

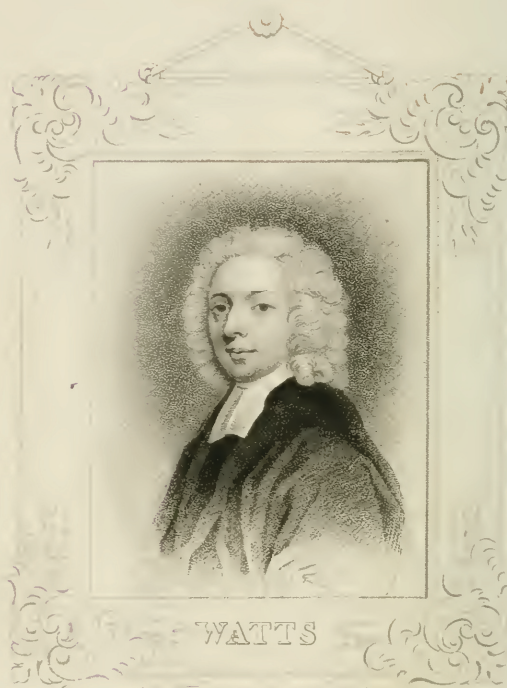
50



John B. Yettin  
Sept 1978



10/20 - 1/4  
\$15



*Engraved by Freeman from the Original in  
"Wattman's 104th"*

THE  
IMPROVEMENT  
OF THE  
MIND.

---

By ISAAC WATTS, D.D.

---

WITH THE LIFE OF THE AUTHOR,  
BY  
DR. JOHNSON.

---

London :

Printed by W. WILSON, 4, Greville-Street,

FOR J. BUMPUS, HOLBORN BARS ; SHARPE, KING-  
STREET, COVENT-GARDEN ; SAMMS, PALL-MALL ;  
WARREN, NEW BOND-STREET ; AND REILLY, LORD-  
STREET, LIVERPOOL.

////////

1821.



## CONTENTS.

---

### PART I.

	Page
LIFE of the Author .....	vi
Preface.....	xvii
Recommendations .....	xxi
The Introduction .....	1
Chap. I. General rules for the improvement of knowledge .....	3
Chap. II. Five methods of improving, described and compared, <i>viz.</i> Observation, reading, instruction by lectures, conversation and study, with their several advantages and defects .....	20
Chap. III. Of observation, either by the senses or the mind.....	34
Chap. IV. Of reading and books, with directions relating thereto .....	42
Chap. V. The judgment of books, both approbation and censure .....	55
Chap. VI. Of living instructions and lectures, of teachers and learners .....	69
Chap. VII. Of learning a language, particularly the Latin.....	73
Chap. VIII. Of inquiring into the sense and meaning of any writer or speaker, whether human or divine .....	83
Chap. IX. Of conversation and profiting by it, and of persons fit or unfit for free converse .....	88
Chap. X. Of disputes, and general rules relating to them .....	105
Chap. XI. Of Socratical disputation, by question and answer .....	120



	Page
Chap. XII. Of forensic disputes, in courts of justice or public assemblies .....	123
Chap. XIII. Of academic or scholastic disputes, and the rules of them, and how far they may be useful ....	126
Chap. XIV. Of study, or meditation, and the final determination of things by our own judgment.....	137
Chap. XV. Of fixing the attention .....	151
Chap. XVI. Of enlarging the capacity of the mind ..	155
Chap. XVII. Of the memory, and the improvement thereof .....	176
Chap. XVIII. Of determining a question ; several cautions about it ; of reason and revelation ; of argument and ridicule ; of assent only in proportion to evidence, &c.....	201
Chap. XIX. Of inquiring into causes and effects.....	223
Chap. XX. Of the sciences, and their uses in particular professions.....	227

## PART II.

THE Introduction .....	263
Chap. I. Methods of teaching, and reading lectures ..	265
Chap. II. Of an instructive style .....	272
Chap. III. Of convincing of truth, or delivering from error .....	279
Chap. IV. The use and abuse of authority .....	287
Chap. V. Of managing the prejudices of men .....	298
Chap. VI. Of instruction by preaching .....	309
Chap. VII. Of writing books for the public.....	323
Chap. VIII. Of writing and reading controversies ....	328

THE  
LIFE OF DR. WATTS.

---

ISAAC WATTS was born July 17, 1674, at Southampton, where his father, of the same name, kept a boarding-school for young gentlemen, though common report makes him a shoemaker. He appears, from the narrative of Dr. Gibbons, to have been neither indigent nor illiterate.

Isaac, the eldest of nine children, was given to books from his infancy; and began, we are told, to learn Latin when he was four years old, I suppose at home. He was afterwards taught Latin, Greek, and Hebrew, by Mr. Pinhorn, a clergyman, master of the free school at Southampton, to whom the gratitude of his scholar afterwards inscribed a Latin ode.

His proficiency at school was so conspicuous, that a subscription was proposed for his support at the university: but he declared his resolution to take his lot with the Dissenters. Such he was, as every Christian church would rejoice to have adopted.

He therefore repaired in 1690 to an academy taught by Mr. Rowe, where he had for his companions and

fellow-students, Mr. Hughes the poet, and Dr. Horte, afterwards archbishop of Tuam. Some Latin essays, supposed to have been written as exercises at this academy, shew a degree of knowledge, both philosophical and theological, such as very few attain by a much longer course of study.

He was, as he hints in his *Miscellanies*, a maker of verses from fifteen to fifty; and in his youth he appears to have paid attention to Latin poetry. His verses to his brother, in the *glyconic* measure, written when he was seventeen, are remarkably easy and elegant. Some of his other odes are deformed by the Pindaric folly then prevailing, and are written with such neglect of all metrical rules as is without example among the ancients; but his diction, though perhaps not always exactly pure, has such copiousness and splendour, as shows that he was but at a very little distance from excellence.

His method of study was to impress the contents of his books upon his memory by abridging them, and by interleaving them, to amplify one system with supplements from another.

With the congregation of his tutor, Mr. Rowe, who were, I believe, Independents, he communicated in his nineteenth year.

At the age of twenty he left the academy, and spent two years in study and devotion at the house of his father, who treated him with great tenderness; and had the happiness, indulged to few parents, of living to see his son eminent for literature and venerable for piety.

He was then entertained by Sir John Hartopp five years as domestic tutor to his son: and in that time particularly devoted himself to the study of the Holy Scriptures; and being chosen assistant to Dr. Chauncy, preached the first time on the birth-day that

completed his twenty-fourth year: probably considering that as the day of a second nativity, by which he entered on a new period of existence.

From the time of his reception into this family, his life was no otherwise diversified than by successive publications. The series of his works I am not able to deduce; their number, and their variety, shew the intenseness of his industry, and the extent of his capacity.

He was one of the first authors that taught the Dissenters to court attention by the graces of language. Whatever they had among them before, whether of learning or acuteness, was commonly obscured and blunted by coarseness and inelegance of style. He shewed them that zeal and purity might be expressed and enforced by polished diction.

He continued to the end of his life the teacher of a congregation, and no reader of his works can doubt of his fidelity or diligence. In the pulpit, though his low stature, which very little exceeded five feet, graced him with no advantage of appearance, yet the gravity and propriety of his utterance, made his discourses very efficacious. I once mentioned the reputation which Mr. Foster had gained by his proper delivery to my friend Dr. Hawksworth, who told me, that in the art of pronunciation he was far inferior to Dr. Watts.

Such was his flow of thoughts, and such his promptitude of language, that in the latter part of his life he did not precompose his cursory sermons: but having adjusted the heads, and sketched out some particulars, trusted for success to his extemporary powers.

He did not endeavour to assist his eloquence by any gesticulations; for, as no corporeal actions have

any correspondents with theological truth, he did not see how they could enforce it.

At the conclusion of weighty sentences he gave time, by a short pause, for the proper impression.

To stated and public instruction, he added familiar visits and personal application, and was careful to improve the opportunities which conversation afforded of diffusing and increasing the influence of religion.

By his natural temper he was quick of resentment; but by his established and habitual practice, he was gentle, modest, and inoffensive. His tenderness appeared in his attention to children, and to the poor. To the poor, while he lived in the family of his friend, he allowed the third part of his annual revenue, though the whole was not a hundred a year; and for children he condescended to lay aside the scholar, the philosopher, and the wit, to write little poems of devotion, and systems of instruction, adapted to their wants and capacities, from the dawn of reason through its gradations of advance in the morning of life. Every man acquainted with common principles of human action, will look with veneration on the writer who is at one time combating Locke, and at another making a catechism for children in their fourth year. A voluntary descent from the dignity of science is perhaps the hardest lesson that humility can teach.

