets witty; the mathematics subtile; natural philosophy deep; moral grave; logic and rhetoric able to contend. . . . There is no stond or impediment in the wit, but may be wrought out by fit studies: like as diseases of the body may have appropriate exercises.

Bacon, *Of Studies*

- 33 The end of study should be to direct the mind towards the enunciation of sound and correct judgments on all matters that come before it.

Descartes, *Rules for Direction of the Mind*, I

- 34 The end . . . of learning is to repair the ruins of our first parents by regaining to know God aright, and out of that knowledge to love him, to imitate him, to be like him, as we may the nearest by possessing our souls of true virtue, which being united to the heavenly grace of faith, makes up the highest perfection.

Milton, *Of Education*

- 35 I call . . . a complete and generous education, that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war.

Milton, *Of Education*

- 36 There is nothing by which a person can better show how much skill and talent he possesses than by so educating men that at last they will live under the direct authority of reason.

Spinoza, *Ethics*, IV, Appendix IX

- 37 Children when they come first into it, are surrounded with a world of new things, which, by a constant solicitation of their senses, draw the mind constantly to them; forward to take notice of new, and apt to be delighted with the variety of changing objects. Thus the first years are usually employed and diverted in looking abroad. Men's business in them is to acquaint themselves with what is to be found without; and so growing up in a constant attention to outward sensations, seldom make any considerable reflection on what passes

within them, till they come to be of riper years; and some scarce ever at all.

Locke, *Concerning Human Understanding*,
Bk. II, I, 8

- 38 A sound mind in a sound body is a short but full description of a happy state in this world. He that has these two has little more to wish for; and he that wants either of them will be but little the better for anything else. Men's happiness or misery is most part of their own making. He whose mind directs not wisely will never take the right way; and he whose body is crazy and feeble will never be able to advance in it. I confess there are some men's constitutions of body and mind so vigorous and well framed by nature that they need not much assistance from others; but by the strength of their natural genius they are from their cradles carried towards what is excellent; and by the privilege of their happy constitutions are able to do wonders. But examples of this kind are but few; and I think I may say that of all the men we meet with, nine parts of ten are what they are, good or evil, useful or not, by their education. 'Tis that which makes the great difference in mankind.

Locke, *Some Thoughts Concerning Education*, 1

- 39 'Tis virtue . . . which is the hard and valuable part to be aimed at in education, and not a forward pertness or any little arts of shifting. All other considerations and accomplishments should give way and be postponed to this. This is the solid and substantial good which tutors should not only read lectures and talk of, but the labor and art of education should furnish the mind with and fasten there, and never cease till the young man had a true relish of it, and placed his strength, his glory, and his pleasure in it.

The more this advances, the easier way will be made for other accomplishments in their turns. For he that is brought to submit to virtue will not be refractory, or restive, in anything that becomes him; and therefore I cannot but prefer breeding of a young gentleman at home in his father's sight, under a good governor, as much the best and safest way to this great and main end of education, when it can be had, and is ordered as it should be.

Locke, *Some Thoughts Concerning Education*, 70

He that at any rate procures his child a good mind, well-principled, tempered to virtue and usefulness, and adorned with civility and good breeding, makes a better purchase for him than if he laid out the money for an addition of more earth to his former acres. Spare it in toys and play-games, in silk and ribbons, laces, and other useless expenses, as much as you please; but be not sparing in so necessary a part as this. 'Tis not good husbandry to make his fortune rich, and his mind poor.

Locke, *Some Thoughts Concerning Education*, 90

- 41 From frequently reflecting upon the course and method of educating youth in this and a neighbouring kingdom, with the general success and consequence thereof, I am come to this determination, that education is always the worse in proportion to the wealth of and grandeur of the parents.

Swift, *Essay on Modern Education*

- 42 A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring.
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.
Fired at first sight with what the Muses impart,
In fearless youth we tempt the heights of arts,
While from the bounded level of our mind
Short views we take, nor see the lengths behind;
But more advanced, behold with strange surprise
New distant scenes of endless science rise!

Pope, *Essay on Criticism*, II, 21!

- 43 The bookful blockhead, ignorantly read,
With loads of learned lumber in his head,
With his own tongue still edifies his ears,
And always list'n'ing to himself appears.

Pope, *Essay on Criticism*, III, 61!

- 44 The mere philosopher is a character, which is commonly but little acceptable in the world, a being supposed to contribute nothing either to the advantage or pleasure of society; while he lives remote from communication with mankind, and is wrapped up in principles and notions equally remote from their comprehension. On the other hand, the mere ignorant is still more despised; no is anything deemed a surer sign of an illiberal genius in an age and nation where the science flourishes, than to be entirely destitute of all relish for those noble entertainments. The most perfect character is supposed to lie between those extremes; retaining an equal ability and taste for books, company, and business; preserving in conversation that discernment and delicacy which arise from polite letters; and in business, the probity and accuracy which are the natural result of a just philosophy.

