



ISAAC WATTS



Logic

or

The Right Use of Reason in the Inquiry After Truth
with a Variety of Rules to Guard Against Error
in the Affairs of Religion and Human Life,
as well as in the Sciences



by Isaac Watts, D.D.



SOLI DEO GLORIA PUBLICATIONS
. . . for instruction in righteousness . . .

Published by
Soli Deo Gloria Publications
A division of Reformation Heritage Books
2965 Leonard St. NE
Grand Rapids, MI 49525
616-977-0599 / Fax 616-285-3246
e-mail: orders@heritagebooks.org
website: www.heritagebooks.org

Logic was first published in London in 1724.
This Soli Deo Gloria reprint is taken from
the 1847 edition published by William Milner.
Printed in the U.S.A.

7th Printing 2008

ISBN 978-1-57358-055-7

*For additional Reformed literature, both new and used, request a
free book list from Reformation Heritage Books at the above address.*

TO

SIR JOHN HARTOPP, BART.

~~~~~

SIR,

It is fit the public should receive through your hands what was written originally for the assistance of your younger studies, and was then presented to you.

It was by the repeated importunities of our learned friend, Mr. John Eames, that I was persuaded to revise these rudiments of Logic; and when I had once suffered myself to begin the work, I was drawn still onward far beyond my first design, even to the neglect, or too long delay, of other pressing and important demands that were upon me.

It has been my endeavour to form every part of this treatise both for the instruction of students, to open their way into the sciences, and for the more extensive and general service of mankind, that the Gentleman and the Christian might find their account in the perusal, as well as the Scholar. I have therefore collected and proposed the chief principles and rules of right judgment in matters of common and sacred importance, and pointed out our most frequent mistakes and prejudices in the concerns of life and religion, that we might better guard against the springs of error, guilt, and sorrow, which surround us in every state of mortality.

You know, Sir, the great design of this noble science is to rescue our reasoning powers from their unhappy slavery and darkness; and thus, with all due submission and deference, it offers an humble assistance to divine revelation. Its chief business is to relieve the natural weakness of the

mind by some better efforts of nature ; it is to diffuse a light over the understanding in our inquiries after truth, and not to furnish the tongue with debate and controversy. True Logic is not that noisy thing that deals all in dispute and wrangling, to which former ages had debased and confined it ; yet its disciples must acknowledge also, that they are taught to vindicate and defend the truth, as well as to search it out. True Logic does not require a long detail of hard words to amuse mankind, and to puff up the mind with empty sounds, and a pride of false learning ; yet some distinctions and terms of art are necessary to range every idea in its proper class, and to keep our thoughts from confusion. The world is now grown so wise as not to suffer this valuable art to be engrossed by the Schools. In so polite and knowing an age, every man of reason will covet some acquaintance with Logic, since it renders its daily service to wisdom and virtue, and to the affairs of common life, as well as to the sciences.

I will not presume, Sir, that this little book is improved since its first composure, in proportion to the improvements of your manly age. But when you shall please to review it in your retired hours, perhaps you may refresh your own memory in some of the early parts of learning ; and if you find all the additional remarks and rules made so familiar to you already by your own observation, that there is nothing new among them, it will be no unpleasing reflection, that you have so far anticipated the present zeal and labour of

SIR,

Your most faithful and obedient Servant,

I. WATTS.

LONDON,  
Aug. 24, 1724.

# CONTENTS.

---

|                                        | PAGE. |
|----------------------------------------|-------|
| INTRODUCTION, and General Scheme ..... | 1     |

## FIRST PART.

### OF PERCEPTION AND IDEAS.

#### CHAPTER I.

|                                     |   |
|-------------------------------------|---|
| <i>Of the Nature of Ideas</i> ..... | 7 |
|-------------------------------------|---|

#### CHAP. II.

|                                                                                              |    |
|----------------------------------------------------------------------------------------------|----|
| <i>Of the Objects of Perception</i> .....                                                    | 9  |
| Sect. 1. Of being in general .....                                                           | 9  |
| 2. Of substances and their various kinds .....                                               | 10 |
| 3. Of modes, and their various kinds; and, first,<br>of essential and accidental modes ..... | 16 |
| 4. The farther divisions of mode .....                                                       | 20 |
| 5. Of the ten categories. Of substances modified .....                                       | 25 |
