

THE ART OF THINKING



BY

T. SHARPER KNOWLSON

Vivere est cogitare

To think is to live

CICERO, *Tusc. Quæst.* v. 38

TWENTY-THIRD THOUSAND

(REVISED AND ENLARGED)



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BY

T. SHARPER KNOWLSON

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Encouraged by the hearty reception of "The Art of Thinking," Mr. Knowlson has since written a supplementary volume called "The Art of Success," which is intended as a guide to *action* as the former volume was a guide to *thought*.

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PREFACE

TO THE REVISED 1904 EDITION

IT is gratifying to observe that students and general readers are still interested in this little book as a body of suggestions for mental improvement; and its growing popularity may, I venture to think, indicate that the people for whom it was written find more practical utility in its pages than some of my reviewers were prepared to admit. I have been accused of attempting the impossible, as if a School of Thought was an idea too irrational for even a moment's consideration. Artists and musicians are said to be born, not made, and yet no one complains that a School of Music, or a School of Art, is in itself an absurdity. Why should a School of Thought, created specially for serious students, be regarded as a superfluity? If mind-training be such a utopian task, why

J.

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do universities and colleges spend money in teaching Logic and Mental Science? The fact is, education, in the future, will resolve itself more and more into a policy laid down on the lines of this manual; in other words, the science of teaching will be concerned with the developing of the powers of the mind, rather than with the mere imparting of facts. At present education is in the hands of those who follow the latter ideal, but signs are not wanting that their hold is loosening; and soon we may see people anxious, not so much for education, or knowledge in bulk, as for tutored senses and trained minds.

In this edition of *The Art of Thinking* there is an additional chapter on "The Commercial Value of Trained Intelligence"; several changes have been made in the books recommended; and a new Appendix has been added dealing with later books of a suitable character.

P R E F A C E

TO THE FIRST EDITION

A SHORT time ago one of our most distinguished statesmen, in giving an address on education, said: "What you want to develop in your race is the art of thinking, and thinking is an art which stands a very good chance of perishing from amongst us altogether. The risks to which independent thinking is exposed, when you come to reckon them up, are manifold and dangerous. I think the Press, with all its merits, is one of the greatest enemies of independent thinking." If by the Press we are to understand newspapers, magazines, and cheap literature, then we shall be in substantial agreement with this opinion. People read a great deal more than they used to do—there is more to be read—but they think less. The chief danger to-day is that of intellectual

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apathy. Life is so complex, the struggle for existence so keen, and pleasures of various kinds are so cheap and abundant, that men and women seem to live entirely on the surface of things. What we need is a call to independent thought. It is as a small contribution to supply this need that the author puts forth this little volume. In every other respect it will, he hopes, explain itself.

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THE ART OF THINKING

CHAPTER I

INTRODUCTION

"It is not erudition that makes the intellectual man, but a sort of virtue that delights in beautiful and vigorous thinking, just as moral virtue delights in vigorous and beautiful conduct."

HAMERTON: *The Intellectual Life.*

"AND friend, when dost thee think?" was the reply made by a Quaker lady to whom Southey had explained with no little satisfaction Time for thinking how he spent the day. He told her how he studied Portuguese grammar whilst he was shaving, how he read Spanish for an hour before breakfast, how, after breakfast, he wrote or studied till dinner; how in a word, his whole time was filled by writing, reading, eating, talking, taking exercise and sleeping; and she replied with the very pertinent

THE ART OF THINKING

question we have just given. It is one we should ask ourselves. Profound students of the times tell us that we are great absorbers of print, but that the art of thinking is gradually becoming a lost art. "Thinking for thinking's

Thinking
for think-
ing's sake.

sake," says the *Spectator* in an article to which we are here indebted, "has become to most men positively repellent.

They have an intense objection—an objection which they believe on the whole to be a laudable one—to time passed not in eating, sleeping, working, talking, reading, writing, or taking exercise." There is much truth in this contention, although we do not share its pessimism to the full. What we want is not the example of Democritus, who put out his eyes that, ceasing to read, he might think the more; or the example of Pythagoras, who devoted his evenings to solemn reflections on the events of the day. We want men and women of all-round activities who will set apart an hour for thought's own sake, and thus fulfil

Sort your
thoughts and
label them.

the exhortation of a wise man whose practice it was to "sort his thoughts and label them." Such a habit would not only be good in itself: it would increase

mental efficiency in every department of life. Madame Swetchine says that to have ideas is to gather flowers; to think is to weave them into garlands. There could be no happier synonym for thinking than the word weaving—a putting together of the best products of observation, reading, experience, and travel, so as to represent a patterned whole, receiving its design from the weaver's own mind. We have plenty of flowers: we want more garlands. We have libraries, books, and newspapers: we want more thinkers.

Wanted
more
thinkers.

Now this manual is intended to help those who are awakened to an individual sense of the need just stated; and it is very necessary at the outset that the writer and reader should thoroughly understand each other. First, then, what is our object?

(1) It is to investigate the rules and practices in which the art of thinking consists. This will require a brief account of the thinking faculty. It is not proposed to make a detailed study of brain from a physiological point of view; all that is necessary is a description of mental powers under the familiar

Our object
stated.

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forms of Feeling, Intellect, and Will. This will lay a good foundation for further study; for it is well nigh impossible to understand the art of thinking without some acquaintance with the machinery of mind.

We shall then inquire into the way in which **Thought** thoughts are generated; in other words, **creation.** how the intellectual storehouse is furnished with suitable materials. Apart from those ideas which seem to be ours by natural heritage, most of our thoughts arise from observation, reading, reflection, social intercourse, and travel. These will be considered separately and collectively. The next point is to know how to direct and control our thoughts. In this connection we shall discuss the power of **Thought** prejudice, the influence of emotion, and **control.** a series of general rules for clear thinking. The importance of these chapters can scarcely be over-estimated. Mental drill here begins in earnest, and we shall ask the diligent reader to overhaul his own notions and ideas as well as those he reads in books or hears from the platform and pulpit. In the last three chapters we propose dealing with constructive thinking—the way in which thoughts

are united into systems, theories, and hypotheses—with thought in its moral aspects, and with a concluding account of the entire programme. Perhaps it would be best to give a formulated scheme :

I. *What is the Mind?*

- (a) Trinity in Unity. Feeling, Intellect, and Will.
- (b) The Laws of Thought.

II. *How do we gather Thoughts?*

- (a) Some are part of the mind's original furniture.
- (b) From observation, reading, reflection, social intercourse, and travel.

III. *By what means do we think correctly?*

- Negative. {
- (a) The true place of emotion.
 - (b) Beware of the prejudice of birth, of temperament, of the theorist, and of unintelligent conservatism.
 - (c) Avoid emotional excesses in fear, sympathy, and admiration.

- Positive. {
- (d) Learn the nature and value of Method.
 - (e) Acquire the art of Concentration.
 - (f) Study carefully the laws of Evidence.
 - (g) Tutor the mind in the art of drawing distinctions.
 - (h) Use and do not abuse the principle of authority.
 - (i) Define your terms and beware of the treachery of words.
 - (j) Remember the close connection between health and clear thinking.

IV. *What is the order of Thought-Building?*

- (a) Be sure of your facts.
- (b) Classify scientifically.
- (c) Observe the limits of reasoning by analogy.

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(d) Cultivate the Constructive Imagination.

(e) Master the rules of generalization.

(f) Particular cases.

V. *The Ethics of Thinking.*

(a) Imagination and Prejudice.

(b) Mental occupation and happiness.

(c) The intellectually vicious may be morally wrong.

(d) Thinking that is dangerous to character.

VI. *Trained Intelligence in Business.*

VII. *Conclusion and Summary.*

That the programme is somewhat ambitious we are quite ready to admit, but let it be remembered that we are addressing ourselves to the beginner, and not to the practised thinker. We have in mind the youth who has just finished his studies at school, and the young man in business who desires a guide in the formation of his opinions. If we can influence these so that they become independent thinkers, such as are wisely receptive but not critically blind, we shall have accomplished our aim.

(2) We begin by studying the elementary principles of psychology and logic. The psychologist's chief question is: How do we ordinarily think?*

Our debt to
Psychology
and Logic.

He makes an inquiry into the nature of mental processes. The logician's chief question is: How can we think

* Sully, *The Human Mind*, vol. ii.

correctly? He is concerned with regulating or controlling mental operations according to some standard of correctness. Now we shall ask both these questions referred to, and yet this manual is neither a text-book of psychology nor a system of logic; it is rather a blending of contributions from both, and we shall be under obligations to the psychologist for telling us how the mind works, and to the logician for showing us how it works correctly. Some may doubt the possibility of writing even a short treatise on the art of thinking with such slender assistance as we propose to have from the two great departments of mental science. The doubt is natural but mistaken. Professor Blackie says: "Have your Blackie on thinking. thinking first and plenty to think about, and then ask the logician to teach you to scrutinize with a nice eye the process by which you have arrived at your conclusions."* In a similar vein Professor Seth affirms "that the theory of every operation is later than its performance, and men were accustomed to And Profes- sor Seth. think correctly long before they began to reflect on their thinking faculties and the pro-

* *Self-Culture* p. 9.

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cesses by which their results were reached."* It would be foolish to undervalue logic and psychology, and the references throughout this book will show how much we are indebted thereto. Nevertheless we are attempting to teach men how to think without first teaching the science of mind, or the rules of syllogistic reasoning. And we venture to believe there is a sufficient justification in view of the selected type of reader, and of the limitations we have voluntarily chosen. A man can digest food well without any knowledge of the processes of digestion; and a man can think well—in the sense we have explained—without necessarily studying a two-volumed work on feeling, intellect, and will, or a large tome on the four figures of Aristotle. Broadly speaking, Psychology is *descriptive*; Logic is *regulative*; Thinking is *creative*.

We propose further to make these studies educational in the exact sense of the term. Mere rules, bald and bare, are not of great service. "A meagre soul can never be made fat, nor a narrow soul large by studying

* Art. : Logic, *Chambers' Encyclopaedia*.

rules of thinking."* We have, therefore, endeavoured to accompany rules with examples, or, if the subject be difficult to illustrate, with such suggestions as will be a good equivalent. By the fulfilment of the scheme in its entirety we hope to answer the question: How shall I become a thinker?

* Blackie, *Self-Culture*, p. 9.

CHAPTER II

THE THINKING FACULTY

*"The mind can make
Substance, and people planets of its own
With beings brighter than have been, and give
A breath to forms that can outlive all flesh."*

BYRON.

WRITERS on mental science have been accustomed to divide the powers of mind into—
The unity of mind. (1) Feeling, (2) Intellect, (3) Will. This does not mean that there are three minds, one of which feels, a second knows, and a third wills. The mind is not a material object that can be separated into distinct parts so that you can have brain action with intellect and will, but with no feeling; or with feeling without intellect and will. This division of mental powers is intended to show that there are three *kinds* of consciousness, but each kind is more or less represented in every intel-

lectual action.* We distinguish a thought from a feeling, and each of these from a volition or act of will. But in the last analysis, every thought is found to have a tincture of feeling and will, every feeling has its modicum of thought and volition, and there is no act of will in which there is not knowledge and emotion.

(a) We will show first of all how knowledge—the fruit of “intellect,” placed second in the trio—is connected with feeling and will. Let us suppose you are about to study a proposition in Euclid. There is a story told about a boy who was so delighted with the reasoning of Euclid that he used to pursue the arguments with considerable warmth of feeling and great wealth of gesticulation. The teacher reproved him by saying: “Euclid knows no emotion.” Now the psychologist has more sympathy with the scholar than with the teacher. To understand a problem in geometry

In trinity of feeling, intellect, and will.

Feeling and will in knowledge.

Euclid and emotion.

* “Yet while knowing, feeling, and willing, are thus broadly marked off from, and even opposed to, one another, they are in another way closely connected. A mind is . . . an organic unity made up of parts standing in the closest relation of interdependence.”—Sully, *Handbook of Psychology*, p. 44.

a certain amount of feeling is necessary, "for unless the mind were affected in some way by the problem itself, it would not come within the mind's sphere of knowledge at all. Knowledge depends on feeling; that feeling which any object or truth is able to excite in the mind."* And since the attention is directed and concentrated, we see that the understanding of a geometrical problem necessitates an act of will. Hence in mathematics, the sphere of the abstract, there is the presence of feeling, intellect and will. Lotze says: "Even the simplest and apparently driest notions are never quite destitute of this attendant feeling; we cannot grasp the conception of unity without experiencing a pleasant satisfaction which is part of its contents."†

(b) It is likewise true that when we examine our feelings we find they contain much of what is otherwise called thought. Those people who are continually setting up reason over against emotion as a guide to conduct, may be surprised to learn that the

* Dewey, *Psychology*, p. 18.

† *Microcosmos*, vol. I. p. 243.

psychologist speaks of *logical* and *intellectual* feelings. To what do these terms ^{Intellectual} point? To the fact that emotions are ^{feelings.} not so empty and transient as many suppose them to be. Lowell says :

All thought begins in feeling—wide,
 In the great mass its base is hid,
 And narrowing up to thought stands glorified,
 A moveless pyramid.

Our emotions are full of intellectual character, and "connected with art, with morals, with scientific investigation, with religion, they are incomprehensible without constant reference to the objects with which they are concerned."* And here again the controlling agency is that of will.

(c) Further, an act of will involves knowledge and feeling. I determine to sell my ^{Knowledge} business ; that implies an end in view ^{and feeling} which to me is a matter of knowledge ; ^{in will.} and since it is an end I desire it is bound thus far to be a matter of feeling.

Hence although for purposes of convenience we distinguish a thought from a feeling, and each of these from an act of will, there is a

* Dewey, *Psychology*, p. 20.

unity in all mental action; and thoroughly to comprehend this is the first matter of importance in studying the thinking faculty.

The next point to be considered is the know-
 "Innate" ledge which the mind contains apart
 knowledge. from experience. A few words will
 make this plain. Take that familiar axiom: things that are equal to the same thing are equal to one another. If X is equal to Y, and Z is also equal to Y, it follows that X is equal to Z. How do we know that? It is self-evident; which means that it is a truth we did not learn from experience; it is part of the mind's original furniture. Our best plan of procedure respecting these truths will be to avoid technical discussions and take a simple statement of facts such as may be found in Jevons's *Logic*.^{*} He says there are three necessary
 Three laws of thought. The first—(1) is the
 of thought. *Law of Identity; whatever is, is.* Every-
 thing is identical with itself. The second
 (2) is the *Law of Contradiction; Nothing can both be and not be.* A piece of paper may be blackened in one part while it is white in

^{*} *Logic*, p. 117. See also St. George Mivart's *Philosophical Catechism*.

other parts; or it may be white at one time and afterwards become black; but we cannot conceive that it should be both white and black at the same time and place. The third (3) law is the *Law of Excluded Middle*. *Everything must either be or not be*. This law may easily be misunderstood and consequently misapplied, but its general meaning is to point out the impossibility of a middle course. The answer must be Yes or No. Gold must be either white or not white; a line must be either straight or not straight. Now, if we examine these three laws of thought, we see at once that they require no proof; they are self-evident. Too much cannot be said in favour of a clear comprehension of those first truths of which they are an expression.

A full treatment of the subject of this chapter demands a section on the train of ideas, and another on the laws of association; but space forbids. The relation of brain to mind is outside our province altogether.

Plan of study.

(1) Read

Baldwin, *The Story of the Mind* (Newnes).

Granger, *Psychology* (Methuen).

Jevons, *Elementary Logic*, chap. xiv. (Macmillan).

Locke, *Essay on the Human Understanding*, "Innate Ideas" (Clar. Press).