As his mind was capacious, his curiosity excursive, and his industry continual, his writings are very numerous, and his subjects various. With his theological works I am only enough acquainted to admire his meekness of opposition, and his mildness of censure. It was not only in his book but in his mind that *orthodoxy* was *united* with charity.

Of his philosophical pieces, his *Logic* has been

received into the universities, and therefore wants no private recommendation: if he owes part of it to Le Clerc, it must be considered that no man who undertakes merely to methodise or illustrate a system, pretends to be its author.

In his metaphysical disquisitions, it was observed by the late learned Dr. Dyer, that he confounded the idea of *space* with that of *empty space*, and did not consider, that though space might be without matter, yet matter, being extended, could not be without space.

Few books have been perused by me with greater pleasure than his *Improvement of the Mind*, of which the radical principles may indeed be found in *Locke's Conduct of the Understanding*; but they are so expanded and ramified by Watts, as to confer upon him the merit of a work in the highest degree useful and pleasing. WHOEVER HAS THE CARE OF INSTRUCTING OTHERS, MAY BE CHARGED WITH DEFICIENCY IN HIS DUTY IF THIS BOOK IS NOT RECOMMENDED.

I have mentioned his treatises of Theology as distinct from his other productions; but the truth is, that whatever he took in hand was, by his incessant solicitude for souls, converted to Theology. As piety predominated in his mind, it is diffused over his works; under his direction it may be truly said, *Theologiæ Philosophia ancillatur*, philosophy is subservient to evangelical instruction; it is difficult to read a page without learning, or at least wishing, to be better. The attention is caught by indirect instruction, and he that sat down only to reason, is on a sudden compelled to pray.

It was therefore with great propriety that, in 1728, he received from Edinburgh and Aberdeen an unsolicited diploma, by which he became a Doctor of Divinity. Academical honours would have more



value, if they were always bestowed with equal judgment.

He continued many years to study and to preach, and to do good by his instruction and example; till at last the infirmities of age disabled him from the more laborious part of his ministerial functions, and being no longer capable of public duty, he offered to remit the salary appendant to it; but his congregation would not accept the resignation.

By degrees his weakness increased, and at last confined him to his chamber and his bed; where he was worn gradually away without pain, till he expired Nov. 25, 1748, in the seventy-fifth year of his age.

Few men have left behind such purity of character, or such monuments of laborious piety. He has provided instruction for all ages, from those who are lisping their first lessons, to the enlightened readers of Malbranche and Locke; he has left neither corporeal nor spiritual nature unexamined; he has taught the art of reasoning, and the science of the stars.

His character, therefore, must be formed from the multiplicity and diversity of his attainments, rather than from any single performance; for it would not be safe to claim for him the highest rank in any single denomination of literary dignity; yet perhaps there was nothing in which he would not have excelled, if he had not divided his powers to different pursuits.

As a poet, had he been only a poet, he would probably have stood high among the authors with whom he is now associated; for his judgment was exact, and he noted beauties and faults with very nice discernment: his imagination, as the *Decian Battle* proves, was vigorous and active, and the stores of knowledge were large by which his fancy was to be supplied. His ear was well tuned, and his diction was elegant and copious. But his devotional poetry,



like that of others, is unsatisfactory. The paucity of its topics enforces perpetual repetition, and the sanctity of the matter rejects the ornaments of figurative diction. It is sufficient for Watts to have done better than others what no man has done well.

His poems on other subjects seldom rise higher than might be expected from the amusements of a Man of Letters, and have different degrees of value as they are more or less laboured, or as the occasion was more or less favourable to invention.

He writes too often without regular measures, and too often in blank verse; the rhymes are not always sufficiently correspondent. He is particularly unhappy in coining names expressive of characters. His lines are commonly smooth and easy, and his thoughts always religiously pure; but who is there that, to so much piety and innocence, does not wish for a greater measure of sprightliness and vigour? But he is at least one of the few poets with whom youth and ignorance may be safely pleased; and happy will be that reader whose mind is disposed by his verses, or his prose, to imitate him in all but his nonconformity, to copy his benevolence to man, and his reverence to God.

In about three years he succeeded Dr. Chauncey; but, soon after his entrance on the charge, he was seized by a dangerous illness, which sunk<sup>d</sup> him to such weakness, that the congregation thought an assistant necessary, and appointed Mr. Price. His health then returned gradually, and he performed his duty, till (1712) he was seized by a fever of such violence and continuance, that from the feebleness which it brought upon him he never perfectly recovered.

This calamitous state made the compassion of his friends necessary, and drew upon him the attention of

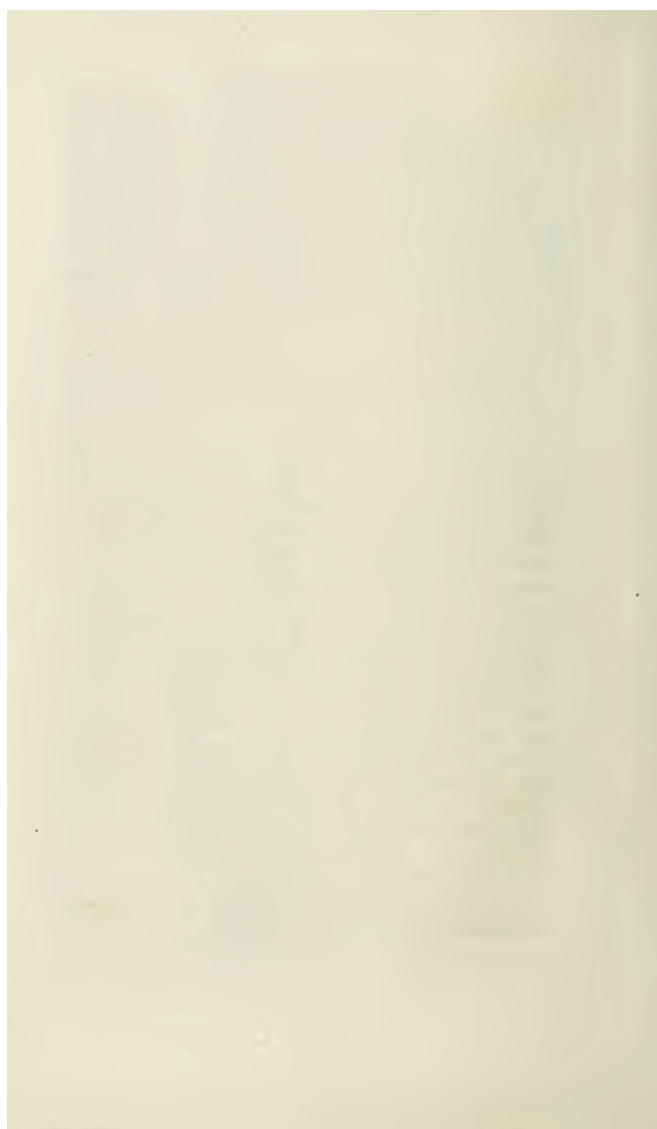
Sir Thomas Abney, who received him into his house, where, with a constancy of friendship, and uniformity of conduct not often to be found, he was treated for thirty-six years with all the kindness that friendship could prompt, and all the attention that respect could dictate. Sir Thomas died about eight years afterwards; but he continued with the lady and her daughter to the end of his life. The lady died about a year after him.

A coalition like this, a state in which the notions of patronage and dependence were overpowered by the perception of reciprocal benefits, deserves a particular memorial: and I will not withhold from the reader Dr. Gibbons's representation, to which regard is to be paid, as to the narrative of one who writes what he knows, and what is known likewise to multitudes besides.

“ Our next observation shall be made upon that remarkably kind providence which brought the Doctor into Sir Thomas Abney's family, and continued him there till his death, a period of no less than thirty-six years. In the midst of his sacred labours for the glory of God, and the good of his generation, he is seized with a most violent and threatening fever, which leaves him oppressed with great weakness, and puts a stop at least to his public services for four years. In this distressing season, doubly so to his active and pious spirit, he is invited to Sir Thomas Abney's family, nor ever removes from it till he had finished his days. Here he enjoyed the uninterrupted demonstrations of the truest friendship. Here, without any care of his own, he had every thing which could contribute to the enjoyment of life, and favour the unwearied pursuits of his studies. Here he dwelt in a family, which, for piety, order, harmony, and every virtue, was an house

of God. Here he had the privilege of a country recess, the fragrant bower, the spreading lawn, the flowery garden, and other advantages to soothe his mind, and aid his restoration to health; to yield him, whenever he chose them, most grateful intervals from his laborious studies, and enable him to return to them with redoubled vigour and delight. Had it not been for this most happy event, he might, as to outward view, have feebly, it may be painfully, dragged on through many more years of languor and inability for public service, and even for profitable study, or perhaps might have sunk into his grave under the overwhelming load of infirmities in the midst of his days, and thus the church and world would have been deprived of those many excellent sermons and works which he drew up and published during his long residence in this family. In a few years after his coming hither, Sir Thomas Abney dies; but his amiable consort survives, who shews the Doctor the same respect and friendship as before; and, most happily for him and great numbers besides, (for as her riches were great, her generosity and munificence were in full proportion,) her thread of life was drawn out to a great age, even beyond that of the Doctor's; and thus this excellent man, through her kindness, and that of her daughter, the present Mrs. Elizabeth Abney, who in a like degree esteemed and honoured him, enjoyed all the benefits and felicities he experienced at his first entrance into this family, till his days were numbered and finished, and like a shock of corn in its season, he ascended into the regions of perfect and immortal life and joy."