Hume, *Concerning Human Understanding*, I, 1

- 45 Whatever propensity one may have to vice, it is not easy for an education, with which love has mingled, to be entirely thrown away.

Rousseau, *Origin of Inequality*
Dedication

- 46 From the first moment of life, men ought to begin learning to deserve to live; and, as at the instant of birth we partake of the rights of citizenship that instant ought to be the beginning of the exercise of our duty. If there are laws for the age of maturity, there ought to be laws for infancy.

teaching obedience to others: and as the reason of each man is not left to be the sole arbiter of his duties, government ought the less indiscriminately to abandon to the intelligence and prejudices of fathers the education of their children, as that education is of still greater importance to the State than to the fathers: for, according to the course of nature, the death of the father often deprives him of the final fruits of education; but his country sooner or later perceives its effects. Families dissolve, but the State remains.

Rousseau, *Political Economy*

- 47 All that we lack at birth, all that we need when we come to man's estate, is the gift of education.

Rousseau, *Emile*, I

- 48 Education comes to us from nature, from men, or from things. The inner growth of our organs and faculties is the education of nature, the use we learn to make of this growth is the education of men, what we gain by our experience of our surroundings is the education of things.

Thus we are each taught by three masters. If their teaching conflicts, the scholar is ill-educated and will never be at peace with himself; if their teaching agrees, he goes straight to his goal, he lives at peace with himself, he is well-educated.

Rousseau, *Emile*, I

- 49 *Johnson*. While learning to read and write is a distinction, the few who have that distinction may be the less inclined to work; but when every body learns to read and write, it is no longer a distinction.

Boswell, *Life of Johnson* (Apr. 14, 1772)

- 50 He [*Johnson*] allowed very great influence to education. "I do not deny, Sir, but there is some original difference in minds; but it is nothing in comparison of what is formed by education. We may instance the science of *numbers*, which all minds are equally capable of attaining; yet we find a prodigious difference in the powers of different men, in that respect, after they are grown up, because their minds have been more or less exercised in it: and I think the same cause will explain the difference of excellence in other things, gradations admitting always some difference in the first principles."

Boswell, *Life of Johnson* (Mar. 16, 1776)

- 51 Though the common people cannot, in any civilised society, be so well instructed as people of some rank and fortune, the most essential parts of education, however, to read, write, and account, can be acquired at so early a period of life that the greater part even of those who are to be bred to the lowest occupations have time to acquire them before they can be employed in those occupations. For a very small expense the public can facilitate,

can encourage, and can even impose upon almost the whole body of the people the necessity of acquiring those most essential parts of education.

Adam Smith, *Wealth of Nations*, V, 1

- 52 A man without the proper use of the intellectual faculties of a man, is, if possible, more contemptible than even a coward, and seems to be mutilated and deformed in a still more essential part of the character of human nature. Though the state was to derive no advantage from the instruction of the inferior ranks of people, it would still deserve its attention that they should not be altogether uninstructed. The state, however, derives no inconsiderable advantage from their instruction. The more they are instructed the less liable they are to the delusions of enthusiasm and superstition, which, among ignorant nations, frequently occasion the most dreadful disorders. An instructed and intelligent people, besides, are always more decent and orderly than an ignorant and stupid one. They feel themselves, each individually, more respectable and more likely to obtain the respect of their lawful superiors, and they are therefore more disposed to respect those superiors. They are more disposed to examine, and more capable of seeing through, the interested complaints of faction and sedition, and they are, upon that account, less apt to be misled into any wanton or unnecessary opposition to the measures of government. In free countries, where the safety of government depends very much upon the favourable judgment which the people may form of its conduct, it must surely be of the highest importance that they should not be disposed to judge rashly or capriciously concerning it.

Adam Smith, *Wealth of Nations*, V, 1

- 53 Education is the art of making men ethical. It begins with pupils whose life is at the instinctive level and shows them the way to a second birth, the way to change their instinctive nature into a second, intellectual, nature, and makes this intellectual level habitual to them. At this point the clash between the natural and the subjective will disappears, the subject's internal struggle dies away. To this extent, habit is part of ethical life as it is of philosophic thought also, since such thought demands that mind be trained against capricious fancies, and that these be destroyed and overcome to leave the way clear for rational thinking. It is true that a man is killed by habit, i.e. if he has once come to feel completely at home in life, if he has become mentally and physically dull, and if the clash between subjective consciousness and mental activity has disappeared; for man is active only in so far as he has not attained his end and wills to develop his potentialities and vindicate himself in struggling to attain it. When this has been fully achieved, activity and vitality are at an end, and the result—loss of in-

terest in life—is mental or physical death.