(2) The habit of introspection should be cultivated assiduously, and yet not to the point of being morbid. Examine the actions of your mind during the last grief you had. Soon you will be able to classify the phenomena, for as you narrate what took place the expressions come naturally to your lips. "I felt;" "I thought"; then I determined. Thus your own analysis will reveal feeling, intellect, and will in their unity. Follow up the subject by a careful study of the three words themselves, and the uses they have served throughout a long history.

**Healthy In-
trospection.**

(3) Read the section in Janes's *Human Psychology* (Baker Taylor and Co., N.Y.) on "Necessary Elements of Perception;" and along with these more abstract studies, the intuitional writers in poetry and prose, of which Browning, Tennyson, and Emerson are good representatives. Of course Shakespeare will be remembered, and the better-class writers of fiction should not be forgotten.

CHAPTER III

THOUGHTS, AND HOW TO GATHER THEM

"A thinking man is the worst enemy the Prince of Darkness can have."—CARLYLE.

HAVING dealt with the nature and contents of the thinking faculty so far as these are concerned with our purpose, we now propose to consider thought-production. Of course there is a sense in which the gathering of thoughts needs no consideration; it is an unconscious operation of every human mind. Our aim is simply to point out those methods by the observance of which the willing learner may reap an abundant harvest of facts and ideas. We refer to observation, reflection, reading, social intercourse, and travel.

(1) The importance of observation as an avenue to the increase of knowledge, is **Observation** made most clear when we study the mental

growth of a child. Perez has told us in a delightful book * how the infant comes to recognise the *me* and *not-me*, and Tennyson has put this psychology into music when he says

The baby new to earth and sky
 What time his tender palm is pressed
 Against the circle of the breast,
 Has never thought that "this is I."

But as he grows he gathers much,
 And learns the use of I and me;
 And finds I am not what I see,
 And other than the things I touch.

As with children, so with older people; we enlarge our mental boundaries by observation. A great deal of course depends on natural capacity. There are men who are all "eyes"; nothing escapes them, and where others find things dull and monotonous, they find life throbbing with interest. Upon such expert observers there is always a premium. Take the **in science.** two divergent spheres of Science and Fiction. "A great science has in many cases risen from an accidental observation. Erasmus Bartholinus thus first discovered double refraction in Iceland spar; Galvani noticed the

* *The First Three Years of Childhood.* "Naomi" in Hall Caine's *Scapegoat* is worth a close study.

twitching of a frog's leg; Oken was struck by the form of a vertebra and Malus accidentally examined light reflected from distant windows with a double refracting substance!"*

Astronomy is largely an observational science, and that thrilling story which centres in the discovery of Neptune had its origin in the simple observation of an eccentricity in the motion of Uranus. Gravitation, Electricity in its many ramifications, Hypnotism and a host of discoveries in medicine are due to watching Nature in her methods of operation; and truly did Bacon say in his first aphorism, "Man the servant and interpreter of Nature can do and understand as much as he has observed concerning the order of Nature in outward things or in the mind; more he can neither know nor do."

The writer of Fiction owes much to observation—not the scientific use of the faculty, for there is many a man with a lynx-eye for botanical similarities who is slow enough to observe the working of forces which govern society. The author of *How to Write Fiction*, says, "You may ask

Observation
in fiction-
writing.

* Jevons, *Principles of Science*, p. 400.

when and where can you best observe human nature? The answer is—at all times and under all circumstances. Watch the faces you meet in the street, until you come to know just what the character of a stranger is by your first glance at his face, figure, and general manner. Study the meaning of eyes, of voice, of gesture, as well as the meaning of the lines on the face. . . . Height, weight, colour, determine an almost infinite number of mental characteristics.” The would-be thinker, therefore, if at all anxious about gathering materials, should be a trained observer. Excellency in most spheres depends upon a tutored eye. But the question is: How may we become keen observers?

Suggestions.

(a) *Cultivate a healthy curiosity:* We are bound to notice that which takes place on the surface of life; nature thrusts it upon us. But the most significant things unveil themselves to the seeing eye alone; and the seeing eye depends to some extent on the inquiring mind. Small-minded inquisitiveness is very properly to be avoided, but a healthy desire to

know is at the root of all excellence in observation.

(b) *Classify your observations in writing:* that is, the most important of them. As an exercise it will increase descriptive power, and correct the distortions which imagination, more or less, introduces into what we see and hear. If you would discover the spectres of the mind and annihilate them, *write* your thoughts.

(c) *Study some branch of natural science.* Perhaps Botany is the best. The habit of looking for specimens and of detecting likenesses and differences, has a tendency to exert itself in other fields than those of flowers, a fact not forgotten by those who have the best right to speak of its educational worth.*

(2) REFLECTION.—As a matter of fact reflection forms a large part of what is popularly known as observation. Venn has made ^{What is reflection?} some very pertinent remarks on this head.

Here is an example. A stranger proposes to join a company of pedestrians. The leader of the party glances at him and noticing certain physical defects, says, within himself, "I can see plainly enough that he will not be fit for

* Balfour, *Manual of Botany*. See Preface.

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our excursion to-day."* In this case observation is accompanied by inference; the eye sees pale cheeks, sunken eyes, and a lame walk; the mind infers that such are hindrances to joining the party.

But by reflection we do not mean thinking in the exclusive sense of inference; we mean the mind that is always asking the "why" and the "wherefore" of things. Cardinal Newman says of some seafaring

men that they "find themselves now in Europe, now in Asia; they see visions of great cities and wild regions; they are in the marts of commerce, or amid the islands of the South; they gaze on Pompey's Pillar or on the Andes; and nothing which meets them carries them forward or backward to any idea beyond itself. Nothing has a drift or relation; nothing has a history or a promise."† Now it is this

unreflective spirit which we should strive to avoid—a lazy contemplation of and acquiescence in the facts of life as fate or fortune deals them out to us.

Schopenhauer says somewhere that experi-

* *Empirical Logic*, p. 112.

† *Idea of an University*, p. 136.

ence is our text and reflection is the commentary. It is to be feared that in this sense there are many lives made up of bare text; not a sign of query, note, or comment. Experience is full enough but it passes reflection's sentry-box without a challenge.

True reflection, however, is more than the drawing of inferences or musing upon what we have seen. It is such hard mental work as is necessary in examining a problem in ethics, the pros and cons of a commercial enterprise, or the possibility of life on the planet Mars. Spasmodic meditation is not of great service; but deliberate and sustained reflection is highly educative and valuable as a means of increasing knowledge.

Suggestions.

What to do

(a) Begin by reading the reflections of others.

Main, *Wise, Witty and Tender Sayings of George Eliot* (Blackwood).

Coleridge, *Aids to Reflection* (Routledge).

Pascal, *Thoughts* (Routledge).

Hare, *Guesses at Truth* (Macmillan).

Helps, *Friends in Council* (Smith, Elder).

Joubert's *Thoughts* (Allen).

(b) Endeavour to get a true and certain knowledge of all that is *fundamental* and *central*.

Aim at things fundamental and central. For instance, an inquiry concerning the *forces* of life will yield profitable results.

Study forces. Beginning with an understanding of the forces of nature, we come to see that there are forces of another kind, namely, those that work in history. See Lotze's brilliant chapter in his *Microcosmus*. Then there are the forces of *ideas* and of *custom*. *Religion*, too, possesses peculiar powers. All these taken together afford a prolonged view of one of the great factors of progress, and to these more particularly the reflective mind should turn its attention. Again: seek the bases of intellectual life by asking such a question as this: What are those truths in which the majority of men most unanimously believe? Sometimes a single question is, for the student, the beginning of a new era.

(3) **READING.**—So much has been said of late years on this subject that were our purpose **A special kind of reading.** general, and not particular, we should simply refer the reader to Mr. John Morley, Sir John Lubbock, and Mr. Frederic Harrison. But since we have a special end in

view, namely, reading which will help a man to become a *thinker*, it may be pardoned us if we expound two rules, which, when observed, will accomplish that end.

(a) *Read critically.*—Some authors have a style so lucid and clear, and a mind so subtle in its chain of sophistical reasoning, that the reader is carried away by rhetorical music, and caught in the snare of specious arguments. There are likewise authors whose style is their **warnings** worst enemy; men who have good thoughts, but cannot state them clearly and attractively, a fact which explains the perplexity of their readers. Emerson has such an oracular way of saying things, that some of his sentences are like decrees—an authoritative mannerism which may completely dominate the uncritical mind. Now a really critical reader will first ask himself what an author means. If the answer is speedily forthcoming, it is a testimony to the writer's perspicuity and a help to the reader's comprehension. Having discovered the author's meaning he will next value it—*i.e.*, he will test its accuracy, its fairness, **specimen** and its relation to other views on the **methods.** same subject. If the book be historical

he will inquire into the following particulars:—

For history. (1) Sources of the work: Period of History.

(2) Style of writing: clear or obscure.

(3) How authorities are used: manner of quotation.

(4) Relation of the work to other theories of history.

(5) As to its originality; and

(6) Its effect upon the public.

And fiction. Or, if the book should be a novel or drama he would proceed to deal with

(1) The subject-matter: plot.

(2) Characters—Their qualities as persons, relative importance, relation to one another, contrasting characters, what each is intended to bring out.

(3) Art in presenting scenes and characters.

(4) Literary qualities. Technical consistency, phrasal power, and æsthetic "finish."

(5) The underlying philosophy.

Of course these are but indications (and to some readers perfectly obvious) of what we mean by critical reading. It is surprising to

know how few people thoroughly master the books they buy, or those which they borrow from the circulating libraries; that is, *Books should be mastered.* *master* by digestion and not by simple appropriation; for in the latter case there is only an increase in the bulk of knowledge, in the former case there is an enlargement of the mental personality. And that way originality lies.

(b) *Read creatively.*—We have borrowed the phrase from Emerson. “There is then creative reading as well as creative writing. *Emerson on reading.* When the mind is braced by labour and invention, the page of whatever book we read becomes luminous with manifold allusion. Every sentence is doubly significant, and the sense of our author is as broad as the world.” As if he had said: “When you read, connect the thoughts of the author with your previously ascertained knowledge; note the contrast or similarity; if there be an advance upon your ideas, observe the place where your reflections fell short, and ask the reason why. Make an unstinting use of the laws of association. Notice how many things are contiguous that seem to be utterly separated; and how an

effect, in scores of instances, must seek its cause in strange quarters."

Gibbon tells us in his *Autobiography* how he proceeded to read a new book. "After glancing my eye over the design and order of a new book, I suspended the perusal until I had finished the task of self-examination; till I had revolved in a solitary walk all that I knew or believed, or had thought on the subject of the whole work, or of some particular chapter. I was then qualified to discern how much the author added to my original stock, and I was sometimes satisfied by the agreement, sometimes armed by the opposition of our ideas."* The practice is an excellent one. And it may be supplemented with unspeakable advantage by another practice, a little more difficult of application. The aim of every reader should be to unify his knowledge. Therefore, let each new bit of information, each new idea, be definitely "placed." The hasty reader can go through one book on tree-cultivation, and another on life in large cities, without tracing any connection between foliage and the health of the people. He

* *Autobiography*, p. 166.

knows how elms are grown, and that fact is packed away in a mental compartment under lock and key; he also knows that city life in relation to the masses is a problem of increasing difficulty, and that fact is duly labelled and pigeon-holed; but he never thinks of unifying the impressions of both books by considering the people's need of pure air in relation to the carbonic-acid absorbing properties of foliage, and therefore the utility of trees in or near large cities.

Connecting facts together.

It is a good test of the value and suggestiveness of a book if it can do more for us than is, strictly speaking, within the scope of the author's aim; it is also a test of our reading, and enables us to distinguish thinkers from listless absorbers of print.

Thinkers v. "Readers."

Suggestions.

(a) It is advisable to have some bibliographical guide at hand. Sonnenschein's *Best Books* (in two or more volumes) is a good series. Baldwin's *The Book Lover* is excellent. Mason's *How to Excel in Study*, and Bain's "Art of Study" in his *Practical Essays* should be read.

D

(b) For thought stimulation we recommend the following as a few of the many:—

Buckle, *History of Civilization* (Richards).

Mozley, *On Miracles* (Longmans).

Amiel, *Journal Intime* (Macmillan).

Dowden, *Shakespeare: his mind and art* (Kegan Paul).

Wallace, *Darwinism* (Macmillan).

Vaughan, *English Literary Criticism* (Blackie).

(4) SOCIAL INTERCOURSE.—We refer more particularly to the advantages of intellectual **mind with society.** Bacon says, "*Conference makes mind. a ready man.*" That is certainly an advantage to be sought after. How dull some learned men are! Better habits of conversation would have saved them from the tardy heavy manner which it is their misfortune to have. But it is not with the etiquette of conversation * that we have to do, or indeed with the advantage of a verbal readiness; it is social intercourse as a **The gains of conversation.** harvest time of thought and experience. "It is said of Varilles that of ten things which he knew he had learned nine from con-

* "When two people are earnestly engaged on a really serious topic . . . we need not intrude upon them any idle considerations as to their manner of treating it."—Mahaffy, *Principles of the Art of Conversation*, p. 159.

versation."* And it was Conference in the larger sense by which the Greek student increased his knowledge. Emerson remarks that "wise, cultivated, genial conversation is the best flower of civilization, and the best result which life has to offer us—a cup of the gods which has no repentance. Conversation is our account of ourselves. All we have, all we can, all we know is brought into play, and is the reproduction, in finer form, of all our havings."

But there is another gain in conversation: its corrective power. There is a sort of mental exposure in talking to a companion; *Its corrective* we drag our thoughts out of their *power.* hiding-places, naked as it were, and occasionally we are not a little startled at the exhibition. Unexpressed ideas are often carefully cherished until, placed before other eyes as well as our own, we see them as they really are. Hence an hour's communion with a critical mind may be fraught with much consequence, especially if the matter under discussion be of practical import. One word of caution is needed. Do not make conversation a sort of drawing-room debating class, or spoil it by harping on mys-

* Adams, *Plain Living and High Thinking*, p. 19.

teries and metaphysics. The social evening can be made more profitable by *abandon* than by a precise and proper programme, however artfully concealed. It is a luxury when kindred spirits can meet to talk about the thought of the passing moment. Bacon sums up the case for conversation by saying: "we toss our thoughts more easily, marshal them more orderly, we see how they look when they are turned into words; finally, we wax wiser than ourselves."

Get a friend and become an intellectual communist.

(5) TRAVEL.—Dr. Johnson says that the use of travelling is to regulate imagination by reality, and instead of thinking how things may be, to see them as they are. Perhaps the people of these islands have need to ponder this remark more than our continental neighbours. English folk are insular to the core, and although it is a characteristic with some advantages, it has disadvantages also, and one of them is that it engenders a false sense of superiority. There is no better cure than accepting the invitation from abroad which says "Come and See." To free the mind of little provincial conceptions, the recipe generally

Travel widens
the view.

English
insularity.

given is "Go to the Metropolis." And to liberalize the mind so that it may cast off its little national affectations and prejudices, the recipe is: *Travel*. If observation can do anything to generate thoughts, surely this is its golden opportunity. But one proviso must be made: observation with *inference*. Not the orthodox "sight-seeing," with photographs of the places "where you have been"; but the journey of a seeing eye and an understanding mind; not the pell-mell rush of the tourist bent on covering so much ground, but the living movements of the traveller who seeks to enlarge his knowledge and widen his interests.

CHAPTER IV

STUDIES IN PREJUDICE

"A man can more easily burn down his own house than get rid of his prejudices."

DESCARTES.

THE word "prejudice" means a prejudgment, a prepossession, or, to use a dictionary definition, "a bias or leaning, favourable or unfavourable, without reason, or for some reason other than justice." But definitions of "prejudice" are seldom, if ever, satisfactory. Take, for example, that of Isaac Taylor: "Prejudices are unreasonable judgments formed or held under the influence of some other motive than the love of truth."* This is very inadequate, for some of the most prejudiced men have the strongest love of truth, that is, so far as they understand it; what we call their

Some definitions of "prejudice."