If this quotation has appeared long, let it be considered that it comprises an account of six and thirty years, and those the years of Dr. Watts.



PREFACE,  
AND  
RECOMMENDATIONS  
BY  
DR. DODDRIDGE AND THE REV. MR. JENNINGS.

---

PREFACE.

THE present Treatise, if it may assume the honour of that name, is made up of a variety of remarks and directions for the improvement of the mind in useful knowledge. It was collected from the observations which I had made on my own studies, and on the temper and sentiments, the humour and conduct of other men in their pursuit of learning, or in the affairs of life ; and it has been considerably assisted by occasional collections, in the course of my reading, from many authors on different subjects. I confess, in far the greatest part, I stand bound to answer for the weaknesses or defects that will be found in these papers, not being able to point to other writers whence the twentieth part of them are derived.

The work was composed at different times, and by slow degrees. Now and then, indeed, it spread itself into branches and leaves, like a plant in April, and advanced seven or eight pages in a week : and sometimes it lay by without growth like a vegetable in the winter, and did not increase half so much in the revolution of a year.

As these thoughts occurred to me in reading or meditation, or in my notices of the various appearances of things among mankind, they were thrown under those heads which make the present titles of the chapters, and were by degrees reduced to something like a method, such as the subject would admit.

On these accounts, it is not to be expected that the same accurate order should be observed, either in the whole book or in the particular chapters thereof, which is necessary in the system of any science whose scheme is projected at once. A book which has been twenty-years a-writing may be indulged in some variety of style and manner, though I hope there will not be found any great difference of sentiment; for wherein I had improved in latter years, beyond what I had first written, a few dashes and alterations have corrected the mistakes: and if the candour of the Reader will but allow what is defective in one place to be supplied by additions from another, I hope there will be found a sufficient reconciliation of what might seem, at first, to be scarce consistent.

The language and dress of these sentiments is such as the present temper of mind dictated, whether it were grave or pleasant, severe or smiling. If there has been any thing expressed with too much severity, I suspect it will be found to fall upon those sneering or daring writers of the age against religion, and against the Christian scheme, who seem to have left reason, or decency, or both, behind them, in some of their writings.

The same apology of the length of years in composing this book may serve also to excuse a repetition of the same sentiments which may happen to be found in different places without the author's design; but in other pages it was intended, so that those rules,

for the conduct of the understanding, which are most necessary should be set in several lights, that they might, with more frequency, and more force, impress the soul. I shall be sufficiently satisfied with the good humour and lenity of my Readers, if they will please to regard these papers as parcels of imperfect sketches, which were designed by a sudden pencil, and in a thousand leisure moments, to be, one day, collected into landscapes of some little prospects in the regions of learning, and in the world of common life, pointing out the fairest and most fruitful spots, as well as the rocks, and wildernesses, and fruitless morasses of the country. But I feel age advancing upon me; and my health is insufficient to perfect what I had designed, to increase and amplify these remarks, to confirm and improve these rules, and to illuminate the several pages with a richer and more beautiful variety of examples. The subject is almost endless; and new writers, in the present, and in the following ages, may still find sufficient follies, weaknesses, and dangers, among mankind, to be represented in such a manner as to guard youth against them.

These hints, such as they are, I hope, may be rendered some way useful to persons in younger years, who will favour them with a perusal, and who would seek the cultivation of their own understandings in the early days of life. Perhaps they may find something here which may wake a latent genius and direct the studies of a willing mind. Perhaps it may point out to a student, now and then, what may employ the most useful labours of his thoughts, and accelerate his diligence in the most momentous inquiries. Perhaps a sprightly youth might here meet with something to guard or warn him against mistakes, and withhold him, at other times, from those pursuits which are like to be fruitless and disappointing.



Let it be observed also, that, in our age, several of the ladies pursue science with success ; and others of them are desirous of improving their reason, even in the common affairs of life, as well as the men : yet the characters which are here drawn occasionally are almost universally applied to one sex ; but if any of the other shall find a character which suits them, they may, by a small change of the termination, apply and assume it to themselves, and accept the instruction, the admonition, or the applause which is designed in it.

## RECOMMENDATIONS.

---

THE author's name which is prefixed to this book, renders it altogether needless for us to say any thing in order to recommend it; and we need not assure any judicious reader, who has been conversant with Dr. Watts's writings, that this is the genuine work of that excellent author; for he cannot fail of discerning the Doctor's easy style and beautiful manner of expression in every page. We esteem it an honour done us by that truly great man, that he was pleased, by his last will, to entrust us with his manuscripts which he designed for the press: however, he lived to publish several of those himself, after his will was made; so that not many remain to be published by us. Some indeed there are remaining, which he did originally intend for the press, but his broken state of health did not permit him to finish them, and they are left too imperfect to be ever published. Of this sort, among others, is The larger Discourse on Psalmody, which he gave notice of his intention to publish, in the preface to the second edition of his Hymns, when he withdrew the shorter essay on that subject, which was annexed to the first edition. There are also among his manuscripts, some tracts relating to a doctrinal controversy which the Doctor had been engaged in, but which the world seems to be tired of; so that, most probably, this Second Part of

the Improvement of the Mind, with the Discourse on Education, and some Additions to the *Reliquiæ Juveniles*, are all the posthumous works of Dr. Watts that will ever be printed.

As to this work in particular, a considerable part of it was corrected for the press by the Doctor's own hand; and as to the rest of it, he did not leave it so far unfinished as should, in his own judgment, discourage the publishing it; for he left this note in a paper along with it: 'Though this book, or the second volume of the Improvement of the Mind, is not so far finished as I could wish, yet I leave it among the number of books corrected for the press, for it is very easy for any person of genius and science to finish it, and publish it in a form sufficiently useful to the world.' The corrections we have presumed to make are comparatively but few and trivial; and when now and then it was thought necessary to add a line or two for the illustration of any passage, it is generally put in the form of a note at the foot of the page.

It may perhaps be expected we should make some apology for delaying the publishing of this book so long after the author's death; a book that has been so much expected and so earnestly desired, as appears by several letters found in the Doctor's study, from eminent persons and from learned societies. There are various causes that have contributed to the delay, which the world need not be informed of; but the remote distance of our habitations, and the multiplicity of business in which each of us is statedly engaged, are circumstances pretty generally known, and which we hope will be admitted in excuse for some part of the delay, and some part the booksellers must answer for. However, we are the less solicitous to apologize for not publishing this book sooner, as

RECOMMENDATIONS. xxiii

we are satisfied it will be welcome now it comes ;  
and that those who, upon reading the first volume  
have so earnestly desired the second, will not be dis-  
appointed when they read it.

We have only to add our most sincere wishes and  
prayers, that a book so admirably suited to improve  
the minds of men, especially of the rising generation,  
and to promote universal goodness, as this appears to  
be, may be attended with a blessing from on high.

D. JENNINGS.  
P. DODDRIDGE.

June 26, 1751.



THE  
IMPROVEMENT OF THE MIND

---

PART I.

---

*Directions for the Attainment of useful Knowledge.*

---

INTRODUCTION.

No man is obliged to learn and know every thing; this can neither be sought nor required, for it is utterly impossible; yet all persons are under some obligation to improve their own understanding; otherwise it will be a barren desert, or a forest overgrown with weeds and brambles. Universal ignorance or infinite errors will overspread the mind which is utterly neglected, and lies without any cultivation.

Skill in the sciences is indeed the business and profession but of a small part of mankind; but there are many others placed in such an exalted rank in the world, as allows them much leisure and large opportunities to cultivate their reason, and to beautify and enrich their minds with various knowledge. Even the lower orders of men have particular callings in life, wherein they ought to acquire a just degree of skill; and this is not to be done well, without thinking and reasoning about them.

The common duties and benefits of society, which belong to every man living, as we are social creatures, and even our native and necessary relations to a family, a neighbourhood or government, oblige all persons whatsoever to use their reasoning powers upon a thousand occasions; every hour of life calls for some regular exercise of our judgment, as to time and things, persons and actions: without a prudent and discreet determination in matters before us, we shall be plunged into perpetual errors in our conduct. Now that which should always be practised, must at some time be learnt.