| 6. Of not-being .....                                                                        | 26 |

#### CHAP. III.

|                                                                     |    |
|---------------------------------------------------------------------|----|
| <i>Of the several sorts of Perceptions or Ideas</i> .....           | 27 |
| Sect. 1. Of sensible, spiritual, and abstracted ideas....           | 28 |
| 2. Of simple and complex, compound and collect-<br>ive ideas .....  | 32 |
| 3. Of universal and particular ideas, real and ima-<br>ginary ..... | 34 |
| 4. The division of ideas, with regard to their quali-<br>ties ..... | 33 |

#### CHAP. IV.

|                                                                                                      |    |
|------------------------------------------------------------------------------------------------------|----|
| <i>Of Words, and their several Divisions, together with<br/>the Advantage and Danger of them....</i> | 45 |
| Sect. 1. Of words in general, and their use .....                                                    | 45 |
| 2. Of negative and positive terms .....                                                              | 51 |
| 3. Of simple and complex terms .....                                                                 | 53 |
| 4. Of words common and proper .....                                                                  | 55 |
| 5. Of concrete and abstract terms .....                                                              | 57 |
| 6. Of univocal and equivocal words .....                                                             | 57 |

|                                                  | PAGE. |
|--------------------------------------------------|-------|
| Sect. 7. Various kinds of equivocal words .....  | 59    |
| 8. The origin or causes of equivocal words ..... | 65    |

## CHAP. V.

|                                                       |    |
|-------------------------------------------------------|----|
| <i>General Directions relating to our Ideas</i> ..... | 69 |
| Direct. 1. Of acquiring a treasure of ideas .....     | 69 |
| 2. Of retaining ideas in the memory .....             | 71 |
| 3. Of selecting useful ideas .....                    | 74 |
| 4. Of the government of our thoughts .....            | 75 |

## CHAP. VI.

|                                                                      |     |
|----------------------------------------------------------------------|-----|
| <i>Special Rules to direct our Conception of Things</i> ...          | 77  |
| Sect. 1. Of gaining clear and distinct ideas .....                   | 78  |
| 2. Of the definition of words and names .....                        | 80  |
| 3. Directions concerning the definitions of names .....              | 82  |
| 4. Of the definition of things .....                                 | 97  |
| 5. Rules of the definition of things .....                           | 102 |
| 6. Observations concerning the definition of things .....            | 105 |
| 7. Of a complete conception of things .....                          | 113 |
| 8. Of definition, and the rules of it .....                          | 115 |
| 9. Of a comprehensive conception of things, and of abstraction ..... | 120 |
| 10. Of the extensive conception of things, and of distribution ..... | 124 |
| 11. Of an orderly conception of things .....                         | 129 |
| 12. The five rules of conception exemplified .....                   | 130 |
| 13. An illustration of these five rules by similitudes .....         | 133 |

---

 SECOND PART.

## OF JUDGMENT AND PROPOSITION.

## CHAP. I.

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| <i>Of the Nature of a Proposition, and its several Parts</i> ..... | 137 |
|--------------------------------------------------------------------|-----|

## CHAP. II.

|                                                                                |     |
|--------------------------------------------------------------------------------|-----|
| <i>Of the various Kinds of Propositions</i> .....                              | 142 |
| Sect. 1. Of universal, particular, indefinite, and singular propositions ..... | 142 |

## CONTENTS.

vii

|                                                                                | PAGE. |
|--------------------------------------------------------------------------------|-------|
| Sect. 2. Of affirmative and negative propositions .....                        | 150   |
| 3. Of the opposition and conversion of propositions .....                      | 152   |
| 4. Of pure modal propositions .....                                            | 155   |
| 5. Of single propositions, whether simple or complex .....                     | 157   |
| 6. Of compound propositions .....                                              | 159   |
| 7. Of true and false propositions.....                                         | 164   |
| 8. Of certain and dubious propositions, of knowledge and opinions.....         | 168   |
| 9. Of sense, consciousness, intelligence, reason, faith, and inspiration ..... | 171   |