Hegel, *Philosophy of Right*,
Additions, Par. 151

- 54 Man has to acquire for himself the position which he ought to attain; he is not already in possession of it by instinct. It is on this fact that the child's right to education is based. Peoples under patriarchal government are in the same position as children; they are fed from central stores and not regarded as self-subsistent and adults. The services which may be demanded from children should therefore have education as their sole end and be relevant thereto; they must not be ends in themselves, since a child in slavery is in the most unethical of all situations whatever. One of the chief factors in education is discipline, the purport of which is to break down the child's self-will and thereby eradicate his purely natural and sensuous self. We must not expect to achieve this by mere goodness, since it is just the immediate will which acts on immediate fancies and caprices, not on reasons and representative thinking. If we advance reasons to children, we leave it open to them to decide whether the reasons are weighty or not, and thus we make everything depend on their whim. So far as children are concerned, universality and the substance of things reside in their parents, and this implies that children must be obedient. If the feeling of subordination, producing the longing to grow up, is not fostered in children, they become forward and impertinent.

Hegel, *Philosophy of Right*,
Additions, Par. 174

- 55 A man sees a great many things when he looks at the world for himself, and he sees them from many sides; but this method of learning is not nearly so short or so quick as the method which employs abstract ideas and makes hasty generalizations about everything. Experience, therefore, will be a long time in correcting preconceived ideas, or perhaps never bring its task to an end; for wherever a man finds that the aspect of things seems to contradict the general ideas he has formed, he will begin by rejecting the evidence it offers as partial and one-sided; nay, he will shut his eyes to it altogether and deny that it stands in any contradiction at all with his preconceived notions, in order that he may thus preserve them uninjured. So it is that many a man carries about a burden of wrong notions all his life long—crotchets, whims, fancies, prejudices, which at last become fixed ideas. The fact is that he has never tried to form his fundamental ideas for himself out of his own experience of life, his own way of looking at the world, because he has taken over his ideas ready-made from other people; and this it is that makes him—as it makes how many others!—so shallow and superficial.

Schopenhauer, *Education*

- 56 No child under the age of fifteen should receive instruction in subjects which may possibly be the vehicle of serious error, such as philosophy, religion, or any other branch of knowledge where it is necessary to take large views; because wrong notions imbibed early can seldom be rooted out, and of all the intellectual faculties, judgment is the last to arrive at maturity. The child should give its attention either to subjects where no error is possible at all, such as mathematics, or to those in which there is no particular danger in making a mistake, such as languages, natural science, history and so on.

Schopenhauer, *Education*

- 57 If we think of it, all that a University, or final highest School can do for us, is still but what the first School began doing—teach us to *read*. We learn to *read*, in various languages, in various sciences; we learn the alphabet and letters of all manner of Books. But the place where we are to get knowledge, even theoretic knowledge, is the Books themselves! It depends on what we read, after all manner of Professors have done their best for us. The true University of these days is a Collection of Books.

Carlyle, *The Hero as Man of Letters*

- 58 Man is thus metamorphosed into a thing, into many things. The planter, who is Man sent out into the field to gather food, is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer, instead of Man on the farm. The tradesman scarcely ever gives an ideal worth to his work, but is ridden by the routine of his craft, and the soul is subject to dollars. The priest becomes a form; the attorney a statute-book; the mechanic a machine; the sailor a rope of the ship.

In this distribution of functions the scholar is the delegated intellect. In the right state he is *Man Thinking*. In the degenerate state, when the victim of society, he tends to become a mere thinker, or still worse, the parrot of other men's thinking.

In this view of him, as Man Thinking, the theory of his office is contained. Him Nature solicits with all her placid, all her monitory pictures; him the past instructs; him the future invites.

Emerson, *The American Scholar*

- 59 Books are good only as far as a boy is ready for them. He sometimes gets ready very slowly. You send your child to the schoolmaster, but 't is the schoolboys who educate him. You send him to the Latin class, but much of his tuition comes, on his way to school, from the shop-windows. You like the strict rules and the long terms; and he finds his best leading in a by-way of his own, and refuses any companions but of his own choosing. He hates the grammar and *Gradus*, and loves guns,

fishing-rods, horses and boats. Well, the boy is right, and you are not fit to direct his bringing-up if your theory leaves out his gymnastic training. Archery, cricket, gun and fishing-rod, horse and boat, are all educators, liberalizers; and so are dancing, dress and the street talk; and provided only the boy has resources, and is of a noble and ingenuous strain, these will not serve him less than the books.