Besides, every son and daughter of Adam has a most important concern in the affairs of life to come, and therefore it is a matter of the highest moment, for every one to understand, to judge, and to reason right about the things of religion. It is vain for any to say, we have no leisure time for it. The daily intervals of time, and vacancies from necessary labour, together with the one day in seven in the Christian world, allows sufficient time for this, if men would but apply themselves to it with half so much zeal and diligence as they do to the trifles and amusements of this life, and it would turn to infinitely better account.

Thus it appears to be the necessary duty, and the interest of every person living, to improve his understanding, to inform his judgment, to treasure up useful knowledge, and to acquire the skill of good reasoning, as far as his station, capacity, and circumstances, furnish him with proper means for it. Our mistakes in judgment may plunge us into much folly and guilt in practice. By acting without thought or reason, we dishonour the God that made us reasonable creatures, we often become injurious to our neighbours, kindred, or friends, and we bring sin and misery upon ourselves; for we are accountable



to God, our judge, for every part of our irregular and mistaken conduct, where he hath given us sufficient advantages to guard against those mistakes.

## CHAP. I.

*General Rules for the Improvement of Knowledge\*.*

Rule I.—DEEPLY possess your mind with the vast importance of a good judgment, and the rich and inestimable advantage of right reasoning. Review the instances of your own misconduct in life; think seriously with yourselves how many follies and sorrows you had escaped, and how much guilt and misery you had prevented, if from your early years you had but taken due pains to judge aright concerning persons, times, and things. This will awaken you with lively vigour to address yourselves to the work of improving your reasoning powers, and seizing every opportunity and advantage for that end.

II. Consider the weaknesses, frailties, and mistakes of human nature in general, which arise from the very constitution of a soul united to an animal body, and subjected to many inconveniences thereby. Consider the many additional weaknesses, mistakes, and frailties, which are derived from our original apostacy and fall from a state of innocence: how much our powers of understanding are yet more darkened, enfeebled, and imposed upon by our senses, our fancies, and our unruly passions, &c. Consider the depth

\* Though the most of these following Rules are chiefly addressed to those whom their fortune or their station require to addict themselves to the peculiar improvement of their minds in greater degrees of knowledge, yet every one who has leisure and opportunity to be acquainted with such writings as these, may find something among them for their own use.

and difficulty of many truths, and the flattering appearances of falsehood, whence arises an infinite variety of dangers to which we are exposed in our judgment of things. Read with greediness those authors that treat of the doctrine of prejudices, prepossessions, and springs of error, on purpose to make your soul watchful on all sides, that it suffer itself, as far as possible, to be imposed upon by none of them.

III. A slight view of things so momentous is not sufficient. You should therefore contrive and practise some proper methods to acquaint yourself with your own ignorance, and to impress your mind with a deep and painful sense of the low and imperfect degrees of your present knowledge, that you may be incited with labour and activity to pursue after greater measures. Among others, you may find some such methods as these successful.

1. Take a wide survey now and then of the vast and unlimited regions of learning. Let your meditations run over the names of all the sciences, with their numerous branchings, and innumerable particular themes of knowledge; and then reflect how few of them you are acquainted with in any tolerable degree. The most learned of mortals will never find occasion to act over again what is fabled of Alexander the Great, that when he had conquered what was called the eastern world, he wept for want of more worlds to conquer. The worlds of science are immense and endless.

2. Think what a numberless variety of questions and difficulties there are belonging even to that particular science in which you have made the greatest progress, and how few of them there are in which you have arrived at a final and undoubted certainty; excepting only those questions in the pure and simple mathematics, whose theorems are demonstrable, and

leave scarce any doubt; and yet, even in the pursuit of some few of these, mankind have been strangely bewildered.

3. Spend a few thoughts sometimes on the puzzling inquiries concerning vacuums and atoms, the doctrine of infinites, indivisibles, and incommensurables in geometry, wherein there appear some insolvable difficulties: do this on purpose to give you a more sensible impression of the poverty of your understanding, and the imperfection of your knowledge. This will teach you what a vain thing it is to fancy that you know all things, and will instruct you to think modestly of your present attainments, when every dust of the earth, and every inch of empty space, surmounts your understanding, and triumphs over your presumption. Arithmo had been bred up to accounts all his life, and thought himself a complete master of numbers. But when he was pushed hard to give the square root of the number 2, he tried at it, and laboured long in millesimal fractions, till he confessed there was no end of the inquiry; and yet he learned so much modesty by this perplexing question, that he was afraid to say it was an impossible thing. It is some good degree of improvement, when we are afraid to be positive.

4. Read the accounts of those vast treasures of knowledge which some of the dead have possessed, and some of the living do possess. Read and be astonished at the almost incredible advances which have been made in science. Acquaint yourself with some persons of great learning, that by converse among them, and comparing yourself with them, you may acquire a mean opinion of your own attainments, and may thereby be animated with new zeal, to equal them as far as possible, or to exceed: thus let your diligence be quickened by a generous and laudable

emulation. If Vanillus had never met with Scitorio and Palydes, he had never imagined himself a mere novice in philosophy, nor ever set himself to study in good earnest.

Remember this, that if upon some few superficial acquirements you value, exalt, and swell yourself, as though you were a man of learning already, you are thereby building a most unpassable barrier against all improvement; you will lie down and indulge idleness, and rest yourself contented in the midst of deep and shameful ignorance. *Multi ad scientiam pervenissent si se illuc pervenisse non putassent.*

IV. Presume not too much upon a bright genius, a ready wit, and good parts; for this, without labour and study, will never make a man of knowledge and wisdom. This has been an unhappy temptation to persons of a vigorous and gay fancy, to despise learning and study. They have been acknowledged to shine in an assembly, and sparkle in a discourse on common topics, and thence they took it into their heads to abandon reading and labour, and grow old in ignorance; but when they had lost their vivacity of animal nature and youth, they became stupid and sottish even to contempt and ridicule. Lucidus and Scintillo are young men of this stamp; they shine in conversation; they spread their native riches before the ignorant; they pride themselves in their own lively images of fancy, and imagine themselves wise and learned; but they had best avoid the presence of the skilful, and the test of reasoning; and I would advise them once a day to think forward a little, what a contemptible figure they will make in age.

The witty men sometimes have sense enough to know their own foible; and therefore they craftily shun the attacks of argument, or boldly pretend to despise and renounce them, because they are con-

scious of their own ignorance, and inwardly confess their want of acquaintance with the skill of reasoning.

V. As you are not to fancy yourself a learned man because you are blessed with a ready wit; so neither must you imagine that large and laborious reading, and a strong memory, can denominate you truly wise.

What that excellent critic has determined when he decided the question, whether wit or study makes the best poet, may well be applied to every sort of learning:

. . . . . Ego nec studium sine divite venâ,  
Nec rude quid prosit, video, ingenium: alterius sic  
Altera poscit opem res, et conjurat amicè.  
*Hor. de Art. Poet.*

Thus made English:

Concerning poets there has been contest,  
Whether they're made by art, or nature best;  
But if I may presume in this affair,  
Among the rest my judgment to declare,  
No art without a genius will avail,  
And parts without the help of art will fail:  
But both ingredients jointly must unite,  
Or verse will never shine with a transcendent light.  
*Othham.*

It is meditation and studious thought, it is the exercise of your own reason and judgment upon all you read, that gives good sense even to the best genius, and affords your understanding the truest improvement. A boy of a strong memory may repeat a whole book of Euclid, yet be no geometrician; for he may not be able perhaps to demonstrate one single theorem. Memorino has learnt half the Bible by heart, and is become a living concordance, and a

speaking index to theological folios, and yet he understands little of divinity.

A well-furnished library, and a capacious memory, are indeed of singular use toward the improvement of the mind ; but if all your learning be nothing else but a mere amassment of what others have written, without a due penetration into the meaning, and without a judicious choice and determination of your own sentiments, I do not see what title your head has to true learning above your shelves. Though you have read philosophy and theology, morals and metaphysics in abundance, and every other art and science, yet if your memory is the only faculty employed, with the neglect of your reasoning powers, you can justly claim no higher character but that of a good historian of the sciences.

Here note, many of the foregoing advices are more peculiarly proper for those who are conceited of their abilities, and are ready to entertain a high opinion of themselves. But a modest, humble youth, of a good genius, should not suffer himself to be discouraged by any of these considerations. They are designed only as a spur to diligence, and a guard against vanity and pride.

VI. Be not so weak as to imagine, that a life of learning is a life of laziness and ease ; dare not give up yourself to any of the learned professions, unless you are resolved to labour hard at study, and can make it your delight, and the joy of your life, according to the motto of our late Lord Chancellor King :

. . . . Labor ipse voluptas.