* *Elements of Thought.*

bias, they themselves call a passion for the true.

It may be said that prejudice exists in two forms: (1) active, and (2) passive. We will illustrate the first from the history of **Active and literary criticism. Did Shakespeare write passive.** the plays—or most of them—which bear his name? The majority of people say “Yes; certainly. Has the English intellect been fooled on so important a matter? Is it possible that Shakespeare’s contemporaries could have been deceived?” Now if these people have never examined the arguments on the **Who wrote Shakespeare’s plays?** other side, their position is clearly prejudiced, regarded intellectually, even though it may be the right one; for they settle the matter simply on the ground of received opinion. But let us suppose that we are anxious to give the matter a fair hearing, and carefully examine the evidence for and against. Even then, if we sound our thoughts, we became aware of a silent drift of opinion in favour of either Shakespeare or Bacon. The irony of the situation is this: that whilst **Subtlety of we are trying to avoid prejudice we prejudice.** are suffering from its warping influence all the

time, due no doubt to some quality of the mind which is the peculiar product of birth, temperament, education, or the like.

By active prejudice, then, we mean a specific instance of bias such as that previously referred to; by passive prejudice we mean a condition of mind governed by influences which, unknown to us, predispose us towards certain theories of life and give colour to our views of evidence. It is with the second of these that we shall have most to do. Basil Montagu

Basil Montagu's description.

says: "Of prejudice it has been truly said that it has the singular ability of accommodating itself to all the possible varieties of the human mind. . . . Let the mind be as naked as the walls of an empty and forsaken tenement, gloomy as a dungeon, or ornamented with the richest abilities of thinking; let it be hot, cold, dark or light, lonely or inhabited, still prejudice, if undisturbed, will fill it with cobwebs, and live like the spider where there seems nothing to live on."*

It will greatly assist our understanding of this subject if we discuss those facts and forces

* *Thoughts on the Conduct of the Understanding*, p. 180.

which, above all others, produce this deflection from the course of right thinking.

(1) *There is the prejudice of Birth and Nationality.* Education is said to raise a man above such a vulgarity as this. No doubt it does, but one's home and kindred is a fact the influence of which no education can totally eliminate. The present writer remembers a hot debate between an Englishman and a German respecting the merits of Shakespeare and Goethe: which was the greater man? The Englishman knew his Shakespeare well, but beyond *Faust* and *Wilhelm Meister* he did not know much of Goethe: the German knew Goethe from beginning to end, but his knowledge of Shakespeare was confined to *Hamlet*, *Coriolanus*, and the *Sonnets*. The debate—an informal one—began by each man stating the case for his client: how great he was, how much he had written that was immortal. When the debaters came to compare the merits of both writers they failed for want of information, and naturally fell back upon patriotism. They parted in ap- parent good humour, each man being convinced he was right. Said one within him-

self: "Shakespeare is better than any German who ever lived!" Said the other, "Goethe? Ach! no Englishman like *him!*"

It may be that the reader thinks he would never be caught in so pronounced a case as this, but it is surprising how the national sentiment—good in its place—warps our judgment of the merits of men and things beyond the shores of our native land. Think for a moment of the way in which English scientists in the eighteenth century treated the results of French research, disdaining them for no other

French v. English. When Adams and Le Verrier simultaneously discovered Neptune there was a disposition in England to strain the evidence for prior discovery in favour of Adams; on the Continent there was a similar tendency to favour Le Verrier. A study of foreign politics and commerce will reveal an unwillingness to allow the national sentiment or prestige to suffer loss, even when the opposing party is in the right. It is the sense of sound morality, and of that justice which is as wide as the East is from the West, and irrespective of race or creed, latitude or longitude,

**The Independ-
ence of
Justice and
truth.**

which will save us from the species of small-mindedness sometimes known as "national honour."

(2) *There is also the prejudice of temperament.*

By temperament we mean that individual **Temperament**, peculiarity of physical and mental organization by which the manner of acting, feeling, and thinking of each person is permanently affected. There are four temperaments, and since every man must belong to one, or a compound of two or more, there is no escape from such influences in the formation of opinions: inasmuch as our temperaments contain, as it were, so many prejudgments of important questions, that, given the type of man, one can almost prophesy his views on stated subjects. If, according to Buckle, climate can do so much to mould the life of man, so will temperament—man's mental climate—exert a like power in shaping his conclusions.

(a) Take Asia and Europe—the mind of the East and of the West—and see how the **Asia and Europe** intellectual "build" of men predisposes them towards a particular system of thought. The Hindoo has little or no inclination for scientific exactness; his is a world of medita-

tion and introspection, and long ages of such life in his ancestry have unfitted him for anything else. On the other hand the European

The Hindoo and the English mind. has none of the Hindoo's submission to Fate or the gods: quick, active, independent, and with a strong instinct for progress, he is restless if not conquering in some sphere of knowledge, politics, or commerce. There are truths against which the English mind is naturally prejudiced on account of its intensely practical character; the Oriental mind, because of its dreamy characteristics, is likewise prejudiced against other forms of truth. Of course it is easy to press this matter too far, but what we contend for is that the peculiar quality of physical and

Tendencies in the constitution of men. mental constitution will predispose men towards this theory and against that*; the danger being greatest when this predisposition is followed uncritically. Then,

* Professor Henry Jones, speaking of the difference between Carlyle and Browning, says: "This notable contrast between the two men, arising at once from their disposition and moral environment, had far-reaching effect on their lives and writings."—*Browning as a Philosophical and Religious Teacher*, p. 50. See also Ladd's *Physiological Psychology*, p. 445.

as John Morley says, "It is a question of temperament which of two mental attitudes becomes fixed and habitual, as What John Morley says. it is a question of temperament how violently either of them straitens and distorts the normal faculties of vision."*

Denominationalism in religion is largely a matter of temperament. The æsthetically minded seek a worship with ritual A religious view. and ceremony; the educated and cultivated classes attend a ministry which deals with truth according to their taste; whilst a good many people whose religion depends on brotherhood and warm social fellowship find their way into churches where these qualities are most developed. Between the religion and the individual there is a conformity to type. Nature has given us a tendency in one direction or the other.†

Two men sit down to study the moral problems of life. One of them is cast The pessimist tendency. in the mould of the melancholy; he has an affinity for all depressing things, and when

* *Miscellanies*, vol. I. p. 144.

† See Newman's *Apologia* as an instructive example of this.

42 THE ART OF THINKING

at last he meets with Schopenhauer, he hails him as a kindred spirit and reveres him as a master. Temperament of the melancholy order has prejudiced his thinking.

The other man is just as sanguine. He would scarcely go so far as Democritus and **The optimist** say life was a side-splitting joke, but he **tendency.** is a laughing philosopher all the same.

He admits that there is pain and agony, but regards them as more educative than penal. To him there is a bounding joy in everything, and he soon declares himself an optimist. Temperament of the sanguine type has predisposed him in his thinking. It is no part of our duty to discuss pessimism and optimism; we have but to show how, as theories of life, there is a tendency in individual temperament to accept or reject them according to the echo of native response they awaken in the heart and life of the thinking man. As Faraday says: "The **Faraday's** **idea.** *inclination* we exhibit in respect of any report or opinion which harmonizes with our preconceived notions can only be compared in degree with the *incredulity* we

entertain towards everything that opposes them."*

(3) We have now to consider *the prejudice of the theorist*. By the theorist we do not mean the man who knows the theory of a **The theorist** subject as opposed to its practice—that is the true sense of the word—we mean the creator of hypotheses, the man who “supposes” a series of causes to account for a series of consequences. Apologising for this colloquial use of the term, we may say that the theorist is not confined to one calling in life: he may be a man of science, a philosopher, a doctor of medicine, a tradesman, or a working man; in fact we are all theorists more or less, **is universal**, for whenever we meet with facts which do not explain themselves, we readily conjure up a working hypothesis to do so. Now the danger of theorizing lies in an anxiety to be complete, and if the theorizer finds his facts too resisting, he has a tendency to coerce them into obedience. Bacon says on this head, “The human understanding, when any proposition has been laid

* “On the Education of the Judgment.” See *Modern Culture*, p. 210.

down (either from general admission or belief, or from the pleasure it affords), forces every-
Reason on thing else to add fresh support and con-
prejudice. firmation; and although most cogent
 and abundant instances may exist to the con-
 trary, yet either does not observe, or despises
 them, or gets rid of and rejects them by some
 destruction with violent and injurious prejudice,
 rather than sacrifice the authority of its first
 conclusions."*

Let us take an illustration from theology.
 Luther, as a consistent believer in the in-
An example spiration of the Bible, accepted its com-
from Luther. posite scriptures as the work of God.
 Severing himself from the Roman Church on
 doctrinal issues, and taking his new ideas on
 justification from the Epistle to the Galatians,
 he commenced to re-read the New Testament
 in the light of that single document; in other
 words he had formed his theory, and was
 about to test it by other scriptures. Meeting
 with the vigorous denunciations of unfruitful
 faith in St. James's Epistle, he thought he saw
 something antagonistic to his preconceived
 views, and without further hesitation he

* *Nov. Org. Aph.* 46.

branded this Apostolic letter as "an epistle of straw." The reformer's thought was led astray by his anxiety to complete his theory.*

But the theologian is not the only sinner.

One of his greatest critics is the scien- The scientist
also a sinner
tist, and yet the scientist should be one

of the last men to cast a stone, for he too is a great hypothesis maker, and suffers from the same tendency to "treat" facts in the light of his theory. When Professor Huxley was inquiring into the origin of life, and the final result showed that life always came from pre-existing life, he candidly admitted that he wished the evidence had been the other way! Once more the prejudice of the theorist!

Professor William James asks, "Why do Prof. William
James on
telepathy.
so few scientists look at the evidence for telepathy so-called? Because they think,

as a leading biologist, now dead, once said to me, that even if such a thing were true, scientists ought to band together to keep it suppressed and concealed."† Why? Because,

* Cardinal Newman's views on ecclesiastical miracles form another good example; *e.g.*, his ideas on the multiplication of the wood of Christ's Cross.

† *The Will to Believe*, p. 10.

forsooth! it would disturb the harmony of their systems. It is to the credit of Dr. A. R. Wallace that he has refused to cut and trim any fact in the interests of evolution; he preferred to allow mysterious things to remain as he found them, and his *Darwinism* is a classic illustration of how a great theory need not be ridden to death.

After the scientist comes the historian, whose special temptation is so to manipulate his materials that events happened in the past as he thinks they ought to have happened and not as they actually did happen. Gibbon's prejudice comes out in his celebrated "five reasons" to account for the spread of Christianity, a bias from which even Mr. J. Cotter Morison does not excuse him.* Buckle's "History of Civilization" is a monument of genius and industry, although at the present time it is unduly depreciated. His conclusions, however, are often doubtful and his methods questionable; he gives us the impression that he is bringing up history to prove what he believes to be the truth about history. That

Where the
historian
errs.

H. T. Buckle's
hasty generalizations.

* Gibbon, *English Men of Letters*.

this is not too harsh a judgment may be inferred from the admission of his most ardent disciple to the effect that he suffered from "theory with all its temptations to hasty generalization and rash synthesis."* One of his *a priori* was that the movements of nations are perfectly regular, and like all other movements they are solely determined by their antecedents. It is easy to see how this would warp the judgment when the time came to deal with things apparently anomalous.†

But we must leave the historian and glance at the doctor of medicine. A reliable authority says, in reviewing medical history, "Theory, however, is too attractive for ingenious minds to be long idle, and again we find medicine turning into the high *priori* road. . . . Sydenham's example . . . was still powerful enough to curb the theorizing tendency, so that enthusiastic mathematicians like Mead did not allow their love

Prejudice in
medical
theories

* J. M. Robertson, *Buckle and his Critics*.

† For other examples see Hegel's *Theory of History* as stated in Matheson's *Aids to the Study of German Theology*; and also Comte's threefold law of intellectual progress.

of hypothetical symmetry to vitiate their practice."*

Yet another sphere, in which prejudice plays its vicious part in forcing theory to its utmost limits and even beyond. **And in daily life.** The same thing happens in daily life. A man one day discovers to his chagrin that two men of education have robbed him by leaving the district without paying their debts; and as they were genial in disposition and polite in manners, he forms the idea that all polite people are bad, and acts accordingly. Instances on the other side are minimized by the supposition that opportunities for proving their badness have not been forthcoming, and that though apparently good they may be as wicked as the others.

But we must bring this part of the subject to a close. Emerson was once twitted about the unsystematic nature of his teaching. **Emerson's lack of system.** His reply was that "truth has so many facts that the best we can do is to notice each in turn without troubling ourselves whether they agree." Possibly this sentiment

* Dr. J. P. Steele, art. "Medicine," in *Chambers's Encyclopædia*.

is too poetic to be of scientific value, but it is nevertheless wholesome as a medicinal draught for the hardened theorist.

(4) *Again, there is the prejudice arising out of an unintelligent conservatism.*—Some minds have a definite bias in favour of the past. These men bend the knee before the Pyramids, and lament the deficiencies of modern builders and engineers; they read the Hindu *Upanishads*, and are sorry for European metaphysics; our historians, they say, are eclipsed by Thucydides and Herodotus, our orators by Cicero and Demosthenes; in a word, there is no comparison in which we are not the losers. Locke says: "Some will not admit an opinion not authorized by men of old who were then all giants in knowledge; nothing is to be put into the treasury of truth or knowledge which has not the stamp of Greece or Rome upon it, and since their days will scarce allow that men have been able to see, think, or write."* This is a well-merited rebuke, for although we owe much to the past, we are not for that reason to cry down the triumphs of

Unintelligent
Conserva-
tism.

Locke's
criticism.

* *Conduct of the Understanding*, p. 52.

later times. Aristotle wrote on logic and on natural history. In some respects no one has advanced upon the rules he laid down for logical reasoning; but in natural history Aristotle left behind "the master of those who know" has been left far behind. And this is true of knowledge in almost every department.

"Received opinion" domineers in a hundred different spheres and in as many different ways. The annals of science contain many painful exhibitions, and nothing could be worse than the story of the "phlogiston" theory of fire. Stahl (1697) was the first to use the term *Phlogiston*, by which he meant a subtle principle residing in inflammable bodies and metals. His theory held undisputed sway until the time of Lavoisier (1787), who demonstrated its utter fallaciousness. Being a Frenchman, he was not regarded with much favour by the English scientists of that time, and they endeavoured to silence him by foolishly defending the now exploded "phlogiston" theory. Routledge says: "The English chemists—no doubt in some degree affected by the general British determination to oppose all French innovations—almost to a

man clung to their beloved *phlogiston*. Cavendish published an able defence of the old theory, but finding that the new opinions were nevertheless gaining ground, he relinquished chemical studies altogether. Priestly died in the *phlogiston* faith, and the other British chemists imitated Cavendish by throwing up the study in disgust."* Comment is needless.

Sixty years ago the English people believed Mohammed to be a perfect specimen of the impostor as religionist. Carlyle undertook to strike a blow at this accepted opinion, and it is a fitting testimony to his great powers that he accomplished the herculean task of turning aside a nation's prejudice by showing Mohammed was not so bad as he had been painted.

But we must bring these studies to a close. Enough has been said to convince any one of the vast importance of subduing a force so alien to right thinking as prejudice. How can it be done? In the following plan of study we have attempted a partial answer.

* *History of Science*, p. 368.

Plan of Study.

(1) Read :

Bacon, "Idola" in *Novum Organum*.Watts, "On Prejudice," in his *Logic*.S. R. Bosanquet, "On Prejudice" in his
Logic.Reid, Essay VI. in *Intellectual Powers*.