Emerson, *Culture*

- 60 One of the benefits of a college education is to show the boy its little avail.

Emerson, *Culture*

We are students of words: we are shut up in schools, and colleges, and recitation-rooms, for ten or fifteen years, and come out at last with a bag of wind, a memory of words, and do not know a thing.

Emerson, *New England Reformers*

- 62 At Mr. Wackford Squeers's Academy, Dotheboys Hall, at the delightful village of Dotheboys, near Greta Bridge in Yorkshire, Youth are boarded, clothed, booked, furnished with pocket-money, provided with all necessities, instructed in all languages living and dead, mathematics, orthography, geometry, astronomy, trigonometry, the use of the globes, algebra, single stick (if required), writing, arithmetic, fortification, and every other branch of classical literature. Terms, twenty guineas per annum. No extras, no vacations, and diet unparalleled.

Dickens, *Nicholas Nickleby*, III

- 63 Perhaps many who watch over the interests of the community, and are anxious for its welfare, will conclude that the development of the judgment cannot properly be included in the general idea of education; that as the education proposed must, to a very large degree, be of *self*, it is so far incommunicable; that the master and the scholar merge into one, and both disappear; that the instructor is no wiser than the one to be instructed, and thus the usual relations of the two lose their power. Still, I believe that the judgment may be educated to a very large extent, and might refer to the fine arts, as giving proof in the affirmative; and though, as respects the community and its improvement in relation to common things, any useful education must be of *self*, I think that society, as a body, may act powerfully in the cause. Or it may still be objected that my experience is imperfect, is chiefly derived from exercise of the mind within the precincts of natural philosophy, and has not that generality of application which can make it of any value to society at large. I can only repeat my conviction, that society occupies itself now-a-days about physical matters, and judges them as common things. Failing in relation to

them, it is equally liable to carry such failures into other matters of life. The proof of deficient judgment in one department shows the habit of mind, and the general want, in relation to others. I am persuaded that all persons may find in natural things an admirable school for self-instruction, and a field for the necessary mental exercise; that they may easily apply their habits of thought, thus formed, to a social use; and that they ought to do this, as a duty to themselves and their generation.

Faraday, *Observations on Mental Education*

- 64 As for me, if, by any possibility, there be any as yet undiscovered prime thing in me; if I shall ever deserve any real repute in that small but high hushed world which I might not be unreasonably ambitious of; if hereafter I shall do anything that, upon the whole, a man might rather have done than to have left undone; if, at my death, my executors, or more properly my creditors, find any precious MSS. in my desk, then here I prospectively ascribe all the honour and the glory to whaling; for a whale ship was my Yale College and my Harvard.

Melville, *Moby Dick*, XXIV

- 65 The mode of founding a college is, commonly, to get up a subscription of dollars and cents, and then, following blindly the principles of a division of labor to its extreme—a principle which should never be followed but with circumspection—to call in a contractor who makes this a subject of speculation, and he employs Irishmen or other operatives actually to lay the foundations, while the students that are to be are said to be fitting themselves for it; and for these oversights successive generations have to pay. I think that it would be *better than this*, for the students, or those who desire to be benefited by it, even to lay the foundation themselves. The student who secures his coveted leisure and retirement by systematically shirking any labor necessary to man obtains but an ignoble and unprofitable leisure, defrauding himself of the experience which alone can make leisure fruitful. 'But,' says one, 'you do not mean that the students should go to work with their hands instead of their heads?' I do not mean that exactly, but I mean something which he might think a good deal like that; I mean that they should not *play* life, or *study* it merely, while the community supports them at this expensive game, but earnestly *live* it from beginning to end. How could youths better learn to live than by at once trying the experiment of living? Methinks this would exercise their minds as much as mathematics. If I wished a boy to know something about the arts and sciences, for instance, I would not pursue the common course, which is merely to send him into the neighborhood of some professor, where anything is professed and practised but the art of life;—to survey the world through a telescope or a microscope,

and never with his natural eye; to study chemistry, and not learn how his bread is made, or mechanics, and not learn how it is earned; to discover new satellites to Neptune, and not detect the moles in his eyes, or to what vagabond he is a satellite himself; or to be devoured by the monsters that swarm all around him, while contemplating the monsters in a drop of vinegar. Which would have advanced the most at the end of a month—the boy who had made his own jackknife from the ore which he had dug and smelted, reading as much as would be necessary for this—or the boy who had attended the lectures on metallurgy at the Institute in the meanwhile, and had received a Rodgers penknife from his father? Which would be most likely to cut his fingers? . . . To my astonishment I was informed on leaving college that I had studied navigation!—why, if I had taken one turn down the harbor I should have known more about it. Even the *poor* student studies and is taught only *political* economy, while that economy of living which is synonymous with philosophy is not even sincerely professed in our colleges. The consequence is, that while he is reading Adam Smith, Ricardo, and Say, he runs his father in debt irretrievably.