It is no idle thing to be a scholar indeed. A man much addicted to luxury and pleasure, recreation and



pastime, should never pretend to devote himself entirely to the sciences, unless his soul be so reformed and refined, that he can taste all these entertainments eminently in his closet, among his books and papers. Sobrino is a temperate man, and a philosopher, and he feeds upon partridge and pheasant, venison and ragouts, and every delicacy, in a growing understanding, and a serene and healthy soul, though he dines on a dish of sprouts or turnips. Languinos loved his ease, and therefore chose to be brought up a scholar; he had much indolence in his temper; and as he never cared for study, he falls under universal contempt in his profession, because he has nothing but the gown and the name.

VII. Let the hope of new discoveries, as well as the satisfaction and pleasure of known truths, animate your daily industry. Do not think learning in general is arrived at its perfection, or that the knowledge of any particular subject in any science cannot be improved, merely because it has lain five hundred or a thousand years without improvement. The present age, by the blessing of God on the ingenuity and diligence of men, has brought to light such truths in natural philosophy, and such discoveries in the heavens and the earth, as seemed to be beyond the reach of man. But may there not be Sir Isaac Newtons in every science? You should never despair therefore of finding out that which has never yet been found, unless you see something in the nature of it which renders it unsearchable, and above the reach of our faculties.

Nor should a student in divinity imagine that our age is arrived at a full understanding of every thing which can be known by the Scriptures. Every age since the Reformation hath thrown some further light on difficult texts and paragraphs of the Bible, which

have been long obscured by the early rise of anti-christ : and since there are at present many difficulties and darkneses hanging about certain truths of Christian religion, and since several of these relate to important doctrines, such as the origin of sin, the fall of Adam, the person of Christ, the blessed Trinity, and the decrees of God, &c. which do still embarrass the minds of honest and inquiring readers, and which make work for noisy controversy ; it is certain there are several things in the Bible yet unknown, and not sufficiently explained ; and it is certain that there is some way to solve these difficulties, and to reconcile these seeming contradictions. And why may not a sincere searcher of truth in the present age, by labour, diligence, study, and prayer, with the best use of his reasoning powers, find out the proper solution of those knots and perplexities which have hitherto been unsolved, and which have afforded matter for angry quarrelling ? Happy is every man who shall be favoured of Heaven, to give a helping hand towards the introduction of the blessed age of light and love.

VIII. Do not hover always on the surface of things, nor take up suddenly with mere appearances ; but penetrate into the depth of matters, as far as your time and circumstances allow, especially in those things which relate to your own profession. Do not indulge yourselves to judge of things by the first glimpse, or a short and superficial view of them ; for this will fill the mind with errors and prejudices, and give it a wrong turn and ill habit of thinking, and make much work for retractation. Subito is carried away with title pages, so that he ventures to pronounce upon a large octavo at once, and to recommend it wonderfully when he has read half the preface. Another volume of controversies, of equal size, was discarded by him at once, because it pre-



tended to treat of the Trinity, and yet he could neither find the word essence nor subsistencies in the twelve first pages ; but Subito changes his opinions of men and books and things so often, that nobody regards him.

As for those sciences, or those parts of knowledge, which either your profession, your leisure, your inclination, or your incapacity, forbid you to pursue with much application, or to search far into them, you must be contented with an historical and superficial knowledge of them, and not pretend to form any judgments of your own on those subjects which you understand very imperfectly.

IX. Once a day, especially in the early years of life and study, call yourselves to an account what new ideas, what new proposition or truth you have gained, what further confirmation of known truths, and what advances you have made in any part of knowledge ; and let no day, if possible, pass away without some intellectual gain : such a course, well pursued, must certainly advance us in useful knowledge. It is a wise proverb among the learned, borrowed from the lips and practice of a celebrated painter, *Nulla dies sine lineâ*, ‘ Let no day pass without one line at least : ’ and it was a sacred rule among the Pythagoreans, That they should every evening thrice run over the actions and affairs of the day, and examine what their conduct had been, what they had done, or what they had neglected : and they assured their pupils, that by this method they would make a noble progress in the path of virtue.

Μὴ δ' ὕπνον μαλακοῖσιν ἐπ' ὄμμασι προσδέξασθαι  
 Πρὶν τῶν ἡμερινῶν ἔργων τρεῖς ἑκάστον ἐπελθεῖν.  
 Πῇ παρέβην ; τί δ' ἔρεξα ; τί μοι δέον οὐκ ἐτελέσθη ;  
 Ταῦτα σε τῆς θείης ἀρετῆς εἰς ἔχματα θήσει.

## GENERAL RULES

Nor let soft slumber close your eyes,  
 Before you've recollected thrice  
 The train of action through the day :  
 Where have my feet chose out their way ?  
 What have I learnt, where-e'er I've been,  
 From all I've heard, from all I've seen ?  
 What know I more that's worth the knowing ?  
 What have I done that's worth the doing ?  
 What have I sought that I should shun ?  
 What duty have I left undone ?  
 Or into what new follies run ?  
 These self-inquiries are the road  
 That leads to virtue, and to God.

I would be glad, among a nation of Christians, to find young men heartily engaged in the practice of what this heathen writer teaches.

X. Maintain a constant watch at all times against a dogmatical spirit: fix not your assent to any proposition in a firm and unalterable manner, till you have some firm and unalterable ground for it, and till you have arrived at some clear and sure evidence; till you have turned the proposition on all sides, and searched the matter through and through, so that you cannot be mistaken. And even where you may think you have full grounds of assurance, be not too early, nor too frequent, in expressing this assurance in too peremptory and positive a manner, remembering that human nature is always liable to mistake in this corrupt and feeble state. A dogmatical spirit has many inconveniences attending it: as

1. It stops the ear against all further reasoning upon that subject, and shuts up the mind from all further improvements of knowledge. If you have resolutely fixed your opinion, though it be upon too slight and insufficient grounds, yet you will stand determined to renounce the strongest reason brought for the contrary opinion, and grow obstinate against the force of the clearest argument. *Positivo* is a man

of this character ; and has often pronounced his assurance of the Cartesian vortexes : last year some further light broke in upon his understanding, with uncontrollable force, by reading something of mathematical philosophy ; yet having asserted his former opinions in a most confident manner, he is tempted now to wink a little against the truth, or to prevaricate in his discourse upon that subject, lest by admitting conviction, he should expose himself to the necessity of confessing his former folly and mistake : and he has not humility enough for that.

2. A dogmatical spirit naturally leads us to arrogance of mind, and gives a man some airs in conversation which are too haughty and assuming. Audens is a man of learning, and very good company ; but his infallible assurance renders his carriage sometimes insupportable.

A dogmatical spirit inclines a man to be censorious of his neighbours. Every one of his own opinions appears to him written as it were with sunbeams ; and he grows angry that his neighbour does not see it in the same light. He is tempted to disdain his correspondents, as men of a low and dark understanding, because they will not believe what he does. Furio goes further in this wild track ; and charges those who refuse his notions with wilful obstinacy, and vile hypocrisy ; he tells them boldly, that they resist the truth, and sin against their consciences.

These are the men that, when they deal in controversy, delight in reproaches. They abound in tossing about absurdity and stupidity among their brethren ; they cast the imputation of heresy and nonsense plentifully upon their antagonists : and in matters of sacred importance, they deal out their anathemas in abundance upon Christians better than themselves ; they denounce damnation upon their neighbours,

without either justice or mercy ; and when they pronounce sentences of divine wrath against supposed heretics, they add their own human fire and indignation. A dogmatist in religion is not a great way off from a bigot, and is in high danger of growing up to be a bloody persecutor.

XI. Though caution and slow assent will guard you against frequent mistakes and retractions ; yet you should get humility and courage enough to retract any mistake, and confess an error : frequent changes are tokens of levity in our first determinations ; yet you should never be too proud to change your opinion, nor frightened at the name of a changeling. Learn to scorn those vulgar bugbears, which confirm foolish man in his old mistakes, for fear of being charged with inconstancy. I confess it is better not to judge, than judge falsely ; it is wiser to withhold our assent till we see complete evidence ; but if we have too suddenly given up our assent, as the wisest man does sometimes, if we have professed what we find afterwards to be false, we should never be ashamed nor afraid to renounce a mistake. That is a noble essay which is found among the occasional-papers ‘ to encourage the world to retrace retractions ;’ and I would recommend it to the perusal of every scholar and every Christian.

XII. He that would raise his judgment above the vulgar rank of mankind, and learn to pass a just sentence on persons and things, must take heed of a fanciful temper of mind, and a humorous conduct in his affairs. Fancy and humour, early and constantly indulged, may expect an old age overrun with follies.

The notion of a humorist is one that is greatly pleased, or greatly displeased with little things ; who sets his heart much upon matters of very small im-

portance; who has his will determined every day by trifles, his actions seldom directed by the reason and nature of things, and his passions frequently raised by things of little moment. Where this practice is allowed, it will insensibly warp the judgment to pronounce little things great, and tempt you to lay a great weight upon them. In short, this temper will incline you to pass an unjust value on almost every thing that occurs; and every step you take in this path is just so far out of the way to wisdom.