### CHAP. III.

|                                                                           |     |
|---------------------------------------------------------------------------|-----|
| <i>The Springs of false Judgment, or the Doctrine of Prejudices</i> ..... |     |
|                                                                           | 179 |
| Sect. 1. Prejudices arising from things.....                              | 180 |
| 2. Prejudices arising from words.....                                     | 183 |
| 3. Prejudices arising from ourselves .....                                | 190 |
| 4. Prejudices arising from other persons .....                            | 206 |

### CHAP. IV.

|                                                             |     |
|-------------------------------------------------------------|-----|
| <i>General Directions to assist us in judging aright</i> .. | 223 |
|-------------------------------------------------------------|-----|

### CHAP. V.

|                                                                                                                 |     |
|-----------------------------------------------------------------------------------------------------------------|-----|
| <i>Special Rules to direct us in judging of particular Objects</i> .....                                        |     |
|                                                                                                                 | 241 |
| Sect. 1. Principles and rules of judgment concerning the objects of sense .....                                 | 242 |
| 2. Principles and rules of judgment in matters of reason and speculation .....                                  | 245 |
| 3. Principles and rules of judgment in matters of morality and religion.....                                    | 251 |
| 4. Principles and rules of judgment in matters of human prudence.....                                           | 255 |
| 5. Principles and rules of judgment in matters of human testimony.....                                          | 258 |
| 6. Principles and rules of judgment in matters of divine testimony.....                                         | 263 |
| 7. Principles and rules of judging concerning things past, present, and to come, by the mere use of reason..... | 266 |



## THIRD PART.

## OF REASON AND SYLLOGISM.

## CHAP. I.

|                                                                                  | PAGE. |
|----------------------------------------------------------------------------------|-------|
| <i>Of the Nature of a Syllogism, and the Parts of which it is composed</i> ..... | 271   |

## CHAP. II.

|                                                                                         |     |
|-----------------------------------------------------------------------------------------|-----|
| <i>Of the various kinds of Syllogisms, with particular Rules relating to them</i> ..... | 274 |
| Sect. 1. Of universal and particular syllogisms, both negative and affirmative .....    | 274 |
| 2. Of plain, simple syllogisms, and their rules....                                     | 275 |
| 3. Of the modes and figures of simple syllogisms                                        | 278 |
| 4. Of complex syllogisms .....                                                          | 282 |
| 5. Of conjunctive syllogisms .....                                                      | 285 |
| 6. Of compound syllogisms .....                                                         | 290 |
| 7. Of the middle terms, of common-places, or topics, and inventions of arguments.....   | 294 |
| 8. Of several kinds of arguments and demonstrations .....                               | 296 |

## CHAP. III.

|                                                                                     |     |
|-------------------------------------------------------------------------------------|-----|
| <i>The Doctrine of Syllogisms</i> .....                                             | 301 |
| Sect. 1. Of several kinds of sophisms and their solution                            | 302 |
| 2. Two general tests of true syllogisms, and methods of solving all syllogisms..... | 311 |

## CHAP. IV.

|                                                         |     |
|---------------------------------------------------------|-----|
| <i>Some general rules to direct our reasoning</i> ..... | 314 |
|---------------------------------------------------------|-----|

## FOURTH PART.

## OF DISPOSITION AND METHOD.

## CHAP. I.

|                                                                                                 |     |
|-------------------------------------------------------------------------------------------------|-----|
| <i>The Nature and Kinds of Method, viz. natural and arbitrary, synthetic and analytic</i> ..... | 326 |
|-------------------------------------------------------------------------------------------------|-----|

## CHAP. II.

|                                                  |     |
|--------------------------------------------------|-----|