Thoreau, *Walden*: Economy

- 66 Education is the instruction of the intellect in the laws of Nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws.

T. H. Huxley, *A Liberal Education*

- 67 From the Factory system budded . . . the germ of the education of the future, an education that will, in the case of every child over a given age, combine productive labour with instruction and gymnastics, not only as one of the methods of adding to the efficiency of production, but as the only method of producing fully developed human beings.

Marx, *Capital*, Vol. I, IV, 15

- 68 When we turn to subjects infinitely more complicated, to morals, religion, politics, social relations, and the business of life, three-fourths of the arguments for every disputed opinion consist in dispelling the appearances which favour some opinion different from it. The greatest orator, save one, of antiquity, has left it on record that he always studied his adversary's case with as great, if not still greater, intensity than even his own. What Cicero practised as the means of forensic success requires to be imitated by all who study any subject in order to arrive at the truth. He who knows only his own side of the case, knows little of that. His reasons may be good, and no one may have been able to refute them. But if he is equally un-

able to refute the reasons on the opposite side; if he does not so much as know what they are, he has no ground for preferring either opinion. The rational position for him would be suspension of judgment, and unless he contents himself with that, he is either led by authority, or adopts, like the generality of the world, the side to which he feels most inclination. Nor is it enough that he should hear the arguments of adversaries from his own teachers, presented as they state them, and accompanied by what they offer as refutations. That is not the way to do justice to the arguments, or bring them into real contact with his own mind. He must be able to hear them from persons who actually believe them; who defend them in earnest, and do their very utmost for them. He must know them in their most plausible and persuasive form; he must feel the whole force of the difficulty which the true view of the subject has to encounter and dispose of; else he will never really possess himself of the portion of truth which meets and removes that difficulty.

Ninety-nine in a hundred of what are called educated men are in this condition; even of those who can argue fluently for their opinions. Their conclusion may be true, but it might be false for anything they know: they have never thrown themselves into the mental position of those who think differently from them, and considered what such persons may have to say; and consequently they do not, in any proper sense of the word, know the doctrine which they themselves profess. They do not know those parts of it which explain and justify the remainder; the considerations which show that a fact which seemingly conflicts with another is reconcilable with it, or that, of two apparently strong reasons, one and not the other ought to be preferred. All that part of the truth which turns the scale, and decides the judgment of a completely informed mind, they are strangers to; nor is it ever really known, but to those who have attended equally and impartially to both sides, and endeavoured to see the reasons of both in the strongest light. So essential is this discipline to a real understanding of moral and human subjects, that if opponents of all important truths do not exist, it is indispensable to imagine them, and supply them with the strongest arguments which the most skilful devil's advocate can conjure up.

Mill, *On Liberty*, II

- 69 A cultivated mind—I do not mean that of a philosopher, but any mind to which the fountains of knowledge have been opened, and which has been taught, in any tolerable degree, to exercise its faculties—finds sources of inexhaustible interest in all that surrounds it; in the objects of nature, the achievements of art, the imaginations of poetry, the incidents of history, the ways of mankind, past and present, and their prospects in the future. It is possible, indeed, to become indifferent to all this,

and that too without having exhausted a thousandth part of it; but only when one has had from the beginning no moral or human interest in these things, and has sought in them only the gratification of curiosity.

Now there is absolutely no reason in the nature of things why an amount of mental culture sufficient to give an intelligent interest in these objects of contemplation, should not be the inheritance of every one born in a civilised country.