XIII. For the same reason have a care of trifling with things important and momentous, or of sporting with things awful and sacred: do not indulge a spirit of ridicule, as some witty men do on all occasions and subjects. This will as unhappily bias the judgment on the other side, and incline you to pass a low esteem on the most valuable objects. Whatsoever evil habit we indulge in practice, it will insensibly obtain a power over our understanding, and betray us into many errors. Jocander is ready with his jests to answer every thing that he hears; he reads books in the same jovial humour, and has gotten the art of turning every thought and sentence into merriment. How many awkward and irregular judgments does this man pass upon solemn subjects, even when he designs to be grave and in earnest? His mirth and laughing humour is formed into habit and temper, and leads his understanding shamefully astray. You will see him wandering in pursuit of a gay flying feather, and he is drawn by a sort of ignis fatuus into bogs and mire almost every day of his life.

XIV. Ever maintain a virtuous and pious frame of spirit; for an indulgence of vicious inclinations debases the understanding, and perverts the judgment. Whoredom and wine, and new wine, take away tho

heart and soul and reason of a man. Sensuality ruins the better faculties of the mind; an indulgence to appetite and passion enfeebles the powers of reason; it makes the judgment weak and susceptible of every falsehood, and especially of such mistakes as have a tendency towards the gratification of the animal: and it warps the soul aside strangely from that stedfast honesty and integrity that necessarily belongs to the pursuit of truth. It is the virtuous man who is in a fair way to wisdom. 'God gives to those that are good in his sight wisdom, and knowledge, and joy. Eccles. ii. 26.

Piety towards God, as well as sobriety and virtue, are necessary qualifications to make a truly wise and judicious man. He that abandons religion must act in such a contradiction to his own conscience and best judgment, that he abuses and spoils the faculty itself. It is thus in the nature of things, and it is thus by the righteous judgment of God: even the pretended sages among the heathens, who did not like to retain God in their knowledge, they were given up to a reprobate mind, *εἰς τοὺς ἀδόκιμους*, an undistinguishing or injudicious mind, so that they judged inconsistently, and practised mere absurdities, *τὰ μὴ ἀνίστα*, Rom. i. 28.

And it is the character of the slaves of antichrist, 2 Thess. ii. 10, &c. that those 'who receive not the love of the truth were exposed to the power of diabolical sleights and lying wonders.' When divine revelation shines and blazes in the face of men with glorious evidence, and they wink their eyes against it, the god of this world is suffered to blind them, even in the most obvious, common, and sensible things. The great God of Heaven, for this cause, sends them strong delusions, that they should believe a lie; and the nonsense of transubstantiation in the



poplsh world, is a most glaring accomplishment of this prophecy, beyond even what could have been thought of or expected among creatures who pretend to reason.

XV. Watch against the pride of your own reason, and a vain conceit of your own intellectual powers, with the neglect of divine aid and blessing. Presume not upon great attainments in knowledge by your own self-sufficiency: those who trust to their own understandings entirely, are pronounced fools in the word of God; and it is the wisest of men gives them this character, 'He that trusteth in his own heart is a fool,' Prov. xxviii. 26. And the same divine writer advises us to 'trust in the Lord with all our heart, and not to lean to our understandings, nor to be wise in our own eyes,' chap. iii. 5, 7.

Those who, with a neglect of religion and dependence on God, apply themselves to search out every article in the things of God by the mere dint of their own reason, have been suffered to run into wild excesses of foolery, and strange extravagance of opinions. Every one who pursues this vain course, and will not ask for the conduct of God in the study of religion, has just reason to fear he shall be left of God, and given up a prey to a thousand prejudices; that he shall be consigned over to the follies of his own heart, and pursue his own temporal and eternal ruin. And even in common studies we should, by humility and dependence, engage the God of truth on our side.

XVI. Offer up therefore your daily requests to God the father of lights, that he would bless all your attempts and labours in reading, study, and conversation. Think with yourself how easily and how insensibly, by one turn of thought, he can lead you into a large scene of useful ideas: he can teach you to lay hold on a clue which may guide your thoughts

with safety and ease through all the difficulties of an intricate subject. Think how easily the Author of your beings can direct your motions by his providence, so that the glance of an eye, or a word striking the ear, or a sudden turn of the fancy, shall conduct you to a train of happy sentiments. By his secret and supreme method of government, he can draw you to read such a treatise, or converse with such a person, who may give you more light into some deep subject in an hour, than you could obtain by a month of your own solitary labour.

Think with yourself with how much ease the God of spirits can cast into your minds some useful suggestion, and give a happy turn to your own thoughts, or the thoughts of those with whom you converse, whence you may derive unspeakable light and satisfaction, in a matter that has long puzzled and entangled you: he can shew you a path which the vulture's eye has not seen, and lead you by some unknown gate or portal, out of a wilderness and labyrinth of difficulties, wherein you have been long wandering.

Implore constantly his divine grace to point your inclination to proper studies, and to fix your heart there. He can keep off temptations on the right hand, and on the left, both by the course of his providence, and by the secret and insensible intimations of his Spirit. He can guard your understandings from every evil influence of error, and secure you from the danger of evil books and men, which might otherwise have a fatal effect, and lead you into pernicious mistakes.

Nor let this sort of advice fall under the censure of the godless and profane, as a mere piece of bigotry or enthusiasm, derived from faith and the Bible: for the reasons which I have given to support this pious



practice, of invoking the blessing of God on our studies, are derived from the light of nature as well as revelation. He that made our souls, and is the Father of spirits, shall he not be supposed to have a most friendly influence toward the instruction and government of them? The Author of our rational powers can involve them in darkness when he pleases, by a sudden distemper; or he can abandon them to wander into dark and foolish opinions, when they are filled with a vain conceit of their own light. He expects to be acknowledged in the common affairs of life; and he does as certainly expect it in the superior operations of the mind, and in the search of knowledge and truth. The very Greek heathens, by the light of reason, were taught to say, Ἐκ Διὸς ἀρχόμεθα, and the Latins, A Jove Principium Musæ. In works of learning they thought it necessary to begin with God. Even the poets call upon the muse as a goddess to assist them in their compositions.

The first lines of Homer, in his *Iliad* and his *Odyssey*, the first line of Musæus, in his song of *Hero and Leander*, the beginning of Hesiod, in his poem of *Works and Days*, and several others, furnish us with sufficient examples of this kind; nor does Ovid leave out this piece of devotion, as he begins his stories of the *Metamorphoses*. Christianity so much the more obliges us, by the precepts of Scripture, to invoke the assistance of the true God in all our labours of the mind, for the improvement of ourselves and others. Bishop Saunderson says, that study without prayer is atheism, as well as that prayer without study is presumption. And we are still more abundantly encouraged by the testimony of those who have acknowledged, from their own experience, that sincere prayer was no hindrance to their studies: they have gotten more knowledge sometimes upon

their knees, than by their labour in perusing a variety of authors; and they have left this observation for such as follow, *Bene orasse est bene studuisse*, 'praying is the best studying.'

To conclude, let industry and devotion join together, and you need not doubt the happy success. Prov. ii. 2: 'Incline thine ear to wisdom; apply thine heart to understanding: cry after knowledge, and lift up thy voice: seek her as silver, and search for her as for hidden treasures; then shalt thou understand the fear of the Lord,' &c. which is the beginning of wisdom.' It is 'the Lord who gives wisdom even to the simple, and out of his mouth cometh knowledge and understanding.'

## CHAP. II.

### *Observation, Reading, Instruction by Lectures, Conversation, and Study, compared.*

THERE are five eminent means or methods whereby the mind is improved in the knowledge of things, and these are observation, reading, instruction by lectures, conversation, and meditation; which last, in a most peculiar manner, is called study.

Let us survey the general definitions or descriptions of them all.

I. Observation is the notice that we take of all occurrences in human life, whether they are sensible or intellectual, whether relating to persons or things, to ourselves or others. It is this that furnishes us, even from our infancy, with a rich variety of ideas and propositions, words and phrases: it is by this we know that fire will burn, that the sun gives light, that a horse eats grass, that an acorn produces an oak, that

man is a being capable of reasoning and discourse, that our judgment is weak, that our mistakes are many, that our sorrows are great, that our bodies die and are carried to the grave, and that one generation succeeds another. All those things which we see, which we hear or feel, which we perceive by sense or consciousness, or which we know in a direct manner, with scarce any exercise of our reflecting faculties, or our reasoning powers, may be included under the general name of observation.

When this observation relates to any thing that immediately concerns ourselves, and of which we are conscious, it may be called experience. So I am said to know or experience that I have in myself a power of thinking, fearing, loving, &c. that I have appetites and passions working in me, and many personal occurrences have attended me in this life.