Take to heart the words of Locke: "He must not be in love with any opinion, or wish it to be true till he knows it to be so, and then he will not need to wish it ; for nothing that is false can deserve our good wishes, nor a desire that it should have the place and force of truth ; and yet nothing is more frequent than this."*

(2) Cultivate the habit of looking at both sides of a subject. A close scrutiny of ideas in which we disbelieve entirely will often reveal a logical power hitherto unsuspected. Our minds are "made up" on a good many subjects, but did we give the other side a patient hearing? Or are we ready to do so now? For there is something radically wrong with a belief on which we are afraid to be cross-examined, or a proposition concerning

* • *Conduct of the Understanding*, p. 32.

which we hesitate to argue. If we have the truth, or think we have it, should we, under proper circumstances, decline to state our reasons for accepting it? Even if the belief or proposition is right in itself, our unwillingness to discuss both sides of the question shows that our hold is defective; the logic is faulty although we dare not confess it.

There is no better practice than that of taking a debatable subject—Cremation, for example—and setting down its arguments *pro* and *con* thus:*

In a formal and practical manner.

Against.

(1) The tradition of nearly all nations is in favour of a reverent mode of treating the dead. Earth sepulture is alike commanded by the Synagogue and the Christian Church.

(2) Cremation violates our best and tenderest emotions; and we could never reconcile ourselves to submitting the bodies of those we loved to the flames

For.

(1) Cremation is much the most sanitary, and much the most cleanly mode of disposing of the dead. The epidemic earth-worm is well known to have occasionally spread infection.

(2) It can be so accomplished as to avoid wounding the feelings of surviving friends; under any circumstances destruction by fire cannot be considered as more unbecoming than destruction by worms

* The example is taken from Askew's *Pros and Cons*, p. 68 (second edition).

(3) The practice was a late introduction in the Roman Empire to prevent bodies from being disinterred. It was forbidden by the Holy Roman Inquisition.

(4) Premature burials can be rendered impossible by puncturing the heart of assumed corpses before burial.

(5) Cremation destroys all evidences of the causes of death, and thus renders the detection of murder much more difficult.

(6) The substitution of perishable for imperishable coffins would meet the difficulty of overcrowding in modern cemeteries.

(3) It is a very ancient practice.

(4) It eliminates all chances of premature burials arising from trances, &c.— a by no means unimportant fact as recent discoveries have shown (We have it, moreover, on eminent medical authority that it is impossible to be certain that a man is dead before actual decay is visible).

(5) The objection that cremation destroys all evidence as to the cause of death would be met by a stricter system of medical certificates.

(6) The crowded condition of our cemeteries is a danger and a disgrace. Perishable coffins would go only a very short way towards remedying this evil.

Now those who, to use a common phrase, wish to look at every question "fairly and squarely," will adopt some method similar to

that given above, not always in the same formal way, but in a way which will guarantee an equally unprejudiced conclusion. Of course it is not an infallible guide to truth, but it is a fine antidote for narrow-mindedness. In all discussions ask two questions—(1) what has been said on both sides? and (2) which side has the greater claim to truth?

An antidote for narrow-mindedness.

(3) But such questions, after all, do not go to the root of the matter. They are somewhat mechanical—useful and necessary—but confined in their application. The root of the matter is what we have called passive or constitutional prejudice, and this should be studied scientifically by selecting a series of typical thinkers and examining them as to (a) the native tendency of their thought, (b) the influence of the geographical area of birth, of the times in which they lived, and of environment generally. As an illustration of the first item we may quote the names of Plato and Aristotle. It has been said that every man is born either a Platonist or an Aristotelian, that is to say, he has a mental drift in the direction of the one or

But confined in its application.

Influence of environment

the other. It is well, therefore, to have a thorough knowledge of what each of these great names stands for.

Plato and
Aristotle as
mental types.

As an illustration of the second item there is a saying of Emerson that some men have "Asia" in their constitution. This means

Asia and
Europe as
intellectual
tendencies.

that they have an affinity for the Pantheism of the East. Schopenhauer was Asiatic in his philosophic sympathies just as Kant was emphatically European.

Hence an understanding of the genius of the East as distinct from that of the West is a valuable acquisition, and will greatly illuminate the course of investigation.

Another side of this subject has reference to

Men of
thought and
men of action.

men of thought and men of action: their differences and the comparative value of their services. Erasmus is a good example of the one, and Luther of the other.*

* In reviewing a work by Mr. Leslie Stephen, the *Daily Chronicle* (March 25th, 1896), said, "Mr. Stephen is always a teacher and never a prophet. Yet we could never dream of him heading a crusade or stirring the deepest emotions of his fellows. This is also just the attitude of the Ethical movement, whose method is that of Erasmus, not that of Luther; and which is much

It is obvious that the end of all this analysis should be kept in view, and not allowed to escape into side channels. The *Truth* is neither in Plato nor in Aristotle; it is not in the East or in the West. In gathering together the scattered elements of truth from whatever source, let the student beware of that undue influence which an inborn tendency will inevitably exert. **Watch inborn tendencies.** And in reference to opinions already formed do not hesitate, when the season is opportune, to be critical. How far have your present convictions been formed by prepossessions, and by the natural desire for the conclusions you have adopted? Have you suffered or profited intellectually from the influences of your early years? Are you governed by the *ipse dixit* of some favourite teacher? **And question yourself carefully.** Has your enthusiasm for a form of truth drawn you into the snare of hasty theorizing? Such questions may be voted tedious, but self-knowledge is impossible without them.

(4) Write a series of brief essays on the

more concerned about getting a few people to think correctly than about inducing great masses to act under the influence of some great enthusiasm."

58 THE ART OF THINKING

epochs of history in which great changes—
intellectual, political, and moral—have taken
Essay studies. place, such as the contact of Christianity
with Greek Philosophy, and the Renaissance.
Applied to the history of individuals—Augustine,
Galileo, Bruno, and Spinoza—it will be
alike instructive.

CHAPTER V

THOUGHT AS INFLUENCED BY EMOTION

"The light of the understanding is not a dry or pure light, but receives a tincture from the will and affections, and it forms the sciences accordingly, for men are most willing to believe what they most desire."

BACON, *Novum Organum*, Aph. 49.

IN a previous chapter we made a brief survey of the faculties of mind and their relation to thought. We said that the terms *Feeling*, *Intellect* and *Will*, whilst they express real distinctions, are, after all, but different activities of one mind. Feeling, however, is most fundamental; consciousness is not a thought, or a congregation of thoughts; as Sully says, "feeling is subjective experience *par excellence*."* Now it is a matter of some importance to grasp this position thoroughly,

Feeling at the basis of mental life.

* *The Human Mind*, vol. II. p. 2.

for if emotion has so primary a place in the sphere of intellect, it ought to receive greater consideration than it has done hitherto, more particularly as a factor in the selection of ideas and beliefs, and as a guide to right conclusions. True, the psychologist devotes many pages to descriptions and classifications of emotions, and we are glad to avail ourselves of the results of his work, but he gives no *rationale* of the subject: it is no part of his work to do so.

(1) "The influence of emotion on thought is twofold, (a) negative or inhibitory, and (b) ~~positive or promotive.~~ The sudden arrival of a bit of exciting intelligence, whether of a joyful character as the inheritance of an unexpected fortune, or of a miserable character, as the death of a beloved friend, is apt to paralyse thought for a while. In the second place, emotion as cerebral excitement is, in its less agitating degrees, distinctly promotive of ideation. We never have in our cooler moments such a swift rush of ideas as we have in our moments of emotional excitement; hence the notion of the ancients that thought is most efficient in the complete abeyance of

The twofold influence of emotion.

feeling is an obsolete error."* There could be no clearer statement than this of the natural and inevitable influence of feeling upon thought. We may now inquire, How far ought our thinking to be influenced by our feeling? This is the old question as to the conflict between a man's "head" and his "Heart" and "heart." Coleridge once said in the "Head." midst of theological perplexities: "My head is with Spinoza; my heart is with Paul and John." Now this use of the terms *head* and *heart* is a psychological convenience; the distinction is not scientific. But it sets forth a real experience, one that every man of mature years must have felt when facing the many problems of life. Such matters as those which concern the bases of conduct and the destiny of the human race, occasion this sense of an inward conflict between intellect and emotion †; Reason and Faith. the dry reason of man suggests opinions which to the feelings are repugnant, and this is well stated by Tennyson when he says

* *The Human Mind*, vol. ii. pp. 60, 61.

† In this chapter *emotion* and *feeling* are in most cases used interchangeably.

If e'er when faith had fallen asleep,
I heard a voice, " Believe no more,"

A warmth within the breast would melt
The freezing reason's colder part,
And like a man in wrath, the heart
Stood up and answered " I have felt."

This is poetry; we believe it is also good philosophy. There can be little doubt that the emotions should be consulted in the selection and rejection of what the world offers in the shape of truth. It cannot be that feeling which lies at the basis of consciousness should be an intruder in the court where the great decisions of life are arrived at, for without it the court itself would have no existence.

"Feeling" to
be consulted.

" Sorrow is hard to bear, and doubt is slow to clear,
Each sufferer says his say, his scheme of the
weal and woe,
But God has a few of us whom He whispers in the
ear,
The rest may reason and welcome, 'tis we
musicians know."*

An analysis of the events of a single day will show how unconsciously, and yet none the less truly, we are moved by mere impressions into which no solid judgment enters. Instinct

* Browning in *Abt Vogler*.

and intuition are greater masters than we are wont to imagine. Those who boast that they are the disciples of pure reason, and sneer at the poor "emotionalist," are debtors to emotion far beyond their knowledge. Locke says: "Sometimes the mind perceives the agreement or disagreement of two ideas immediately, by themselves, without the intervention of any other; and this I think we may call *intuitive* knowledge. For in this the mind is at no pains of proving or examining, but perceives the truth as the eye doth the light only by being directed towards it." Precisely. And why should not the emotions—and the intuitions so often associated with them—be regarded as responsible agents in thinking? For they can bring us face to face with some truths without the assistance of that which we call "reason." Professor Henry Jones is bold enough to say that "the intuitive insight of faith, the immediate conviction of the heart, cannot render, and must not try to render, any account of itself. Proof is a process; but there is no process in this direct conviction of truth. Its assertion is just the denial of

Locke on
intuitive
knowledge.

Professor
Henry Jones
on Faith.

process."* The natural man with only five senses must not be trusted as a capable expositor of life. Spiritual things are spiritually discerned, and if a man may muddle his mind by an overplus of emotion, he can starve it by a policy of self-repression.

(2) We now come to emotion in excess.

Bain very aptly says : " Emotion tampers with the intellectual trains as a culprit would **Emotion in Excess.** fain do with the witnesses in his case, keeping out of the way all who are against him." † Coming to practical illustrations, it is evident how anger obscures the action **Anger obscures judgment.** of judgment ; how many a man regrets that excess of feeling which caused him to think lightly of important side issues and to act precipitately. Parents with fond hearts have often to lament that lack of decision ✕ which springs from thoughtless affection. But let us take one or two of life's greatest emotions, and trace their influence upon the course of right thinking.

* *Browning as a Philosophical and Religious Teacher*, p. 318 ; also Hutton, *Contemporary Thoughts and Thinkers*, vol. I. p. 212.

† *The Emotions and the Will*, p. 552.

(a) *Fear*.—This is a word of several meanings, but here we mean that inward agitation which in view of apprehended evil exerts a disturbing influence on the mind. There **Fear defined** is, for instance, the effect upon man of the external aspects of the universe, producing in every mind a sense of unspeakable littleness in the midst of the world's immensities, and of feebleness in the presence of its mighty powers. This feeling of awe which **In awe of Nature.** nearly always passes into one of dread, more or less refined, is the occasion of false conceptions, and, in some cases, of mischievous doctrines. Buckle has pointed out how in the Tyrol this fact has caused the natives to invent superstitious legends.* Earthquakes have had a share in the making of theology.

But there is another kind of fear; the fear of ~~the~~ future; a fear which is partly a natural heritage and partly the result of training. Appeals by preachers and moralists are often **Fear in religion.** made to it, and, as a result, conduct is largely modified thereby. Highly coloured descriptions of the infernal regions may be striking as specimens of oratory, but as to the

* *History of Civilization*, vol. I. p. 121.

emotions that follow a belief in the doctrines they teach, one can only speak in terms of reprehension.

There is, or ought to be, a fear of broken law; *that* can be justified at the bar of reason. Of other "fears" beware!

(b) *Pride*.—We mean such a feeling of our own superiority as begets an ignorant pity for **Pride defined.** the supposed inferiority of others. Its chief ingredient is scorn; a contempt that either arises out of the vanity of success, or native fulness of conceit. Faraday says in an essay from which we have previously quoted, **Faraday on** "Mental education has for its first and **humility.** last step *humility*. It can commence only because of a conviction of deficiency; and if we are not disheartened under the growing revelations it will make, that conviction will become stronger to the end. But the humility will not be founded on comparison of ourselves with the imperfect standards around us, but on the increase of that internal knowledge which alone can make us aware of our internal wants!"* Examples are better than mere descriptions, and we turn to the life of

* *Education of the Judgment.*

Descartes. Professor Mahaffy tells us that this French philosopher regarded himself as almost infallible, and had a scorn of all Descartes, his contemporaries. He praised Harvey, but says he only learned a single point from him; Galileo was only good in music, and here he attributed to him the elder Galileo's work; Pascal and Campanella are pooh-poohed. Here then is an instance of how pride in one's own work may beget a cheap cynicism with regard to the work of others: and how, as a feeling, it blinds the mind to excellences outside those we have agreed to call our own. The Hebrew proverb writer said a wise thing when he affirmed, "A scorner seeketh wisdom and findeth it not." The scorner is always a very unsuitable man to judge his contemporaries, but, apart from such a special employment of his powers, he is unfitted for the general search of truth. All critics are agreed that sympathy is essential to insight, and "between sympathy and scorn there is a great gulf fixed, to cross which is practically beyond the resources of nature or art. It has been authoritatively declared impossible to be a good naturalist

And his conceit.

Sympathy essential to insight.

without sympathy: a man must enter into the life and personal characteristics, so to speak—the habits and idiosyncrasies of the birds and even of fishes, to say nothing of the higher creatures, before he can understand them." The clear thinker, therefore, will stoop that he may rise; he becomes humble that he may be exalted. He knows how a superficial egotism may blind him to new truths and unfit him for unprejudiced judgments. In a word he realizes that "when a man consents to lay aside his vanity, and to become Nature's organ, his elevation is the instant consequence of his humility!"*

(c) *Sympathy*.—As already stated sympathy is essential to insight. But it is possible to have too much sympathy. Take the subject of animal suffering. We will suppose that a man devotes one month to the exclusive study of this question. First he reads the story of science—the great struggle for life in which might was right and the weakest went to the wall. Then he wades through reports of the

* Tyndall, *On the Study of Physics*. See *Modern Culture*, p. 17.