Mill, *Utilitarianism*, II

- 70 It has often been said, and requires to be repeated still oftener, that books and discourses alone are not education; that life is a problem, not a theorem; that action can only be learned in action. A child learns to write its name only by a succession of trials; and is a man to be taught to use his mind and guide his conduct by mere precept? What can be learned in schools is important, but not all-important. The main branch of the education of human beings is their habitual employment, which must be either their individual vocation or some matter of general concern, in which they are called to take a part. The private money-getting occupation of almost everyone is more or less a mechanical routine; it brings but few of his faculties into action, while its exclusive pursuit tends to fasten his attention and interest exclusively upon himself, and upon his family as an appendage of himself—making him indifferent to the public, to the more generous objects and the nobler interests, and, in his inordinate regard for his personal comforts, selfish and cowardly. Balance these tendencies by contrary ones; give him something to do for the public, whether as a vestryman, a juryman, or an elector; and in that degree, his ideas and feelings are taken out of this narrow circle. He becomes acquainted with more varied business and a larger range of considerations. He is made to feel that besides the interests which separate him from his fellow citizens, he has interests which connect him with them; that not only the common weal is his weal but that it partly depends upon his exertions. Whatever might be the case in some other constitutions of society, the spirit of a commercial people will be, we are persuaded, essentially mean and slavish wherever public spirit is not cultivated by an extensive participation of the people in the business of government in detail: nor will the desideratum of a general diffusion of intelligence among either the middle or lower classes be realized, but by a corresponding dissemination of public functions, and a voice in public affairs.

Mill, *Review of Tocqueville's "Democracy in America"*

- 71 Education . . . is one of the subjects which most essentially require to be considered by various minds, and from a variety of points of view. For,

of all many-sided subjects, it is the one which has the greatest number of sides. Not only does it include whatever we do for ourselves, and whatever is done for us by others, for the express purpose of bringing us somewhat nearer to the perfection of our nature; it does more: in its largest acceptance, it comprehends even the indirect effects produced on character and on the human faculties, by things of which the direct purposes are quite different; by laws, by forms of government, by the industrial arts, by modes of social life; nay even by physical facts not dependent on human will; by climate, soil, and local position. Whatever helps to shape the human being; to make the individual what he is, or hinder him from being what he is not—is part of his education. And a very bad education it often is; requiring all that can be done by cultivated intelligence and will, to counteract its tendencies.

Mill, *Inaugural Address at St. Andrews*

- 72 Men are men before they are lawyers, or physicians, or merchants, or manufacturers; and if you make them capable and sensible men, they will make themselves capable and sensible lawyers or physicians. What professional men should carry away with them from an University, is not professional knowledge, but that which should direct the use of their professional knowledge, and bring the light of general culture to illuminate the technicalities of a special pursuit. Men may be competent lawyers without general education, but it depends on general education to make them philosophic lawyers—who demand, and are capable of apprehending, principles, instead of merely cramming their memory with details. And so of all other useful pursuits, mechanical included. Education makes a man a more intelligent shoemaker, if that be his occupation, but not by teaching him how to make shoes; it does so by the mental exercise it gives, and the habits it impresses.

Mill, *Inaugural Address at St. Andrews*

- 73 It has always seemed to me a great absurdity that history and geography should be taught in schools; except in elementary schools for the children of the labouring classes, whose subsequent access to books is limited. Who ever really learnt history and geography except by private reading? and what an utter failure a system of education must be, if it has not given the pupil a sufficient taste for reading to seek for himself those most attractive and easily intelligible of all kinds of knowledge? . . . Of the mere facts of history, as commonly accepted, what educated youth of any mental activity does not learn as much as is necessary, if he is simply turned loose into an historical library? What he needs on this, and on most other matters of common information, is not that he should be taught it in boyhood, but that abun-

dance of books should be accessible to him.

Mill, *Inaugural Address at St. Andrews*

- 74 Health is a good in itself, though nothing came of it, and is especially worth seeking and cherishing: yet, after all, the blessings which attend its presence are so great, while they are so close to it and so redound back upon it and encircle it, that we never think of it except as useful as well as good, and praise and prize it for what it does, as well as for what it is, though at the same time we cannot point out any definite and distinct work or production which it can be said to effect. And so as regards intellectual culture, I am far from denying utility in this large sense as the end of Education, when I lay it down, that the culture of the intellect is a good in itself and its own end; I do not exclude from the idea of intellectual culture what it cannot but be, from the very nature of things; I only deny that we must be able to point out, before we have any right to call it useful, some art, or business, or profession, or trade, or work, as resulting from it, and as its real and complete end. The parallel is exact: As the body may be sacrificed to some manual or other toil, whether moderate or oppressive, so may the intellect be devoted to some specific profession; and I do not call *this* the culture of the intellect. Again, as some member or organ of the body may be inordinately used and developed, so may memory, or imagination, or the reasoning faculty; and *this* again is not intellectual culture. On the other hand, as the body may be tended, cherished, and exercised with a simple view to its general health, so may the intellect also be generally exercised in order to its perfect state; and this is its cultivation.

Newman, *Idea of a University*, Discourse VII

Culture is indispensably necessary, and culture is *reading*; but reading with a purpose to guide it, and with system. He does a good work who does anything to help this: indeed, it is the one essential service now to be rendered to education.