Observation therefore includes all that Mr. Locke means by sensation and reflexion.

When we are searching out the nature or properties of any being by various methods of trial, or when we apply some active powers, or set some causes to work to observe what effects they would produce, this sort of observation is called experiment. So when I throw a bullet into water, I find it sinks; and when I throw the same bullet into quicksilver, I see it swims: but if I beat out this bullet into a thin hollow shape, like a dish, then it will swim in the water too. So when I strike two flints together, I find they produce fire: when I throw a seed into the earth, it grows up into a plant.

All these belong to the first method of knowledge; which I shall call observation.

II. Reading is that means or method of knowledge whereby we acquaint ourselves with what other men have written, or published to the world in their writ-

ings. These arts of reading and writing are of infinite advantage; for by them we are made partakers of the sentiments, observations, reasonings, and improvements of all the learned world, in the most remote nations, and in former ages almost from the beginning of mankind.

III. Public or private lectures are such verbal instructions as are given by a teacher while the learners attend in silence. This is the way of learning religion from the pulpit; or of philosophy or theology from the professor's chair; or of mathematics, by a teacher shewing us various theorems or problems, *i. e.* speculations or practices by demonstration and operation, with all the instruments of art necessary to those operations.

IV. Conversation is another method of improving our minds, wherein, by mutual discourse and inquiry, we learn the sentiments of others, as well as communicate our sentiments to others in the same manner. Sometimes indeed, though both parties speak by turns, yet the advantage is only on one side, as when a teacher and a learner meet and discourse together: but frequently the profit is mutual. Under this head of conversation we may also rank disputes of various kinds.

V. Meditation or study includes all those exercises of the mind, whereby we render all the former methods useful for our increase in true knowledge and wisdom. It is by meditation we come to confirm our memory of things that pass through our thoughts in the occurrences of life, in our own experiences, and in the observations we make. It is by meditation that we draw various inferences, and establish in our minds general principles of knowledge. It is by meditation that we compare the various ideas which we derive from our senses, or from the operations of our

souls, and join them in propositions. It is by meditation that we fix in our memory whatsoever we learn, and form our own judgment of the truth or falsehood, the strength or weakness, of what others speak or write. It is meditation or study that draws out long chains of argument, and searches and finds deep and difficult truths which before lay concealed in darkness.

It would be a needless thing to prove, that our own solitary meditations, together with the few observations that the most part of mankind are capable of making, are not sufficient, of themselves, to lead us into the attainment of any considerable proportion of knowledge, at least in an age so much improved as ours is, without the assistance of conversation and reading, and other proper instructions that are to be attained in our days. Yet each of these five methods have their peculiar advantages, whereby they assist each other; and their peculiar defects, which have need to be supplied by the other's assistance. Let us trace over some of the particular advantages of each.

I. One method of improving the mind is observation, and the advantages of it are these :

1. It is owing to observation, that our mind is furnished with the first simple and complex ideas. It is this lays the ground-work and foundation of all knowledge, and makes us capable of using any of the other methods for improving the mind : for if we did not attain a variety of sensible and intellectual ideas by the sensations of outward objects, by the consciousness of our own appetites and passions, pleasures and pains, and by inward experience of the actings of our own spirits, it would be impossible either for men or books to teach us any thing. It is observation that



must give us our first ideas of things, as it includes in it sense and consciousness.

2. All our knowledge derived from observation, whether it be of single ideas or of propositions, is knowledge gotten at first hand. Hereby we see and know things as they are, or as they appear to us ; we take the impressions of them on our minds from the original objects themselves, which give a clearer and stronger conception of things : these ideas are more lively, and the propositions (at least in many cases) are much more evident. Whereas, what knowledge we derive from lectures, reading, and conversation, is but the copy of other men's ideas, that is, the picture of a picture ; and it is one remove further from the original.

3. Another advantage of observation is, that we may gain knowledge all the day long, and every moment of our lives ; and every moment of our existence we may be adding something to our intellectual treasures thereby, except only while we are asleep, and even then the remembrance of our dreaming will teach us some truths, and lay a foundation for a better acquaintance with human nature, both in the powers and in the frailties of it.

II. The next way of improving the mind is by reading, and the advantages of it are such as these :

1. By reading we acquaint ourselves, in a very extensive manner, with the affairs, actions, and thoughts, of the living and the dead, in the most remote nations, and most distant ages, and that with as much ease as though they lived in our own age and nation. By reading of books we may learn something from all parts of mankind ; whereas by observation we learn all from ourselves, and only what comes within our own direct cognizance ; by conversation we can only

enjoy the assistance of a very few persons, viz. those who are near us, and live at the same time when we do, that is, our neighbours and contemporaries; but our knowledge is much more narrowed still, if we confine ourselves merely to our own solitary reasonings, without much observation or reading: for then all our improvement must arise only from our own inward powers and meditations.

2. By reading we learn not only the actions and the sentiments of different nations and ages, but we transfer to ourselves the knowledge and improvements of the most learned men, the wisest and the best of mankind, when or wheresoever they lived: for though many books have been written by weak and injudicious persons, yet the most of those books which have obtained great reputation in the world, are the products of great and wise men in their several ages and nations: whereas we can obtain the conversation and instruction of those only who are within the reach of our dwelling, or our acquaintance, whether they are wise or unwise: and sometimes that narrow sphere scarce affords any person of great eminence in wisdom or learning, unless our instructor happen to have this character. And as for own study and meditations, even when we arrive at some good degrees of learning, our advantage for further improvement in knowledge by them is still far more contracted than what we may derive from reading.

3. When we read good authors, we learn the best, the most laboured, and most refined sentiments, even of those wise and learned men; for they have studied hard, and have committed to writing their maturest thoughts, and the result of their long study and experience: whereas by conversation, and in some lectures, we obtain many times only the present thoughts of our tutors or friends, which (though they may be

bright and useful) yet, at first perhaps, may be sudden and indigested, and are mere hints which have risen to no maturity.

4. It is another advantage of reading, that we may review what we have read ; we may consult the page again and again, and meditate on it, at successive seasons, in our serenest and retired hours, having the book always at hand : but what we obtain by conversation and in lectures, is oftentimes lost again as soon as the company breaks up, or at least when the day vanishes, unless we happen to have the talent of a good memory, or quickly retire and note down what remarkables we have found in those discourses. And for the same reason, and for the want of retiring and writing, many a learned man has lost several useful meditations of his own, and could never recall them again.

III. The advantage of verbal instructions by public or private lectures are these.

1. There is something more sprightly, more delightful and entertaining in the living discourse of a wise, learned, and well-qualified teacher, than there is in the silent and sedentary practice of reading. The very turn of voice, the good pronunciation, and the polite and alluring manner which some teachers have attained, will engage the attention, keep the soul fixed, and convey and insinuate into the mind the ideas of things in a more lively and forcible way, than the mere reading of books in the silence and retirement of the closet.

2. A tutor or instructor, when he paraphrases and explains other authors, can mark out the precise point of difficulty or controversy, and unfold it. He can shew you which paragraphs are of greatest importance, and which are of less moment. He can teach his hearers what authors, or what parts of an author, are



best worth reading on any particular subject, and thus save his disciples much time and pains, by shortening the labours of their closet and private studies. He can shew you what were the doctrines of the ancients, in a compendium which perhaps would cost much labour and the perusal of many books to attain. He can inform you what new doctrines or sentiments are arising in the world before they come to be public; as well as acquaint you with his own private thoughts, and his own experiments and observations, which never were and perhaps never will be, published to the world, and yet may be very valuable and useful.

3. A living instructor can convey to our senses those notions with which he would furnish our minds, when he teaches us natural philosophy, or most parts of mathematical learning. He can make the experiments before our eyes. He can describe figures and diagrams, point to the lines and angles, and make out the demonstration in a more intelligible manner by sensible means, which cannot so well be done by mere reading, even though we should have the same figures lying in a book before our eyes. A living teacher, therefore, is a most necessary help in these studies.

I might add also, that even where the subject of discourse is moral, logical, or rhetorical, &c. and which does not directly come under the notice of our senses, a tutor may explain his ideas by such familiar examples, and plain or simple similitudes, as seldom find place in books and writings.

4. When an instructor in his lectures delivers any matter of difficulty, or expresses himself in such a manner as seems obscure, so that you do not take up his ideas, clearly or fully, you have opportunity, at least when the lecture is finished, or at other proper

seasons, to inquire how such a sentence should be understood, or how such a difficulty may be explained and removed.

If there be permission given to free converse with the tutor, either in the midst of the lecture, or rather at the end of it, concerning any doubts or difficulties that occur to the hearer, this brings it very near to conversation or discourse.