Royal Society for the Prevention of Cruelty to Animals, and is shocked at the brutalities of our boasted civilization. Later, he masters the literature of vivisection and is appalled by hideous pictures of experiments performed on living animals. At the close of a month's study his mind is filled with a very proper sympathy for the sufferings of the lower creation. Now, without arguing the question on one side or the other, let us state a few facts which will show how it is possible for the feeling of sympathy to override the judgment. Pain inflicted by one animal on another, or by a human being, is not so agonizing as if experienced by man himself; the power to suffer varies in creatures of flesh and blood according to the number and strength of nerve ganglia.* Animals do not look before and after as men do, and whilst we decry all kinds of brutal

*—"The essence of all suffering is mental. It is not the sensation, pure and simple, but such sensation accompanied by intellectual consciousness and reflection which is so fearfully distressing. This distrust the brute creation is spared; they suffer but never reflect on their sufferings, and therefore cannot be truly said to know them."—L. A. Lambert, *Tactics of Infidels*, p. 124. See also Ruskin on the *Pathetic Fallacy in Modern Painters*, vol. iiii.

treatment, we are always confronted with that suffering for which Nature is responsible. Now those who know most about the method of Nature, say that "On the whole the popular idea of the struggle for existence entailing misery and pain in the animal world, is the very reverse of truth. What it really brings about is the maximum of life, and of the enjoyment of life, with the minimum of suffering and pain. . . . It is difficult to imagine a system by which a greater balance of happiness could have been secured."* Professor Drummond also bears a like testimony.† Now these facts are bound to direct the disposal of our sympathy. We shall not be so ready to curse the Creator for making such a world full of cruelties ; our feelings, on witnessing wilful brutalities, are somewhat softened by remembering that animal suffering is not the same as human suffering ; and the anti-vivisectionist may comfort himself a little with the solace of the same thought. Without discussing these questions, our aim will have been

An important difference.

Suffering in the natural world.

Wallace and Drummond on the struggle for existence.

Modified conclusions.

* Wallace, *Darwinism*, p. 40.

† *Ascent of Man*, p. 260.

accomplished if we have shown how easily an emotion in excess may warp us from right conclusions.

To take an example of another kind we turn to Mrs. Besant's *Autobiography*. When her baby was ill with the whooping-cough, Mrs. Besant's its sufferings aroused grave doubts in ^{criticism.} her mind respecting the goodness of the God she worshipped. "For some months a stubborn antagonism to the providence who ordains the sufferings of life had been steadily increasing in me, and this sullen challenge, 'Is God good?' found voice in my heart during those silent nights and days. . . . As I watched my baby in its agony and felt so hopeless to relieve, more than once the indignant cry broke from my lips: 'How canst Thou torture a baby so?' . . . All my mother-heart rose up in rebellion against this Person in whom I believed and whose individual finger I saw in my baby's agony."

This is a clear case of blinding emotionalism. That we should say anything against the tender solicitude of a mother's heart let us ^{its defects.} hasten to utter a fervent 'God forbid.' But is it a doctrine of Theism that God smites babies

with disease and enjoys the fun of tormenting them? Was it the first time Mrs. Besant had seen a baby suffer? and if not, why did doubt fail to assert itself before? The fact is Mrs. Besant has so much sympathy, that it is more than a match for her judgment, and she failed to see those modifications of a problem which change its issues entirely. Probably, however, she has forsaken her logic, although she has never restored the lost clause to her creed. We are reminded of what has been said of a noted **George Sand**. French writer, "As a thinker, George Sand never attained to maturity . . . she never wrote a truer word, than when she confessed that she judged everything by sympathy." *

(d) *Admiration*.—By this term we mean an emotion excited by something beautiful or excellent; and apt, like many more **Dangers of uncontrolled admiration.** emotions, to lead the mind astray. There is a fine field for admiration in the study of insect intelligence, an intelligence in some cases so wonderful that verdicts as to its nature are given more by feeling-prompted thoughts of amazement than by reasonably drawn con-

* Niechs, *Life of Chopin*, p. 339

clusions based upon sure data. Here is an example taken from the pages of a scientific journal. "Mr. Tegetmeier described an example of intelligence in the honey bee which has hitherto escaped observation. . . . On placing a frame hive in which old combs had been artificially attached, near a stock that was expected to throw off a swarm, it was seen that the bees visited it, and that numerous scales of newly secreted wax were found on the floor board. This led to an attentive examination of the combs, and it was discovered that new white wax had been secreted in the empty hive, and that this had been employed in repairing the combs, particularly in cementing them more securely to the top of the hive, their attachment being strengthened at that point where the greatest weight would have to be sustained when the combs should be filled with young brood, honey, and pollen. It appears an extraordinary instance of foresight and intelligence, as distinct from unreasoning instinct, that the bees, when proposing to send out a swarm to tenant a new residence, should not only clean

Mr. Tegetmeier on bees

Foresight and intelligence v. unreasoning instinct.

the hive, but send a relay of worker bees to cluster and secrete wax, in order to strengthen the combs at that part where the greatest weight will have to be supported.*

Notice the language used by this writer: "extraordinary foresight and intelligence as distinct from unreasoning instinct;" "proposing" to send out a relay, and so forth. Does he mean to say that these insects entered into minute calculations respecting weights? and foresaw a greater influence of gravity at one point than another? and that they had a council and "proposed" to do this and not to do that? It may be poetry, but it is bad psychology. Insects have no foresight at all, and the cleverest of them are surprisingly poor at adapting means to ends when placed under new conditions. Mr. Tegetmeier's admiration deluded him into a confusion of instinct with intelligence.

Dr. Bascom states the case well, when he says, "We are also to remember that from a scientific point of view the social economy of the hive and the ant-hill takes a very misleading garniture from the language

* *Intellectual Observer*, vol. v. p. 462.

which the enthusiastic observer applies to them. He talks of the Queen Bee, yet the Queen Bee is not the ruler but the fecund mother of the hive, that is all. Her close confinement, her daily food, her careful attendance are not the perquisites of royalty, but have reference to the propagation of species."* We read of ants having a king and a queen, royal chambers and capacious apartments; all this is poetry.

The words *slaves* and *masters* are a mere gloss of language. In the dairy keeping of the ants there is much the same extravagance of phrase. The tendency to be fought against is one which attempts to read into the activities of the lower creation all the subtle and delicate intellections of the human kind. Of course, this is only one sphere out of many in which admiration for creatures or

* *Comparative Psychology*, p. 164. The same criticism might be applied to some forms of animal affection. "Hamerton gives an instance in which the skin of her calf, very carelessly stuffed, was laid before the cow to draw her attention whilst being milked. She proceeded to lick it with 'most delightful tenderness'; yet a little later, the fastenings giving way, she ate up the fodder it contained with entire composure. Natural affection flowed into natural appetite without a ripple of intelligence."

things may divert us from right conclusions.

And it will be evident from a survey of the whole chapter that he who would think clearly must have a close acquaintance with the influences of feeling.

Feeling must be studied.

Plan of Study.

(1) Perhaps the best thing to do in the first place is to obtain an adequate knowledge of emotions and feelings as they are described by the psychologist. For this purpose read the following :

Bain, *Emotions and the Will* (Longmans).

Sully, *The Human Mind* (Longmans).

James, *Principles of Psychology* (Macmillan).

These are three of the best books on the subject of emotion ; but if treatises are required showing special influences on the course of thought we should recommend—

Taylor, *Fanaticism*.

Vaughan, *Corruptions of Christianity*.

Taylor, *Natural History of Enthusiasm* (Bell).

Emotion considered philosophically.

(2) In the first part of this chapter we made a plea for the use of emotion or feeling in the selection of ideas and beliefs, and as a guide to right conclusions.

We further stated that this was equivalent to asking that in deciding questions in Philosophy, Theology, Religion, and Ethics, some respect should be paid to the demands of the "heart." But why? it will be asked. Is not feeling proverbially delusive? Are not emotional people more often unintelligent than not? and may not the "heart" give credence to a thousand forms of error? These questions are not ill-placed, but they ^{Its claim to be heard.} scarcely touch the foundation point. It is a common experience to hear a man say: "I *feel* this to be true;" and we should defend such a statement as intelligent because "feeling is subjective experience *par excellence*;" at least that would be the first item in the defence. There are many truths about which it is superfluous to reason; we are conscious that they *are*, just as we are conscious of consciousness itself. Again—reason, *per se*, does not ^{Reason is not intuition.} in the full exercise of its powers give play to every mental function; it is largely an employment of the logical elements of mind; at any rate such is the case as the term is popularly used. And one has only to read some of Berkeley's dialogues to find

that Herbert Spencer was right when he said that reason was capable of exercising a sort of tyranny over other mental functions. Therefore, to come back to the familiar terms so often on our lips, we think it right to say that any man who follows his "head" to the neglect of his "heart," is no more likely to find the truth than the man who follows his "heart" and neglects his "head."

Herbert Spencer on Berkeley.

But what, more exactly, is meant by consulting one's heart? The reply is more readily conceived than it is expressed. Now therein lies a suggestive fact which ought not to escape notice. The heart can never give an account of itself in logical form; it would not be the heart if it could. The "reasons" of the heart are the dictates of our higher instincts, or in other words the goings forth of our intuitions. The heart is not a thinker; it is the subjective nature's perpetual motion. Hence to consult one's heart is to lay aside syllogisms, and reasons for and against, and listen to the promptings of the soul within. We use the word "soul" advisedly, for there is a sense

Consulting the heart, defined.

Dispenses with syllogisms.

in which the following of the heart means an exploiting of baser tendencies; moreover, soul is an accepted term where intuitions are concerned. The questions of Philosophy and Religion are in many respects identical, and we therefore recommend the reader's attention to the following problems which are to be dealt with first from the standpoint of reason, afterward from the standpoint of intuition.

Some problems for solution.

(a) God. (1) What is meant by God? Can there be an Infinite Personality? Need of anthropo-morphism. A First Cause necessary to every thinker. How far that First Cause realises itself. (2) The perception of God. The Infinite: as a philosophical conception and a mystic idea. The indefiniteness of every thought about the Unknown and Eternal. Instinctive belief. The testimony of the heart to the sense of fitness. Faith as a working hypothesis.*

(b) In the same way treat these :

*"The philosophic vindication of Faith is, that proof of the impossibility of comprehending all things in a reasoned system of knowledge." See Fraser's *Berkeley in Philosophical Classics*, Blackwood, p. 213 ff.

- i. The eternity of the soul.
- ii. The possibility of a future life.
- iii. Can there be communion with God ?
- iv. The difference between right and wrong.
- v. The nature and genesis of conscience.

(2) Character-studies on intellectual lines will serve a useful end. The emotions of early years have considerable power in directing the appreciations of the mind. Let us suppose Charlotte Brontë is our character-study. Where did she get her intensity and power ? Mrs. Gaskell, in speaking of Charlotte and her sisters, says : "They knew no other children. They knew no other modes of thought than what were suggested to them by the fragments of clerical conversation which they overheard in the parlour, or the subjects of village and local interests which they heard discussed in the kitchen. Thus children leading a secluded life are often thoughtful and dreamy ; the impressions made upon them by the world without—the unusual sights of earth and sky—the accidental meetings with strange faces and figures are sometimes

imagined by them into things so deeply significant as to be almost supernatural."*

Here, then, is the origin of one element of intensity—an element which will account for many traits in her character, and which for years dominated her mental outlook. In fact the influence of emotion upon thought can nowhere be seen to such advantage as in biography and autobiography. It is not unfitting, therefore, to urge the reader to adopt such a course of reading, by taking some representative writer or thinker of the emotional type, and from biographic details and general criticisms gather the varying quantity of truth and error to be put down to the influence of feeling.

The *Philosophical Classics* (Blackwood) is a fine series of monographs, and especially adapted for the purpose referred to. The *English and Foreign Classics*, published by the same firm, and containing volumes on Dante, Pascal, &c., is also a very useful library. The Mystics, of course, must be found a place in this connection. The handiest book is still Vaughan's *Hours with the Mystics*. Along

* *Life of Charlotte Brontë*, p. 63

with the reading of this book it would not be amiss to study representatives of an opposite school: Thomas Hobbes, David Hume, Edward Gibbon, John Stuart Mill, Jean Jacques Rousseau, and Auguste Comte.

(3) The following names representing all shades of teaching are well worthy of study from the standpoint of this chapter :

Buddha, St. Paul, Plotinus, St. Augustine, Mohammed, Francis Bacon, Shelley, Byron, Tennyson, Browning, Emerson, and Maeterlinck among modern writers.

CHAPTER VI

GENERAL RULES FOR CLEAR THINKING

*"Each mind has its own method. A
true man never acquires after college rules."*

EMERSON.

WE propose in this chapter briefly to expound and enforce a few of those rules, without a conformity to which we cannot hope to think clearly and vigorously. They are not set down in the order of importance, or with any regard to their relationship; they are too general in nature to need a classification.

(1) *Learn the nature and value of method.*—

By method we mean the manner of treating a subject, the way in which we deal with it intellectually. The common way is to think haphazardly, without knowing there is a place where one's thoughts should begin, and a certain manner and direction in

The nature
and value of
method.

which they should travel. Of course, we are supposing you have a subject before you, and are about to "think it over."

Perhaps it is an essay on "Woman: her place and power." We will take that as an example. The man without method flies from one thought to another, regardless of their relationship or proper sequence. He will think of the last woman he heard of who "henpecked" her husband; then he passes to the women of the New Testament, and almost immediately is busy once more in a later century of crinolines; finishing a comet-like course of thought by criticising the influence of women on knowledge as expounded by H. T. Buckle. This man without method is a choppy thinker. He thinks about the subject, it is true, but he lacks the sense of order and relationship. How should we apply method to the subject of the essay referred to? By following the stated order—*i.e.*, the *place* and *power* of woman. Take the first part: *woman's place*. A possible division, among others, is her place in

- | | |
|---------------|-------------------|
| (a) Nature. | (c) Christianity. |
| (b) Paganism. | (d) Modern Life. |

It will be observed that the above is historical. Such a method is necessary if we are to see a thing in its true perspective. The historical method.

Of course, there are a thousand methods, and very often the subject will dictate one peculiar to itself. Method has been defined as the following of one thing Method defined. *through* another; order, as the following of one thing *after* another.

Suggestions.

(a) Read Jevons' *Lessons in Logic*, chap. xiii., "Pascal and Descartes on Method"; Locke's *Conduct of the Understanding*, "Principles." How would you deal with these subjects? "Ought novels to have a purpose?" "Was Byron insane?"

(b) Take a book like Rowton's *The Debater*, and study the debates with the help there given. "Which is the more happy, a barbarous or a civilized nation?" "Has the invention of gunpowder been beneficial to mankind?" These are specimens of the discussions—hackneyed, perhaps, but touching fundamental questions—and they provide a fine field for the exercise of native insight,

the weighing of evidence, and the application of different methods. Find the centre of a subject, or, as some would say, changing the figure, go to the bottom of it.

A hackneyed question is often fundamental.

See Locke, *Conduct*, &c., p. 95.

(2) *Acquire the art of concentration.*—The foundation of all mental discipline lies in the power of governing the operations of our minds. If we are at the mercy of “thought succession,” it will fare badly with our attempts to think clearly. Let us suppose that two men are about to examine the relation of genius to insanity. Many great names pass before their minds, but when Shakespeare’s presents itself they are struck by the absence of every morbid element in his character and works. Here is a mighty exception: What will Lombroso make of this? Having duly noted the fact, one man returns to study Cæsar, Leopardi, and Swift. But the other man had no sooner thought of Shakespeare than his mind went off to the last meeting of the dramatic club, and from that to a boating excursion by the members; from the boating excursion

The art of concentration.

he quickly travels on in thought to the residence of a new friend he made that day, in whose grounds there is an observatory, and that leads him to think of stars and distant worlds. Instead of puzzling out a question in psychology, this man has wandered into infinite space. Scores of people complain of mind-wandering. What is the cure?

First, to know what concentration is. Is it possible to keep an unflagging attention on one thing, and one alone?