| <i>General and Special Rules of Method</i> ..... | 336 |
|--------------------------------------------------|-----|

# INTRODUCTION

## AND

### GENERAL SCHEME.

---

LOGIC is the art of using Reason\* well in our inquiries after truth, and the communication of it to others.

Reason\* is the glory of human nature, and one of the chief eminencies whereby we are raised above our fellow-creatures, the brutes, in this lower world.

*Reason*, as to the power and principle of it, is the common gift of God to all men, though all are not favoured with it by nature in an equal degree ; but the acquired improvements of it, in different men, make a much greater distinction between them than nature had made. I could even venture to say, that the improvement of reason hath raised the learned and the prudent in the European world, almost as much above the Hottentots, and other savages of Africa, as those savages are by nature superior to the birds, the beasts, and the fishes.

Now the design of Logic is to teach us the right use of our reason, or intellectual powers, and the

\* The word Reason in this place is not confined to the mere faculty of reasoning, or inferring one thing from another, but includes all the intellectual powers of man.

improvement of them in ourselves and others. This is not only necessary in order to attain any competent knowledge in the sciences, or the affairs of learning, but to govern both the greater and the meaner actions of life. It is the cultivation of our reason by which we are better enabled to distinguish good from evil, as well as truth from falsehood ; and both these are matters of the highest importance, whether we regard this life, or the life to come.

The pursuit and acquisition of truth is of infinite concernment to mankind. Hereby we become acquainted with the name of things both in heaven and earth, and their various relations to each other. It is by this means we discover our duty to God and our fellow-creatures ; by this we arrive at the knowledge of natural religion, and learn to confirm our faith in divine revelation, as well as to understand what is revealed. Our wisdom, prudence, and piety, our present conduct and our future hope, are all influenced by the use of our rational powers in the search after truth.

There are several things that make it very necessary that our reason should have some assistance in the exercise or use of it.

The first is, the depth and difficulty of many truths, and the weakness of our reason to see far into things at once, and penetrate to the bottom of them. It was a saying among the ancients, *Veritas in puteo*, Truth lies in a well ; and, to carry on this metaphor, we may very justly say, that logic does, as it were, supply us with steps whereby we may go down to reach the water : or it frames the links of a chain, whereby we may draw the water up from the bottom. Thus, by the means of many reasonings well connected together, philosophers in our

age have drawn a thousand truths out of the depths of darkness, which our fathers were utterly unacquainted with.

Another thing that makes it necessary for our reason to have some assistance given it, is the disguise and false colours in which many things appear to us in this present imperfect state. There are a thousand things which are not in reality what they appear to be,—and that both in the natural and moral world : so that the sun appears to be flat as a plate of silver, and to be less than twelve inches in diameter ; the moon appears to be as big as the sun ; and the rainbow appears to be a large substantial arch in the sky : all which are in reality gross falsehoods. So knavery puts on the face of justice ; hypocrisy and superstition wear the vizard of piety ; deceit and evil are often clothed in the shapes and appearances of truth and goodness. Now logic helps us to strip off the outward disguise of things, and to behold them and judge of them in their own nature.

There is yet a farther proof of our intellectual or rational powers needing some assistance, and that is, because they are so frail and fallible in the present state. We are imposed upon at home as well as abroad ; we are deceived by our senses, by our imaginations, by our passions and appetites ; by the authority of men, by education and custom, &c. ; and we are led into frequent errors, by judging according to these false and flattering principles, rather than according to the nature of things. Something of this frailty is owing to our very constitution, man being compounded of flesh and spirit : something of it arises from our infant state, and our growing up by small degrees to manhood ; so that we form a thousand judgments before our

reason is mature. But there is still more of it owing to our original defection from God, and the foolish and evil dispositions that are found in fallen man ; so that one great part of the design of logic is to guard us against the delusive influences of our meaner powers, to cure the mistakes of immature judgment, and to raise us in some measure from the ruins of our fall.