Arnold, *Literature and Dogma*, Pref.

- 76 Soap and education are not as sudden as a massage, but they are more deadly in the long run.
Mark Twain, *The Facts Concerning the Recent Resignation*
- 77 Education in the long run is an affair that works itself out between the individual student and his opportunities. Methods of which we talk so much, play but a minor part. Offer the opportunities, leave the student to his natural reaction on them, and he will work out his personal destiny, be it a high one or a low one.
William James, *Stanford's Ideal Destiny*
- 78 There are many paths to knowledge already discovered; and no enlightened man doubts that there are many more waiting to be discovered.

Indeed, all paths lead to knowledge; because even the vilest and stupidest action teaches us something about villainess and stupidity, and may accidentally teach us a good deal more.

Shaw, *Doctor's Dilemma*, Pref.

- 79 In truth, mankind cannot be saved from without, by schoolmasters or any other sort of masters: it can only be lamed and enslaved by them. It is said that if you wash a cat it will never again wash itself. This may or may not be true: what is certain is that if you teach a man anything he will never learn it; and if you cure him of a disease he will be unable to cure himself the next time it attacks him. Therefore, if you want to see a cat clean, you throw a bucket of mud over it, when it will immediately take extraordinary pains to lick the mud off, and finally be cleaner than it was before. In the same way doctors who are up-to-date (say .00005 per cent of all the registered practitioners, and 20 per cent of the unregistered ones), when they want to rid you of a disease or a symptom, inoculate you with that disease or give you a drug that produces that symptom, in order to provoke you to resist it as the mud provokes the cat to wash itself.

Shaw, *Back to Methuselah*, Pref.

- 80 Culture is activity of thought, and receptiveness to beauty and humane feeling. Scraps of information have nothing to do with it. A merely well-informed man is the most useless bore on God's earth. What we should aim at producing is men who possess both culture and expert knowledge in some special direction. Their expert knowledge will give them the ground to start from, and their culture will lead them as deep as philosophy and as high as art. We have to remember that the valuable intellectual development is self-development, and that it mostly takes place between the ages of sixteen and thirty. As to training, the most important part is given by mothers before the age of twelve.

Whitehead, *Aims of Education*

- 81 There is only one subject-matter for education, and that is Life in all its manifestations. Instead of this single unity, we offer children—Algebra, from which nothing follows; Geometry, from which nothing follows; Science, from which nothing follows; History, from which nothing follows; a Couple of Languages, never mastered; and lastly, most dreary of all, Literature, represented by plays of Shakespeare, with philological notes and short analyses of plot and character to be in substance committed to memory. Can such a list be said to represent Life, as it is known in the midst of the living of it? The best that can be said of it is, that it is a rapid table of contents which a deity might run over in his mind while he was thinking of creating a world, and had not yet determined

how to put it together.

Whitehead, *Aims of Education*

- 82 The merit of this study [of Roman history] in the education of youth is its concreteness, its inspiration to action, and the uniform greatness of persons, in their characters and their staging. Their aims were great, their virtues were great, and their vices were great. They had the saving merit of sinning with cart-ropes. Moral education is impossible apart from the habitual vision of greatness. If we are not great, it does not matter what we do or what is the issue. Now the sense of greatness is an immediate intuition and not the conclusion of an argument. It is permissible for youth in the agonies of religious conversion to entertain the feeling of being a worm and no man, so long as there remains the conviction of greatness sufficient to justify the eternal wrath of God. The sense of greatness is the groundwork of morals. We are at the threshold of a democratic age, and it remains to be determined whether the equality of man is to be realised on a high level or a low level. There was never a time in which it was more essential to hold before the young the vision of Rome: in itself a great drama, and with issues greater than itself.

Whitehead, *The Place of Classics in Education*

- 83 Education is, as a rule, the strongest force on the side of what exists and against fundamental change: threatened institutions, while they are still powerful, possess themselves of the educational machine, and instill a respect for their own excellence into the malleable minds of the young. Reformers retort by trying to oust their opponents from their position of vantage. The children themselves are not considered by either party; they are merely so much material, to be recruited into one army or the other. If the children themselves were considered, education would not aim at making them belong to this party or that, but at enabling them to choose intelligently between the parties; it would aim at making them able to think, not at making them think what their teachers think. Education as a political weapon could not exist if we respected the rights of children. If we respected the rights of children, we should educate them so as to give them the knowledge and the mental habits required for forming independent opinions; but education as a political institution endeavors to form habits and to circumscribe knowledge in such a way as to make one set of opinions inevitable.