Professor William James says that concentration is not a study of one thing or idea; that we start with one thought and immediately travel on to the nearest thought related to it, and concentration is the power of swiftly returning to the original thought. "There is

no such thing as voluntary attention sustained for more than a few seconds at a time. What is called sustained voluntary attention is a repetition of successive efforts which brings back the topic to the mind."* Thus it appears that mind-wandering is not so

* *Principles of Psychology*, vol. I. p. 420

much a tendency to think of different things from the one chosen for reflection; it is inability to return from a related subject to the original theme with which thought had its commencement. And this power of concen-

Not neces-
sarily great
mental
power.

tration should not be made synonymous with intellectual acumen. Newton, Helvetius, and others have attributed their success to concentration, and it is no doubt true that "the discoverers of new knowledge have always been distinguished by an unusual degree of pertinacity in brooding over a subject," but "no amount of attention simply will constitute intellectual eminence."^{*}

Control over
faculties.

No, concentration is just the power to use the faculties we have when we want to do so. They may be naturally strong or otherwise, but if we have no command over them, then, apart from the humiliation of being slaves to mental whim and fancy, we have to suffer the degradation of impotence. How can this be avoided?

Suggestions.

(a) Bacon said, "If a man's wit be wandering, let him study mathematics." Even Sir

* Sully, *Handbook of Psychology*, p. 97.

William Hamilton said, "Their study, if pursued in moderation and efficiently counteracted, may be beneficial in the correction of a certain vice and in the formation of its corresponding virtue. The vice is the habit of mental distraction; the virtue is the habit of continuous attention."* Euclid is perhaps the best branch to take up. See Locke's *Conduct*, &c., p. 25.

Sir William
Hamilton on
Mathematics.

(b) Form the habit of writing your thoughts. Pen in hand you will be able to keep closer to a subject than by merely thinking it over in your easy chair. The mechanical element in writing assists the power of concentration.

The help of
the pen.

(c) Chess is undoubtedly of great service, and it has the advantage of possessing intrinsic attraction.

Chess as
an aid.

(3) *Study carefully the laws of evidence.*— Scarcely a day passes without our being asked to produce proofs of something we have said, and it is therefore highly desirable that we should know what a proof is, and what is the nature of the evidence on which it rests. The word "evidence" comes from *e* and

The laws of
evidence.

* *Discussions in Philosophy and Literature*, p. 225.

videre—to see ; literally, the seeing of anything.

It now means any facts apprehended by the mind and made the grounds of knowledge and belief. We may divide evidence into three kinds: (a) General, (b) Legal, and (c) His-
torical. It is usual to divide the first into

Demonstrative evidence. two classes—*demonstrative* and *probable*.

The former has a large place in logic ; to draw from a necessary and universal truth consequences which necessarily follow is demonstration. The reasoning in mathematics is of this type. All the propositions of Euclid are simply deductions from the definitions ; axioms being assumed and postulates granted. There is then no difficulty with evidence so telling that every man of sane mind must concur therein ; the difficulty arises in the sphere of the probable. By probable

Probable evidence. evidence is meant such facts as incline the mind to belief, but leave some room for doubt ; a state of mind varying in degree from the faintest presumption to almost perfect certainty. As may be imagined, probable evidence requires careful handling—a keen sense of justice, and an entire absence of all prejudice.

Legal evidence is likewise subdivided as follows: (a) oral and (b) documentary; (c) direct and (d) circumstantial. The first two Legal evidence. define themselves; and the others do not need much exposition. Direct evidence is what the witness saw—as when he witnessed the shooting of a man's wife; circumstantial evidence is the testimony given by witnesses to what they know regarding facts more or less remotely connected with the act which resulted in the woman's death.

Historical evidence has not been treated in the same manner as those branches we have just dealt with. It has principles of guidance, and some of them have been Historical evidence according to Freeman. expounded by Professor Freeman:

“One of the highest forms of testimony is when two or three witnesses tell the same story in practically one way, but one part of it in exactly the same way.” Again: “Short of direct disproof, there is no argument so strong against any story as the argument that it is too obvious.” Professor Professor Greenleaf. Greenleaf's *Testimony of the Four*

✓ *Evangelists* is a fine embodiment of studies in historical evidence. A working knowledge

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of this subject is one of the thinker's indispensables.

Suggestions.

(a) Read :

Butler, *Analogy—Introduction.*

Stephen, *Digest of the Law of Evidence*
(Macmillan)

Encylo. Brit., art. *Evidence.*

Freeman, *Methods of Historical Study*
(Macmillan).

Whateley, *Historic Doubts relative to Napoleon.*

(b) Examine the evidence for

(a) Origin of species.

(b) Other worlds than ours.

(c) Resurrection of Christ.

(d) That life comes from death.

(e) Socialism.

(c) Read a good book of Law Cases.

(4) *The mind should be tutored in the art of drawing distinctions.*—John Locke defines a

Drawing dis- distinction as “the perception of a
tinctions. difference that nature has placed in things.” He further adds that “to observe every the least difference that is in things, argues a quick and clear sight, and this keeps the understanding steady and right in its way to knowledge,” closing his remarks with the

following: "An aptness to jumble things together wherein can be found any likeness is a fault in the understanding Locke speaks which will not fail to mislead it, and by plainly. thus lumping of things hinder the mind from distinct and accurate conceptions."*

How often have we heard an argument from analogy successfully refuted because the reasoner had failed to observe disparities which made the analogy impossible! And how painful is that "lumping of things" to which Locke refers! Now one of the most important matters in all thought is to be able to distinguish things *essential* from things *secondary*. Wherever this is overlooked, the central question is invariably lost in the discussion of side issues. Some one asks what is the difference between an original and a conventional mind? Should any one introduce the matter of sex, few would fail to see that that was a point of secondary importance; the real question is one of mind apart from sex. From this simple illustration an idea can be found of the way in which political, social, and religious doctrines

* *Conduct, &c.*, p. 68.

are vexed by being played off into side issues.

“Ought persons to be excluded from civil offices on account of their religious opinions?”

An illustration. The answer given by some is: “No, except Infidels and Roman Catholics.”

Now this reply is wrong, for the *kind* of religious opinions is a secondary matter; the essential point—taking the question as stated—is religious opinions of any type: shall these debar a man from serving the interests of his country?

The art of drawing distinctions is very unpopular in certain quarters where it is known as scholastic subtlety. We hold no brief for the defence of the “schoolmen,” but it is only fair to say that they are too cheaply summed up in the hackneyed phrase, which represents them spending their time in discussing how many angels could stand on the point of a needle.* They were giants in intellect, and although one may smile at their methods and metaphysical minutiae, it cannot be denied that as an intellectual gym-

* For a defence of the Schoolmen see Townsend's *Schoolmen of the Middle Ages*.

nastic their works can scarcely be excelled. Bacon says, if a man's wit be "not apt Bacon's ad- to distinguish or find differences, let him vice. study the schoolmen, for they are *Cymini Sectores*."

Suggestions.

(a) Read Macaulay's *Essays*, Newman's *Grammar of Assent*, and Lessing's *Laocoön*.

(b) There is no one book in English which contains the essence of Scholasticism. Townsend's is good. For a specimen of the metaphysical method, see Lambert's *Tactics of Infidels*. The arguments may not always command assent, but they are invariably acute.

(c) It may be thought absurd to prescribe a Dictionary, but it affords good discipline to study the articles in Thomson's *Dictionary of Philosophy*; Fleming's *Vocabulary of Philosophy*, and Taylor's *Elements of Thought*.

(5) *Use and do not abuse the principle of authority.*—A great many of our opinions, convictions, and beliefs are not the result Authority. of our own personal investigation; we receive them on the word of others. This is what is meant by the principle of authority. Some of

us are not mathematicians clever enough to measure the distance of the Sun, but we have no hesitation in accepting the pronouncement of the Astronomer Royal on such a matter. In the same way the non-Sanskrit scholar reads the Bhagavat-Gita in a translation on the authority of the translator; we believe the sea is five miles deep off the coast of Japan, although we have never measured it; and that Mount Everest is the highest of the Himalaya range, although we have never set foot upon Indian soil. And we are none the less intelligent, because every day we are accepting statements of fact on the authority of others. The use of authority is the use of reason itself. What is to be avoided is the danger of extremes—either a senseless credence or an untrained scepticism. There is a story told of a certain monk named Scheiner, who contested with Galileo the honour of having been the first to observe spots on the Sun. Writing to the Superior of his Order, Scheiner explained the nature of his discovery, but was astonished to have the following reply: “I have searched through Aristotle, and can

Believing on
the testimony
of others.

Scheiner and
the sun spots.

find nothing of the kind mentioned ; be assured therefore, it is a deception of your senses or your glasses." *

Here we have an instance of the possibility of paying an unreasonable deference to a great name. Galileo in Italy ; Descartes in Holland ; and Bacon in England, each felt the bondage of Aristotelianism, perhaps not always in the same way, but they were made to feel it all the same. Bacon says : "Antiquity deserves that man should stand awhile upon it to view around which is the best way, but when the discovery is well made, they should stand no longer, but proceed with cheerfulness. And to speak the truth, antiquity, as we call it, is the young state of the world ; for those times are ancient when the world is ancient, and not those we vulgarly account ancient by computing backwards ; so that the present time is the real antiquity." † So much for an opinion on the authority of the past. On the general subject of this section we cannot do better than listen

* Baden Powell, *History of Natural Philosophy*, p. 171.

† E. J. Dewey, *Physical and Metaphysical Works of Lord Bacon*, p. 49.

to Sir G. C. Lewis who says, "General soundness of opinions will be promoted by the presence of a free exercise of private judgment in cases where the means of arriving at a correct conclusion exist. But in a large number of subjects, and in multitudes of practical questions, an independent judgment is impossible or inexpedient, and a great part of practical wisdom consists in the judicial selection of authorities, and in a steady reliance upon their opinion. 'That man,' says Hesiod, 'is the most excellent who can always think for himself. He, too, is a good man who will take some advice from others. But he who can neither think for himself, nor will listen to the sound advice of others, is a worthless man.' " *

Hesiod on
thinking for
one's self.

This sums up the position very well. If a man has not the ability to form an independent judgment on any matter he deems to be important, let him follow those guides who can show the greatest reason for their position. In this connection religion has always assumed a prominent place. Is it a subject we can deal with ourselves? or is it to

Authority in
religion.

* *Influence of Authority in Matters of Opinion*, p. 79.

be dealt with for us by a clerical expert? Bewildered by the multitude of contending sects and parties, one man cries: "Some authority must be found to decide what is truth." He fails to see that there is almost as much intellectual responsibility in choosing his authority as there is in deciding what is truth. But this point apart, since religion has mostly to do with conscience and conduct, and since these are parts of every human character, it is quite possible for each man to be his own authority. In other matters we may have to contend with the general rule which exhorts us to choose that authority (whether a book or a man) which secures the greatest intellectual majority.

Responsibility in choosing an authority.

Suggestions.

(a) Read:

G. C. Lewis, *Influence of Authority*.

A. J. Balfour, *Foundations of Belief*.

"Authority and Reason" (Longmans).

A. Helps, *Friends in Council*. "On Conformity" (Smith, Elder).

J. Martineau, *Authority in Religion* (Longmans).

(b) Take Newman's *Apologia* and trace the

influence of authority in shaping the course of his intellectual history. Write an essay on the subject, comparing the Cardinal's position with that of his brother Francis in *Phases of Faith*, and both with Mill's *Autobiography*.

The two
Newmans.

(c) Study the lives of Spinoza, Descartes, Kant, Darwin, and Huxley.

These names represent interesting stages of the place which authority has found in human philosophy.

(6) *Define your terms and beware of the treachery of words.*—“Must we be always seeking after the meaning of words?” is a question asked in Tooke's *Diversions of Purley*, and the reply given is: “Of important words we must, if we wish to avoid important error.” Yes; but what is an important word? The answer does not come quite readily. Let us take two: *humanitarian* and *by*. There does not seem to be very much in the preposition *by*, but hear what Herbert Spencer says. “The word *by* is a highly abstract word—so abstract that we are apt to overlook the relation having at least two terms invariably implied in it. Its intrinsic connotations are

Two exam-
ples.

lost in the remote past, but its extrinsic connotations, abundantly obvious, will suffice us. Originally the word means 'near' or 'close' as 'to sit by,' 'to pass by.' ^{Spencer on} "by." Proximity being the root notion, there come the secondary notions of proximity with agency, either subjective or objective, as in 'hit by a stone,' 'broken by me.'"^{*} A word, then, should be looked at from the standpoints of etymology and history, but most of all from its power to alter the meaning of a sentence and change the line of thought. Theology has had its trials over the little preposition which Mr. Spencer expounds at great length.

Mr. R. G. White thus explains the other word. "A Humanitarian is one who denies the Godhead of Christ and insists upon His human nature. . . . Humanitarianism used in the sense of widely benevolent and philanthropic is mere cant, the result of an effort by certain people to elevate and appropriate to themselves a common feeling by giving it a grand and peculiar name."[†] It may be urged that these references belong

R. G. White
defines a hu-
manitarian.

^{*} *Principles of Psychology*, vol. II. p. 322.

[†] *Words and their Uses*, c. vi.

to rhetoric rather than the art of thinking. That is not so. A man thinks before he speaks or writes; at least he ought to do so. And the meaning he gives to words in speech or prose is the meaning they have in his thought. How necessary, therefore, is word-
Bacon on words. study to the student, for as Bacon says: "words still manifestly force the understanding, throw everything into confusion, and lead mankind into vain and innumerable controversies and fallacies."*

For instance take *criticism* and *inspiration*. We have heard arguments numberless on these two subjects, and confused from the
Criticism and inspiration. beginning to the end by the lack of a few preparatory definitions. And there are some words demanding more than ordinary attention because they are the key words to great intellectual positions. For these the reader should always be on the look out. Meanwhile the following rules are well
Rules for guidance. worth observing. Define your terms but (1) do not undertake to define all words, because this would often be useless and often impossible. (2) Do not change received defini-

* *Novum Organum*, Aph. 43.

tions when we have nothing to complain of in them. (3) In defining a word we ought as far as possible to accommodate ourselves to custom in not giving to words a sense altogether removed from that which they have, and which might be even contrary to their etymology!*

Suggestions.

(a) The possession of Chambers' *Etymological Dictionary*, Lloyd's *Encyclopædic Dictionary*, or some such work is absolutely essential. Read and use

Trench, *On Words* (Kegan Paul).

White, *Words and Their Uses* (Low).

Davidson, *Leading and Important English Words* (Longmans).

Ryland, *Locke on Words*.

Roget, *Thesaurus* (Longmans).

(b) The study of terminology of all kinds is indispensable. Of course technical terms are abused just as all others are,† but speaking generally, terminology is the salvation of clear thinking; for to have a science

* *Port Royal Logic*, p. 84.

† G. C. Lewis, *Method of Observing and Reasoning in Politics*, p. 94.

of terms is to have that which connects language and thought more closely together, and therefore effects more exactness and certainty.*

The popular mind uses *opposite* and *contradictory* interchangeably. That use we know is confusion. We should advise the drawing up of a list of such words. For example :

Subjective	Objective
Infinite	Finite
Abstract	Concrete
Theoretical	Practical
Theological	Religious
Necessary	Contingent

And not only words that usually go in pairs, but important words in Philosophy such as Knowledge, Sensation, and Perception.