It is evident enough from all these things, that our reason needs the assistance of art in our inquiries after truth or duty ; and without some skill and diligence in forming our judgment aright, we shall be led into frequent mistakes, both in matters of science and in matters of practice ; and some of these mistakes may prove fatal too.

The art of logic, even as it assists us to gain the knowledge of the sciences, leads us on towards virtue and happiness ; for all our speculative acquaintance with things should be made subservient to our better conduct in the civil and the religious life. This is infinitely more valuable than all speculations, and a wise man will use them chiefly for this better purpose.

All the good judgment and prudence that any man exerts in his common concerns of life without the advantage of learning, is called natural logic ; and it is but a higher advancement, and a farther assistance of our rational powers, that is designed by and expected from this artificial logic.

In order to attain this, we must inquire what are the principal operations of the mind which are put forth in the exercise of our reason ; and we shall find them to be these four, viz. Perception, judgment, argumentation, and disposition.

Now the art of logic is composed of those observations and rules, which men have made about

these four operations of the mind, perception, judgment, reasoning, and disposition, in order to assist and improve them.

I. Perception, conception, or apprehension, is the mere simple contemplation of things offered to our mind, without affirming or denying any thing concerning them. So we conceive or think of a horse, a tree, high, swift, slow, animal, time, motion, matter, mind, life, death, &c. The form under which these things appear to the mind, or the result of our conception or apprehension, is called an idea.

II. Judgment is that operation of the mind whereby we join two or more ideas together by one affirmation or negation ; that is, we either affirm or deny this to be that. So this tree is high ; that horse is not swift ; the mind of a man is a thinking being ; mere matter has no thought belonging to it ; God is just ; good men are often miserable in this world ; a righteous governor will make a difference betwixt the evil and the good ; which sentences are the effect of judgment, and are called Propositions.

III. Argumentation or reasoning is that operation of the mind, whereby we infer one thing, that is, one proposition, from two or more propositions premised : or it is the drawing a conclusion, which before was either unknown, or dark, or doubtful, from some propositions which are more known and evident. So when we have judged that matter cannot think, and that the mind of man doth think, we then infer and conclude, that therefore the mind of man is not matter.

So we judge that a just governor will make a difference between the evil and the good ; we judge also that God is a just governor : and from thence

we conclude, that God will make a difference betwixt the evil and the good.

This argumentation may be carried on farther ; thus, God will one time or another make a difference between the good and the evil ; but there is little or no difference made in this world : Therefore there must be another world wherein this difference shall be made.

These inferences or conclusions are the effects of reasoning ; and the three propositions taken all together are called a syllogism or argument.

IV Disposition is that operation of the mind, whereby we put the ideas, propositions, and arguments, which we have formed concerning one subject, into such an order as is fittest to gain the clearest knowledge of it, to retain it longest, and to explain it to others in the best manner ; or, in short, it is the ranging of our thoughts in such order as is best for our own and others' conception and memory. The effect of this operation is called *method*. This very description of the four operations of the mind, and their effects in this order, is an instance or example of method.

Now, as the art of logic assists our conception, so it gives us a large and comprehensive view of the subjects we inquire into, as well as a clear and distinct knowledge of them. As it regulates our judgment and our reasoning, so it secures us from mistakes, and gives us a true and certain knowledge of things ; and as it furnishes us with method, so it makes our knowledge of things both easy and regular, and guards our thoughts from confusion.

Logic is divided into four parts, according to these four operations of the mind, which it directs, and therefore we shall treat of it in this order.

# THE FIRST PART OF LOGIC.

---

## OF PERCEPTION AND IDEAS.

THE first part of logic contains observations and precepts about the first operation of the mind, perception, or conception ; and since all our knowledge, how wide and large soever it grow, is founded upon our conceptions and ideas, here we shall consider,

1. The general nature of them.
  2. The objects of our conception, or the archetypes or patterns of these ideas.
  3. The several divisions of them.
  4. The words and terms whereby our ideas are expressed.
  5. General directions about our ideas.
  6. Special rules to direct our conceptions.
- 