Russell, *Education*

- 84 The joy of mental adventure is far commoner in the young than in grown men and women. Among children it is very common, and grows naturally out of the period of make-believe and fancy. It is rare in later life because everything is

done to kill it during education.

Russell, *Education*

- 85 A community of men and women possessing vitality, courage, sensitiveness, and intelligence, in the highest degree that education can produce, would be very different from anything that has hitherto existed. Very few people would be unhappy. The main causes of unhappiness at present are: ill-health, poverty, and an unsatisfactory sex-life. All of these would become very rare. Good health could be almost universal, and even old age could be postponed. Poverty, since the industrial revolution, is only due to collective stupidity. Sensitiveness would make people wish to abolish it, intelligence would show them the way, and courage would lead them to adopt it. (A timid person would rather remain miserable than do anything unusual.) Most people's sex-life, at present, is more or less unsatisfactory. This is partly due to bad education, partly to persecution by the authorities and Mrs. Grundy. A generation of women brought up without irrational sex fears would soon make an end of this. Fear has been thought the only way to make women "virtuous," and they have been deliberately taught to be cowards, both physically and mentally. Women in whom love is cramped encourage brutality and hypocrisy in their husbands, and distort the instincts of their children. One generation of fearless women could transform the world, by bringing into it a generation of fearless children, not contorted into unnatural shapes, but straight and candid, generous, affectionate, and free. Their ardor would sweep away the cruelty and pain which we endure because we are lazy, cowardly, hard-hearted and stupid. It is education that gives us these bad qualities, and education that must give us the opposite virtues. Education is the key to the new world.

Russell, *Aims of Education*

- 86 The educability of a young person as a rule comes to an end when sexual desire breaks out in its final strength. Educators know this and act accordingly; but perhaps they will yet allow themselves to be influenced by the results of psycho-analysis so that they will transfer the main emphasis in education to the earliest years of childhood, from the suckling period onward. The little human being is frequently a finished product in his fourth or fifth year, and only gradually reveals in later years what lies buried in him.

Freud, *General Introduction to Psycho-Analysis*, XXII

- 87 We may reject knowledge of the past as the end of education and thereby only emphasize its importance as a means. When we do that we have a problem that is new in the story of education: How shall the young become acquainted with the

past in such a way that the acquaintance is a potent agent in appreciation of the living present?

Dewey, *Experience and Education*, I

- 88 Education as growth or maturity should be an ever-present process.

Dewey, *Experience and Education*, III

- 89 In its contrast with the ideas both of unfolding of latent powers from within, and of formation from without, whether by physical nature or by the cultural products of the past, the ideal of growth results in the conception that education is a constant reorganizing or reconstructing of experience. It has all the time an immediate end, and so far as activity is educative, it reaches that end—the direct transformation of the quality of experience. Infancy, youth, adult life—all stand on the same educative level in the sense that what is really *learned* at any and every stage of experience constitutes the value of that experience, and in the sense

that it is the chief business of life at every point to make living thus contribute to an enrichment of its own perceptible meaning.

We thus reach a technical definition of education: It is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.

Dewey, *Democracy and Education*, VI

- 90 The only adequate training for occupations is training *through* occupations. The principle . . . that the educative process is its own end, and that the only sufficient preparation for later responsibilities comes by making the most of immediately present life, applies in full force to the vocational phases of education. The dominant vocation of all human beings at all times is living—intellectual and moral growth.

Dewey, *Democracy and Education*, XXIII

8.2 | Habit

The ancient saying that habit is a kind of second nature explains the significance of habit and habit-formation for the process of education. If men were born with their natures perfected, with no room for improvement, with no potentialities to be realized, they would not need and could not use education. Precisely because they are born with room for improvement, they can be and need to be educated, and this usually takes the form of giving them a “second nature”—a set of acquired habits that, once they are well established, operate as smoothly as their original nature.

Some of the passages quoted deal with the psychology of habit and habit-formation, and with the conditions under which habits are acquired, strengthened, weakened, and changed. Other passages present distinctions among kinds of habit, especially the differ-

ence between habits of mind (of thought and knowledge) and habits of character (of action and of emotion). This, of course, has a bearing on the distinction between intellectual and moral training—the effort, on the one hand, to form or inculcate good intellectual habits; and the effort, on the other hand, to instill good moral habits. The discussion here tends to move from the domain of psychology to that of ethics, for the qualification of habits as good and bad introduces the notions of virtue and vice.

Learning would be fruitless if what is learned were not retained. One aspect of such retention, especially when the learning is verbal, is discussed under the head of memory, in Section 5.3 of Chapter 5 on MIND. The other, and much broader, aspect is discussed here.