(7) *Lastly, remember the close connection between good health and clear thinking.*—One cannot do better than echo Sydney Health and thought. Smith who said, “I am convinced that digestion is the great secret of life, and that character, talents, virtues and qualities, are powerfully affected by beef, mutton, piecrust

* Jevons' Logic, *Philosophical Language*.

and rich soups." The influence of health upon thought cannot be easily over-estimated. Livery and bilious thinking is no figment of the imagination; it is a physiological ^{The liver.} fact. The slightest bodily affection will sometimes give a turn to one's reflections. "It has been said, and not without truth, that we think differently when we are lying down and when we are standing up; a constrained or cramped position of the body has a depressing effect upon the spirits . . . rage is Lotze's idea quieted by muscular repose, and it is a dictate of prudence to get an angry man to sit down in an easy chair."* But it is not with psychophysiology of this kind that we are concerned here; it is with health and thought as ^{Swift, De} seen in the lives of Swift, De Quincey, ^{Quincey, &c.} Coleridge, Carlyle and many others. The biographies of these men are now well known, and it is evident that their physical habits and conditions greatly affected their mental outlook. And yet we are not able to say how, except in a very general sense. At least this is what most of us feel, but a new school of mental scientists is arising in our midst who claim that

* Lotze, *Microcosmus*, vol. II. p. 28.

erroneous ideas may be traced to special organic irregularities. Sir J. Crichton Browne says that those persons who believe in Reincarnation suffer from a species of abnormal brain action.* Max Nordau, viewing the decadent literature of the age, puts all the blame upon bad health, degeneracy of nerve and brain.† We may not agree with these opinions but we are bound to agree with the general statement that to think clearly it is most important to live healthily.

**Error and
brain irregu-
larities.**

Suggestions.

Read and observe :

Yorke-Davies, *Health in the Active and Sedentary* (Low).

H. Thompson, *Diet in Relation to Age and Activity* (Warne).

Tissot, *Health of Men of Letters* (1772).

Burton, *Anatomy of Melancholy* (Chatto).

Smiles, *Life and Labour* (Murray).

“The literary ailment.”

* *Dreamy Mental States.* Cavendish Lecture.

† *Degeneration.*

CHAPTER VII

CONSTRUCTIVE THINKING

"What a young man should aim at is to acquire a habit of binding things together according to their bonds of natural affinity."

JOHN STUART BLACKIE.

By constructive thinking we mean a weaving together of the results of experience (in its all-embracing sense) into a complete and systematic whole; or it might be defined as that process of thought which, when we have learned what is fact, we proceed to inquire into reasons and causes, in order that our knowledge may embrace things in their **Entire know** entirety. We are all constructive **ledge.** thinkers more or less, perhaps less than more, inasmuch as every day we are taking the threads of experience and weaving them into theories. Thoughts gathered from books and in the course of conversation; convictions

which are the harvest of ripened observations and, it may be, bitter disappointments; impressions coming to us in Wordsworthian fashion, we know not how or whence;* ideas gained as the result of definite creative effort—all these form the material which the constructive mind uses to frame its philosophy. Be that philosophy profound or shallow, full of truth or full of error, there can be no doubt that every mind has its constructive moods; times when it tries to reconcile the discrepancies of life, to discover the secrets of nature, or find out some means of accomplishing a desirable end. It is a mood which should be encouraged until it becomes habitual.

The purpose of this chapter is to create a desire and provide an effective medium for that kind of thinking which discovers, reconciles, and systematizes. The aim is high, but we are not blind to the difficulties involved. We know that every constructive effort has to face the inevitable exception;

* Think you, 'mid all this mighty sum
Of things for ever speaking,
That nothing of itself will come,
But we must still be seeking?

that a small error can upset the best system ever conceived; and that the elements which resist analysis will always be with us. Still there are boundless possibilities open to the earnest mind—the story of the world's past is in constant need of a fresh setting, and in philosophy, art, science, literature, and poetry, there is ample room for originality.

These remarks, however, refer to the general question—they scarcely touch those particular points on which the reader is perhaps anxious to hear something. Constructive thinking, though in a sense self-explanatory needs individualizing in an example. Let us take one of the simplest kind. A traveller once stood on a bridge over a railway station, and a train drew up at the platform. He noticed at once that the roofs of the carriage were dripping wet, a fact which occasioned much surprise, for the weather had been unbroken sunshine for weeks past, and at that moment the sky was cloudless. Here, then, his constructive thinking began. What was the cause of this strange phenomenon? The first hypothesis was that of a shower of rain; but that was

dismissed as being in the highest degree improbable. At this point he noticed that the *sides* of the carriages were almost dry, indicating that the water on the roofs had not come in the manner of a shower of rain.

Steps to a conclusion.

The traveller puzzled his mind further until it suddenly struck him that most likely the wet condition of the train was due to water droppings from the arch of a tunnel; the idea gained strength as he remembered a journey through a North of England tunnel; and on inquiring at the station he found his surmise was quite correct.

This may be taken as an elementary sample of those cases which, thousands of times, the events of life present to us unasked. In some instances the matter is of no consequence, as in that just referred to; but in others the issues are full of moment. It may not be true that Newton began to think about gravitation on seeing the fall of an apple, but the story has a certain didactic worth. The fall of the apple was the fact observed—the starting-point of constructive thought. From that point to the finished statement of this great law there is almost an infinite number of

Newton and gravitation.

suggested explanations—attempts at solution—considerations of the possible and probable—and at last a discovery of the truth.

We wish now to throw out a few suggestions as to mental procedure in matters of this kind.

(1) *Be perfectly sure of your facts.*—Nothing can atone for slipshod work in this **Facts** department. If you are engaged in forming a new theory of literary criticism or a working hypothesis for the explanation of ghosts,* be certain that you are dealing with truths about which there is no doubt. Every worker in every field of research needs this constant reminder. The scientist and the theologian, the political economist and the social reformer, the historian and the inventor, all these are none the worse for an occasional warning on this subject. Of course *facts* may be divided into many classes, and the acutest observer in the realm of nature, or the finest insight in the sphere of history may

A needful
reminder to
all.

* *Vide* Podmore's *Apparitions and Thought Transference*. The last chapter is a good example of the careful handling of facts and theory. See also "Possibilities of mal-observation" in *Proceedings S. P. R.* vol. iv.

be deceived. It is culpable negligence alone that is unpardonable. If, however, this one question be asked and faithfully answered: what are the *facts*? it will rid us of much hasty generalization and all its fatal consequences.

(2) *Acquire the art of classification.*—It is scarcely possible to exaggerate the importance of this section, so much depends on the way in which we divide things into classes. The term is scientific, but “to classify is no secret of science, no process reserved for the select few who are initiated into a magic art it is as universal and necessary as the act of thinking. The classifications of common life may be as rational and useful for the ends of common life as are those of science for its special objects.”* Thus we divide our fellow men into classes. One class is according to nationality, another refers to culture, and a third to wealth. Chiefly, however, we classify men according to character. Now since such a process when it is finished may be acted upon, thus influencing our conduct, and because a classification helps or hinders

* Porter, *The Human Intellect*, p. 399.

the truth of our conclusions, it is therefore most necessary that we should exercise the greatest care in this grouping of our fellows. Suppose a thinker is about to construct a theory of human evil, its origin, its extent, and its destiny. Such a theory demands, first of all, a knowledge of men and their doings; in the second place it demands a classification of men: in other words, it desiderates definitions of evil and of good, and what men belong to each class. If the facts as he knows them lead him to predicate goodness of the majority, it will affect the theory in the direction of hopefulness; if, on the other hand, he says that Church communicants are alone good, the rest of mankind being bad, the theory of evil will be coloured accordingly; for the greater number of people do not show the accepted signs of goodness. Logicians have laid down the following rules for guidance:—

- (a) Be not deceived by appearances.
- (b) Aim at utility in every classification you make.
- (c) Let it contain the greatest possible number of assertions.

(3) *Learn the province of analogical reasoning.*

—When a little boy went to fish for the first time, and, after throwing in the line, called **Analogy**. “Fish! Fish!” he was reasoning by analogy, inasmuch as when he wanted his rabbits all he said was, “Bunny! Bunny!” A laughable mistake to his seniors doubtless, but those seniors have been guilty of errors equally bad in higher spheres than the art of angling. Reasoning from analogy is one of those mental excursions the dangers of which **its dangers**. are always dogging the steps of the man who is endeavouring to understand the unknown from the known. Its method is as follows :—Because two or more things resemble each other in several particulars, we conclude that they may have more points of resemblance than we have yet discovered. Thus analogical **Fowler's** reasoning is based on our ignorance, it **view.** is the result of a calculation of chances which an accession of knowledge may invalidate by either augmenting, diminishing or annihilating it.* Consequently it is a method which needs great caution ; experts are agreed that there is no way in which we can really

* Fowler, *Inductive Logic*, p. 326.

assure ourselves that we are arguing safely by analogy; what we get is the *probable* not the *certain*; the latter can only come by experiment. Thus when Hargreaves saw that some Australian mountains were like Californian mountains in which he had mined for gold, he reasoned that because they were alike in *appearance* they were probably alike in *contents*. Such reasoning was correct, but before experiment confirmed it, it was only probability, and the two mountain ranges might have had no other resemblance than that of appearance.

Analogy points to the probable.

Reasoning by analogy is best seen in scientific arguments about the planet Mars. There is good reason for believing that the darker portions of its surface are seas, and its lighter portions land. Each pole, too, has a white patch round it suggesting the presence of snow, a supposition strengthened by observation of the sun's influence upon them, since each patch decreases under the solar rays. Consequently analogy leads us to argue with strong probability that Mars, like the earth, has about its poles vast regions of ice and snow.

The planet Mars.

(4) *Cultivate the constructive imagination.*—

“Science does not know its debt to the imagination,” said Emerson. Perhaps not when

The constructive imagination.

the Concord Sage wrote those words, but since Professor Tyndall published his *Scientific Uses of the Imagination* every one has become aware of the immense power which this much criticised faculty has exerted in the progress of knowledge.

(a) Its first province is to assist the understanding. Mr. P. G. Hamerton furnishes an

Mr. P. G. Hamerton.

illustration: “‘I cannot imagine why you live in Italy,’ said a Philistine to an acquaintance, ‘nothing could induce *me* to live in Italy.’ He did not take into account the difference of gifts and culture, but supposed the person he addressed to have just his own mental condition.”* It is this power of transferring ourselves into the life-conditions of another, of detaching the self from its immediate

Detaching one's self.

environment, and placing it in surroundings of a different type, that enables us to understand men and things of a new and separate order, or those of some period in the

* *Human Intercourse*, p. 271.

past. For this reason Comte is a great historian.*

(b) There is a constructive element in the imagination; for, quite unconsciously, we engage its powers in the attempted discovery of something unknown.† But in most cases it is a deliberate act on the part of the thinker; and whether he be a historian seeking to reconstruct the story of the world's past; an inventor bravely attempting to imagine his difficulties out of existence; or a prophet with eyes upon the world's future, he gathers his powers together and endeavours to realise that which as yet is beyond his ken. The constructive imagination "takes its start from facts, but it supplements them and does not contradict them. It . . . probably presents truer pictures than those afforded by knowledge of facts alone—vivid, truthful pictures, which knowledge of facts alone would not enable us to paint."‡ We have only to add that he who would excel in

Goschen on
the imagination.

* Fiske, *Cosmic Philosophy*, vol. i. p. 165.

† Sully, *The Human Mind*, vol. i. p. 375.

‡ Goschen, *The Cultivation and Use of the Imagination*, p. 54.

discovery of any kind must learn the art of putting things together, not so much in reality as in imagination. The pages of science are full of interesting examples, and to these we recommend the reader's careful attention.

(5) *Master the rules and limits of generalization.*—What is it to generalize? First, look at the word itself. The *general* is set over against the *particular*; to generalize, therefore, concerns reflections upon a number of facts taken together, whilst to particularize refers to the selection of one fact. Thus, if I have a tooth drawn, and feel much pain, I generalize when I reflect that every other tooth drawn will give me pain also; just as I infer that a glass of cider from a cask is representative of the taste of the whole.

Jevons gives an example by saying that stones, pieces of wood, metal, ice, leaves, feathers, scraps of paper, clouds, smoke, steam and dust, however different they may be, agree in one thing that they fall to the earth. If on seeing a stone fall we generalize that all falling things must have solidity we are too hasty; further observation reveals the fact that things not solid fall, for example, air; the

true generalization is this, that things which resemble each other in being *material*, will also resemble each other in the property of falling to the earth.

In a few instances there is an ossification of the septum of the heart in horses and oxen. Aristotle heard of this and forthwith ^{Aristotle's} argued: "The heart is destitute of ^{error,} bones except in horses, and a species of ox; these however, in consequence of their size, have something bony as a *support*, just as we find throughout the whole body." The mistake is too obvious to need explanation. The present writer remembers a country youth, whose knowledge of railways was very ^{and the error} limited, staring with open mouth at a ^{of a country} departing train. "Hoo is't?" he said, ^{youth.} "She niver whistled!" A few questions explained his position. He had never seen a train leave the station without whistling—so that whistling, followed by immediate motion, had become connected together in his mind until he thought their connection was mechanical; that is to say his observations were limited to those occasions in which, when the engine whistled, it immediately started off

on its journey. From these observations he inferred that when the engine whistled it could not remain stationary ; and further that before moving it must whistle. Hence his surprise when the train left without the usual signal.

(6) *Observe those physical and mental conditions which foster the constructive mood.*—In

The constructive mood. one sense there is no frame of mind which is constructive: a man's brain has either that tendency or it has not. But things seen, heard, or thought sometimes start us on a line of meditation, so fascinating that we say the constructive mood is upon us. Thus, **Schiller.** a newspaper paragraph set Schiller's genius at work and he produced *Cabale und Liebe*. **Galileo.** A brass lustre pendant from the vaulted roof of Pisa Cathedral had been left swinging by a verger. It caught Galileo's eye and set him thinking, the result being that the world learned how to measure time by the medium of a pendulum. But even genius has sometimes to resort to expedients to produce the inspiration necessary for good work. A few of these are worth looking at, not for their educational value, but because of their biographical interest. When Cicero wished to

Alfieri, preparatory to writing, would listen to music; a habit which can boast the discipleship of Milton and Lord Bacon. In order to concentrate their thoughts, Malebranche, Hobbes and Corneille darkened their apartments. Zola, curiously enough darkened his, though for a different reason.

These examples are sufficient to show that there are physical and mental conditions which either help or hinder the mind in its work. Since, however, these are to a large extent individual, it is not possible to treat them in an orderly and scientific manner. Each man is a law unto himself.

Rousseau, in composing his celebrated romance, has referred to the influence of Rousseau. his portfolio ribbons, fine paper, brilliant ink and gold sand. On the other hand Robert Louis Stevenson gloried in his almost R. L. Stevenson-^{son} unfurnished study, and the absence of books and other surroundings of the literary man.

Let a man love his subject, and continually feed his affection with suitable supplies, and he will soon find out those habits and methods

which predispose the mind to do its required work.

We cannot close the expository part of this chapter without referring to some specific methods of synthesis. If a number of obscure facts are awaiting an explanation, *begin your studies with what appears to you to be the best theory.* Cramer gives an interesting illustration from Darwin's career: "A sigh of relief is embodied in the declaration, 'Here, then, I had at last got a theory by which to work.' (*Life and Letters*, vol. i. p. 68.) Facts cannot be seen without some notion of the relation they will bear to each other when they are found. The stupendous importance of theory for observation is illustrated by the effects of Darwin's theories on biological investigation in all its phases. Huxley put it thus: "The "Origin" provided us with the working hypothesis we sought. The whole biological world was waiting for it; and when it came it carried the biological sciences into the deductive stage, and opened an era of investigation unprecedented in the rapidity with which discovery advanced, and the accuracy of the

results reached." * What is good in science, is also good, as a method, in all other fields of research; the marvel is that the working hypothesis, hinted at even in Aristotle, should have existed in comparative idleness until this century.

The method which associates itself with the names of Fichte and Hegel is The Hegelian formula. expressed in the threefold formula :

Thesis }
 Antithesis } Synthesis.

Perhaps the best commentary—apart from the works of Hegel and his disciples—is to be found in those who have employed the formula.† It has been said of Dr. George Matheson, that “one of the characteristics of his style is to begin an argument by laying down two apparently irreconcilable principles and then proceeding to reveal some hidden harmony.” “Here,” we find him frequently saying, “are two views which at first sight appear utterly contradictory and antagonistic but let us look deeper, and we

Matheson's Illustrations.