## CHAPTER I.

### ON THE NATURE OF IDEAS.

FIRST, The nature of conception or perception\* shall just be mentioned, though this may seem to belong to another science rather than logic.

\* The words Conception and Perception are often used promiscuously, as I have done here, because I would not embarrass a learner with too many distinctions ; but if I were to distinguish them, I would say, Perception is the consciousness of an object when present ; conception is the forming an idea of the object whether present or absent.



Perception is that act of the mind (or, as some philosophers call it, rather a passion or impression,) whereby the mind becomes conscious of any thing : as when I feel hunger, thirst, or cold, or heat ; when I see a horse, a tree, or a man ; when I hear a human voice, or thunder, I am conscious of these things, and this is called perception. If I study, meditate, wish, or fear, I am conscious of these inward acts also, and my mind perceives its own thoughts, wishes, fears, &c.

An idea is generally defined a representation of a thing in the mind ; it is a representation of something that we have seen, felt, heard, &c. or been conscious of. That notion or form of a horse, a tree, or a man, which is in the mind, is called the idea of a horse, a tree, or a man.

That notion of hunger, cold, sound, colour, thought, or wish, or fear, which is in the mind, is called the idea of hunger, cold, sound, wish, &c.

It is not the outward object or thing which is perceived, viz. the horse, the man, &c. nor is it the very perception or sense and feeling, viz. of hunger or cold, &c. which is called the idea ; but it is the thing as it exists in the mind by way of conception or representation that is properly called the idea, whether the object be present or absent.

As a horse, a man, and a tree, are the outward objects of our perception, and the outward archetypes or patterns of our ideas, so our own sensations of hunger, cold, &c. are also inward archetypes or patterns of our ideas ; but the notions or pictures of these things, as they are considered or conceived in the mind, are precisely the ideas that we have to do with in logic. To see a horse, or to feel cold, is one thing ; to think of and converse about a man, a horse, hunger, or cold, is another.

Among all these ideas, such as represent bodies are generally called images, especially if the idea of the shape be included. Those inward representations which we have of spirit, thought, love, hatred, cause, effect, &c. are more pure and mental ideas, belonging more especially to the mind, and carry nothing of shape or sense in them. But I shall have occasion to speak more particularly of the original, and the distinction of ideas, in the third chapter. I proceed therefore now to consider the objects of our ideas.

---

## CHAP. II.

### OF THE OBJECTS OF PERCEPTION.

#### SECTION I.—*Of Being in general.*

THE object of perception is that which is represented in the idea, that which is the archetype or pattern, according to which the idea is formed ; and thus *judgment, propositions, reasons*, and long discourses, may all become the objects of perception ; but in this place we speak chiefly of the first and more simple objects of it, before they are joined and formed into propositions or discourses.

Every object of our idea is called a theme, whether it be a being or not being ; for not being may be proposed to our thoughts, as well as that which has a real being. But let us first treat of beings, and that in the largest extent of the word.

A being is considered as possible, or as actual.

When it is considered as possible, it is said to have an essence or nature. Such were all things

before their creation. When it is considered as actual, then it is said to have existence also. Such are all things which are created, and God himself the creator.

Essence, therefore, is but the very nature of any being, whether it be actually existing or no. A rose in winter has an essence, in summer it has existence also.

*Note.* There is but one being which includes existence in the very essence of it, and that is God, who therefore actually exists by natural and eternal necessity; but the actual existence of every creature is very distinct from its essence, for it may be or may not be, as God pleases.

Again, every being is considered either as subsisting in and by itself, and then it is called a substance; or it subsists in and by another, and then it is called a mode or manner of being: Though few writers allow mode to be called a being in the same perfect sense as a substance is; and some modes have evidently more of real entity or being than others, as will appear when we come to treat of them. These things will furnish us matter for larger discourse in the following sections.

## SECT. II.—*Of Substances, and their various Kinds.*

A SUBSTANCE is a being which can subsist by itself, without dependence upon any other created being. The notion of subsisting by itself gives occasions to logicians to call it a substance. So a horse, a house, wood, stone, water, fire, a spirit, a body, an angel, are called substances, because they depend on nothing but God, for their existence.

It has been usual also in the description of sub-