IV. Conversation is the next method of improvement, and it is attended with the following advantages :

1. When we converse familiarly with a learned friend, we have his own help at hand to explain to us every word and sentiment that seems obscure in his discourse, and to inform us of his whole meaning ; so that we are in much less danger of mistaking his sense : whereas in books, whatsoever is really obscure may also abide always obscure without remedy, since the author is not at hand, that we may inquire his sense.

If we mistake the meaning of our friend in conversation, we are quickly set right again ; but in reading, we many times go on in the same mistake and are not capable of recovering ourselves from it. Thence it comes to pass that we have so many contests in all ages about the meaning of ancient authors, and especially the sacred writers. Happy should we be, could we but converse with Moses, Isaiah, and St. Paul, and consult the prophets and apostles, when we meet with a difficult text : but that glorious conversation is reserved for the ages of future blessedness.

2. When we are discoursing upon any theme with a friend, we may propose our doubts and objections against his sentiments, and have them solved and answered at once.—The difficulties that arise in our minds may be removed by one enlightening word of our correspondent : whereas in reading, if a difficulty

or question arise in our thoughts, which the author has not happened to mention, we must be content without a present answer or solution of it. Books cannot speak.

3. Not only the doubts which arise in the mind upon any subject of discourse are easily proposed and solved in conversation, but the very difficulties we meet with in books, and in our private studies, may find a relief by friendly conference. We may pore upon a knotty point in solitary meditation many months without a solution, because perhaps we have gotten into a wrong tract of thought ; and our labour (while we are pursuing a false scent, is not only useless and unsuccessful, but it leads us perhaps into a long train of error for want of being corrected in the first step. But if we note down this difficulty when we read it, we may propose it to an ingenious correspondent when we see him ; we may be relieved in a moment, and find the difficulty vanish : he beholds the object perhaps in a different view, sets it before us in quite another light, leads us at once into evidence and truth, and that with a delightful surprise.

4. Conversation calls out into light what has been lodged in all the recesses and secret chambers of the soul : by occasional hints and incidents it brings old useful notions into remembrance ; it unfolds and displays the hidden treasures of knowledge with which reading, observation, and study, had before furnished the mind. By mutual discourse, the soul is awakened and allured to bring forth its hoards of knowledge, and it learns how to render them most useful to mankind. A man of vast reading without conversation, is like a miser, who lives only to himself.

5. In free and friendly conversation, our intellectual powers are more animated, and our spirits act with a superior vigour in the quest and pursuit of un-

known truths. There is a sharpness and sagacity of thought that attends conversation, beyond what we find whilst we are shut up reading and musing in our retirements. Our souls may be serene in solitude, but not sparkling, though perhaps we are employed in reading the works of the brightest writers. Often has it happened in free discourse, that new thoughts are strangely struck out, and the seeds of truth sparkle and blaze through the company, which in calm and silent reading would never have been excited. By conversation you will both give and receive this benefit; as flints, when put into motion, and striking against each other, produce living fire on both sides, which would never have arisen from the same hard materials in a state of rest.

6. In generous conversation, amongst ingenious and learned men, we have a great advantage of proposing our private opinions, and of bringing our own sentiments to the test, and learning in a more compendious and safer way what the world will judge of them, how mankind will receive them, what objections may be raised against them, what defects there are in our scheme, and how to correct our own mistakes; which advantages are not so easy to be obtained by our own private meditations: for the pleasure we take in our own notions, and the passion of self-love, as well as the narrowness of our views, tempt us to pass too favourable an opinion on our own schemes; whereas the variety of genius in our several associates, will give happy notices how our opinions will stand in the view of mankind.

7. It is also another considerable advantage of conversation, that it furnishes the student with the knowledge of men and the affairs of life, as reading furnishes him with book learning. A man who dwells all his days among books, may have amassed together

a vast heap of notions ; but he may be a mere scholar, which is a contemptible sort of character in the world. A hermit, who has been shut up in his cell in a college, has contracted a sort of mould and rust upon his soul, and all his airs of behaviour have a certain awkwardness in them ; but these awkward airs are worn away by degrees in company : the rust and the mould are filed and brushed off by polite conversation. The scholar now becomes a citizen or a gentleman, a neighbour and a friend ; he learns how to dress his sentiments in the fairest colours, as well as to set them in the strongest light. Thus he brings out his notions with honour ; he makes some use of them in the world, and improves the theory by the practice.

But before we proceed too far in finishing a bright character by conversation, we should consider that something else is necessary besides an acquaintance with men and books : and therefore I add,

V. Mere lectures, reading, and conversation, without thinking, are not sufficient to make a man of knowledge and wisdom. It is our own thought and reflection, study and meditation, must attend all the other methods of improvement, and perfect them. It carries these advantages with it :

1. Though observation and instruction, reading and conversation, may furnish us with many ideas of men and things, yet it is our own meditation, and the labour of our own thoughts, that must form our judgment of things. Our own thoughts should join or disjoin these ideas in a proposition for our ourselves : it is our own mind that must judge for ourselves concerning the agreement or disagreement of ideas, and form propositions of truth out of them. Reading and conversation may acquaint us with many truths, and with many arguments to support them ; but it is our

own study and reasoning that must determine whether these propositions are true, and whether these arguments are just and solid.

It is confessed there are a thousand things which our eyes have not seen, and which would never come within the reach of our personal and immediate knowledge and observation, because of the distance of times and places : these must be known by consulting other persons ; and that is done either in their writings or in their discourses. But after all, let this be a fixed point with it us, that is our own reflection and judgment must determine how far we should receive that which books or men inform us of, and how far they are worthy of our assent and credit.

2. It is meditation and study that transfers and conveys the notions and sentiments of others to ourselves, so as to make them properly our own. It is our own judgment upon them, as well as our memory of them, that makes them become our own property. It does as it were concoct our intellectual food, and turns it into a part of ourselves : just as a man may call his limbs and his flesh his own, whether he borrowed the materials from the ox or the sheep, from the lark or the lobster : whether he derived it from corn or milk, the fruits of the trees, or the herbs and roots of the earth ; it is all now become one substance with himself, and he wields and manages those muscles and limbs for his own proper purposes, which once were the substance of other animals or vegetables ; that very substance which last week was grazing in the field or swimming in the sea, waving in the milk-pail, or growing in the garden, is now become part of the man.

3. By study and meditation we improve the hints that we have acquired by observation, conversation, and reading : we take more time in thinking, and by



the labour of the mind we penetrate deeper into the themes of knowledge, and carry our thoughts sometimes much farther on many subjects, than we ever met with, either in the books of the dead or discourses of the living. It is our own reasoning that draws out one truth from another, and forms a whole scheme or science from a few hints which we borrowed elsewhere.

By a survey of these things we may justly conclude, that he who spends all his time in hearing lectures, or poring upon books, without observation, meditation, or converse, will have but a mere historical knowledge of learning, and be able only to tell what others have known or said on the subject: he that lets all his time flow away in conversation, without due observation, reading, or study, will gain but a slight and superficial knowledge, which will be in danger of vanishing with the voice of the speaker: and he that confines himself merely to his closet, and his own narrow observation of things, and is taught only by his own solitary thoughts, without instruction by lectures, reading or free conversation, will be in danger of a narrow spirit, a vain conceit of himself, and an unreasonable contempt of others; and after all, he will obtain but a very limited and imperfect view and knowledge of things, and he will seldom learn how to make that knowledge useful.

These five methods of improvement should be pursued jointly, and go hand in hand, where our circumstances are so happy as to find opportunity and conveniency to enjoy them all: though I must give my opinion that two of them, viz. reading and meditation, should employ much more of our time than public lectures, or conversation and discourse. As for observation, we may be always acquiring knowledge that way, whether we are alone or in company.

But it will be for our further improvement, if we go over all these five methods of obtaining knowledge more distinctly and more at large, and see what special advances in useful science we may draw from them all.

## CHAP. III.

*Rules relating to Observation.*

THOUGH observation, in the strict sense of the word, and as it is distinguished from meditation and study, is the first means of improvement, and in its strictest sense does not include in it any reasonings of the mind upon the things which we observe, or inferences drawn from them; yet the motions of the mind are so exceeding swift, that it is hardly possible for a thinking man to gain experiences or observations without making some secret and short reflections upon them, and therefore in giving a few directions concerning this method of improvement, I shall not so narrowly confine myself to the first mere impression of objects on the mind by observation; but include also some hints which relate to the first, most easy and obvious reflections or reasoning which arise from them.

1. Let the enlargement of your knowledge be one constant view and design in life; since there is no time or place, no transactions, occurrences, or engagements in life, which exclude us from this method of improving the mind. When we are alone, even in darkness and silence, we may converse with our own hearts, observe the working of our own spirits, and reflect upon the inward motions of our own passions in some of the latest occurrences in life; we may