* *Method of Darwin*, p. 130.

† Space does not permit of an extended treatment. See articles in Fleming's *Vocabulary of Philosophy*.

shall discover a truth that will harmonize them."* This method of *reconciliation*, as we may call it, has been greatly productive of systems in various branches of philosophy and theology. We would refer the reader to Matheson's *Aids to the Study of German Theology, Can the old Faith live with the New?* and *The Psalmist and the Scientist*.†

Plan of Study.

(1) The first requisite is a thorough comprehension of induction: its means, dangers, and errors. Read:

Darwin, *Life and Letters* (Murray).

Fowler, *Inductive Logic* (Clar. Press).

Jevons, *Logic* (Macmillan).

Mill, *Logic* (Routledge).

(2) For classification, read the sections on that subject in the above-named works. For **Classification.** practice begin with a classifying of "motives" as they are worthy or unworthy, healthy or morbid, and so on. The work is not inviting, but it is capital exercise for the analytical powers.

(3) The study of analogical reasoning will

* *The Thinker*, vol. II. p. 329.

† See also Zenos, *Elements of the Higher Criticism*, p. 109.

be furthered by reading the following works : Analogy.

—Hinton, *Chapters on the Art of Thinking* (Kegan Paul).

—Whewell, *Philosophy of Discovery*.

—Drummond, *Natural Law in the Spiritual World* (Hodder).

Butler, *Analogy* (Routledge).

Bagehot, *Physics and Politics* (Kegan Paul).

Comparison, too, is a part of this subject, and Lloyd Morgan's *Comparative Psychology* will be found helpful. It is also good practice to trace an idea through a series of subjects, e.g., *Grammar* as seen in Painting, Literature, Geography, Science, and Elocution.

(4) For the Imagination, read : Imagination.

A. J. George, *Wordsworth's Prefaces* (U.S.A.).

—Tyndall, *Scientific Uses of the Imagination* (in *Fragments of Science*) (Longmans).

—Goschen, *Cultivation and Use of the Imagination* (Arnold).

(5) A careful reading of the story of Science and Inventions is the best training in generalization ; not forgetting the technical rules laid down by the logician. There are many good books on Darwinism, but that by F. Cramer on the *Method of Darwin* is, for our purposes, as helpful a manual as can be found.

K

CHAPTER VIII

THOUGHT IN ITS MORAL ASPECTS

“Moral culture must begin with a change in the way of thinking, and with the founding of a character.”—KANT.

THE Orientals have a theory that thoughts are things composed of a certain kind of “spiritual substance,” and are capable of being transmitted from one mind to another. Hence a man who thinks bad thoughts all day long is filling the intellectual atmosphere with odious exhalations to the detriment of his fellows. “The more pure thought there is,” says the Orientalist, “the less likely are men’s brains to be invaded by evil ideas, and when unscrupulous thinkers have ceased to exist the long expected reign of purity will begin.” We are not disciples of this Eastern Philosophy, but we are disciples of that teaching which says that mental action is capable of

The substance of thought-

moral consequences. When the imagination is allowed to run riot the injury is moral as well as intellectual. One pities the poor hypochondriac who is afraid to walk abroad lest some tame animal should devour him, and the madman who imagines he is William the Conqueror or Charles the Bald; but just as an overstrain may beget abnormal mental conditions, so may an indulgence in libidinous fancies work sad mischief in debasing character. This is what the Hebrew writer meant when he said: "Keep thy heart with all diligence, for out of it are the issues of life." There is a close relationship between thought and action. Many of those hostilities which have taken place between rival parties in Science, Religion, and Politics have been the outcome of prejudiced or careless reasoning. The progress of Science may be hindered by personal jealousy; one wrong argument may wreck the interests of a church; and the peace of a country may depend on a major premiss. Thinking and acting therefore are in such close connection that it may almost be said, What

Moral and intellectual injury.

Keep thy heart.

What wrong thinking may do.

a man thinks, that he does. At any rate it is safe to affirm, What a man thinks, that he is.

(1) For instance, there is that kind of thinking which is intimately associated with the art of happiness. It is such an occupation of mind as that described by Lowell in his essay, "My Garden Acquaintance." Like Gilbert White, he possessed the alchemy which enabled him to transmute the commonplaces of a robin's life into the excitement of a romance. Whilst thousands were growling at this howling wilderness of a world, he was bubbling over with intelligent delight as he watched the growth and development of insects, or marked the effect on Nature of the temperature's rise and fall. Happiness may not be an end to be sought for in itself, but it is nevertheless a desirable condition of life and one which to a large extent depends on some species of mental occupation. Thus to look into the doings of Nature after the manner of *The Natural History of Selborne* is to have "an innocent and healthful employment of the mind, distracting one from too continual study

of himself, and leading him to dwell rather upon the indigestions of the elements than his own." Indigestions! Life is full of them; and although the gospel of work preached by Zola and Tolstoi is not perhaps an all-sufficing remedy, it is nevertheless a great factor in multiplying the experiences which go to make up happiness. "Something to think about," "something to occupy one's mind": these are phrases we hear almost every day; they set forth the consciousness of a real mental need, and hold a prominent place in the prescriptions of the medical man. Let those who suffer from *ennui*, or are pessimists in spite of themselves,* turn their attention to the discovery of a soul-stirring interest, a pursuit that is mind-absorbing, or some form of unselfish mission. The world can ill spare the efforts of either its moral or religious representatives.

(2) Then we learn that what is intellectually vicious may be morally wrong. The man with bitter prejudices is not only unfitted for right

* "Pessimism is a voice from the laden heart more than a scheme from a vigorous mind." Forsyth, *Religion in Recent Art*, p. 249.

thinking; he is just as likely, as not, to *act* in a questionable manner. If he has a bias against members of a certain profession, that bias is sure to show itself in his dealings with them. Should he be on the jury, and a member of the said profession be the prisoner, it is easy to see how a vicious habit of thought might result in an unfair vote. Wrong thinking and right practice do not usually follow in the order of sequence. The Christian creed contains a clause which is as true in philosophy as it is in ethics: *Think charitably.* Not only do we gain in the spirit of brotherhood by so doing, but we obtain one of the first conditions of intellectual vision. "Charity hopeth all things; believeth all things." He who has this love of humanity is far more likely to obtain true estimates of men and things than the man who measures them by rigid rules and theories.

We have said that thoughts readily become actions. It is not so with feelings. A certain percentage doubtless soon realize themselves in deeds, but feeling has a tendency to luxuriate in itself, and with that to be

content. This applies particularly to those emotions which contain intellectual elements, and predispose the thinker towards a kind of intellectual anti-nomianism. The reader will do well to avoid that employment of mind which enervates by feeding on itself, rather than stimulates by suggesting helpful courses of action. "Every time a resolve, or a fine glow of feeling evaporates without bearing practical fruit is worse than a chance lost; it works so as to positively hinder future resolutions and emotions from taking the normal path of discharge. There is no more contemptible type of human character than that of the nerveless sentimentalist and dreamer who spends his life in a weltering sea of sensibility and emotion, but who never does a manly concrete deed. Rousseau, inflaming all the mothers of France to follow nature and nurse their babies themselves, while he sends his own children to the Foundling Hospital, is a classic example."*

Professor
James's criti-
cism.

(3) Closely allied with the above is the thinking that is dangerous to character, especially the altruistic part of it. The links

* James, *Principles of Psychology*, vol. I. pp. 125, 126.

between creed and conduct have been made less during past years, but there are some links which nothing can break.

Where character may suffer.

It does not matter what a man believes about the planet Mars, but it is important for those with whom he does business that he should believe in the virtue of honesty. His views on the subject of a fourth dimension will not affect his neighbour's life for good or evil, but his views on the social order might turn bliss into misery. And there is a species of reflection which is without moral significance ; there is another species the effect of which is extremely prejudicial to good life. Mr. W. L. Sheldon says "the tendency

A timely utterance. is ever on the increase for men who have become broad in their views, as they shake off former convictions, as they enlarge the scope of their knowledge, in the same degree to sit back as it were in a kind of philosophic calm, leaving the world to take its own course, and find its own way out of its difficulties . . . there is a kind of rationalism that is dangerous to character."* This

* *International Journal of Ethics*, vol. I. p. 226.

is a timely warning from one who has himself adopted broad views. Any gospel which thrusts a man out of active connection with his fellows should be condemned as **Gospels of isolation.** unsound. A moral result is of greater

X importance than an intellectual sanction; and however true a theory may appear to be, it must be judged by its consequences rather than by its symmetry and logical order.

A review of what has been said in this chapter will show that there is need of guarding against two contingencies. **Two dangers.**

The first is that kind of thought which *perverts* action, such as entertaining a prejudice, and feeding a corrupt imagination; the second is that kind of thought which *destroys* action, such as the static moodiness **Perversion and destruction.** of the sentimentalist, and the inertia

of him who is content to be a mere spectator. The excellence to be coveted is the thinking which is *helpful* to action. In one man it will be an interest in affairs, **Covet helpfulness.** in another a love for the good of humanity, and in yet another the revealing of Nature's secrets; let it be what it may, so long as it is there and faithfully nurtured,

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it will be well with the life of which it is a fundamental constituent. To learn the art of thinking is something; it is more to learn the art of living.

CHAPTER IX

THE COMMERCIAL VALUE OF TRAINED INTELLIGENCE

"If English business is going to hold its own, it has got fairly to tingle with brains."—M. E. SADLER, M.A., in *The King's Weigh House Lectures to Business Men.*

THERE are three questions involved in a discussion of this subject: the first is, "What is meant here by Intelligence?" the second, "What is trained Intelligence?" and the third is, "What are the evidences of its commercial value?"

(1) It might seem superfluous to occupy any space with the first question, seeing that in the foregoing chapters the thinking faculty has already received some attention. But the general notion of Intelligence is, that it is synonymous with Mind or Brain, and this is not the notion we wish to entertain; in fact, we desire to show that here the word Intelligence means the powers of the mind *plus* the powers of the senses. In sheer mental acumen few men have surpassed the schoolmen of the Middle Ages, but they could have written almost all they actually did write

even if they had been blind, or deaf, or had lost the sense of touch. Their work was confined entirely to the domain of ideas. Now the Intelligence we have to deal with in this connection is not only Brain power, but the power

Mind plus the Senses. of observation, of trained hearing, and of a disciplined touch ; it is man's facul-

ties exercised in such a way as to make him equally alive to things he can see, and to the thoughts he can think. A thinker is usually regarded as an expert in thinking pure and simple, and so far this is right ; but that man who evolves ideas out of what he has seen or heard is no less a thinker than the man who evolves them out of the depths of his consciousness. The word Intelligence, therefore, sets forth those powers which we know as the Brain and the Senses, and it is the training of these powers on which we claim there is a distinct commercial value.

(2) As already indicated, the art of thinking has been too narrowly conceived. Brain

What is trained Intelligence ? culture by means of logic and mathematics is both excellent and necessary ; but what is wanted is a greater degree of tuition for the senses of hearing, sight, and other avenues to knowledge. Observation—

the tutored eye—is at the basis of nearly all commercial enterprises; the successful man notices small details which escape the eyes of others, and he brings his mental faculties to bear upon these apparent trifles, with results that soon bring wealth and fame.

It may be freely acknowledged that there are men whose minds are trained for other than commercial pursuits: why not?

Take the mathematician to whom the mysteries of the calculus are as a tale that is told. He is a scholar whose astronomical researches are of service to man the world over, and, in spite of his avowed professionalism, commerce owes a debt to him which it has not been slow to pay. But here our point of view is different. We are trying to find what kind of mental training is of most value in business, and we find it consists of a broad culture which will include the training of brain and senses; neither the one nor the others, considered separately; for then we should get the abstract teacher—like the poet and philosopher, or else we should have men like the mechanic and brick-layer, whose work demands manual Mental v. manual skill. more than mental skill. A trained Intelli-

The non-commercial mind.

Mental v. manual skill.

gence is one in which human faculties are quick to receive impressions from without and develop ideas from within; one that can concentrate its attention on difficulties and solve them; and one that can reason from the known to the unknown. These words may carry a transcendental atmosphere with them, but they are by no means formidable; for when an eating-house proprietor notices that a certain district is not well provided with places of refreshment, and sits down to count the cost, and devise ways and means to supply the want, he is receiving impressions from without and developing ideas from within; and when, further, he is confronted with the problem of finding the required capital, and estimating the probable profit accruing from the new venture, he is but concentrating his attention on difficulties and solving them, and passing from the known to the unknown.

It will be urged that an eating-house proprietor is scarcely a good representative of trained Intelligence. But why? Possibly he may lack the ability to write a grammatical letter, and show other signs of defective education; but these are only

Trained Intelligence in action.

surface matters, although important in their place. "Wonderment is often caused at the success of a man who, in the academic sense, is quite uneducated, but who is gifted with a clear brain, keen observation, great mental activity, and common sense."* There need be no wonderment, for the best brains always win, other things being equal; and the object of a manual like *The Art of Thinking* is not to *create* Intelligence, but to *direct* its activity. More and more the race is to the swift and the battle to the strong; hence training, even by mere books, cannot be despised, and the youth who would make a way for himself can ill afford to ignore the smallest contribution towards his well-being.

(3) One need not spend much time in gathering evidences of the commercial value of trained Intelligence. Let us take a section of the Report of the Mosely Educational Commission. The quotation is from Mr. W. C. Fletcher's article, p. 121, and we would refer readers to the graphical representation on page xi called "The Money Value of Technical Education."

* *Business Success*, by G. G. Millar, p. 24.

The figures refer to the staff of the Rapid Transit Railroad Commissioners of New York.

	College Trained.	Non-College Trained.	Percentage College Trained
Chief Engineer	1	...	100
Deputy "	1	...	100
Division Engineers	5	2	71
Assistant "	93	16	85
Roadmen	33	12	73
Axemen	11	19	37

The table speaks for itself and needs little comment. Trained Intelligence, that is, trained in early years for special work, occupies everywhere the most responsible positions. But, it will be argued, it is not necessary for a man to go to college in order to be a successful draper, or a good stock-broker. The reply to this argument is that it does not matter so much how and where a man obtains the required training: the main fact is that he must get it somehow. The coming of the college-trained man simply means that a new force has arrived. He brings to business, it may be, a native ability that in any case would have made him successful; but if his academical course in the class-room or the workshop has added a

What about colleges?

quicker insight and a more educated judgment, then he is likely to accomplish in five years what other men only accomplish in ten. True, experience is the greatest teacher of all, and no amount of college facility can be substituted for practical work in any particular business; but, where education has been adapted to one special end from early years, there is bound to be a mental fitness which average education, even if coupled with some experience, cannot produce. In advertising—a department of expenditure which next to the quality of goods is of first importance—the really trained mind and eye will always have the advantage. The art of thinking, therefore, is not an item for leisure hours only; it is part and parcel of one's daily life, and with all those who have to work for a living, resolves itself into a factor for multiplying the means of obtaining bread and butter.

The teaching of experience.

Thinking for a living.

CHAPTER X

CONCLUSION

"The end we aim at must be known before the way."—JEAN PAUL.

WE have now to recapitulate. At the beginning we stated that it was our intention to teach the art of thinking apart from the technicalities of psychology and logic. Recapitulation.

It is quite possible that so many we have failed to accomplish our purpose, but the reader will bear us out when we say that there are few technical terms in the preceding chapters, and that, as a whole, the arguments and illustrations are such as can be understood by those who have had an average education. And if we have not succeeded in giving a compressed view of those principles and practices in which the art of thinking consists, we shall endeavour in this chapter to give such unity to these

things as will enable every student clearly to comprehend the whole.

We commenced with the declaration that there is great need of a thought-revival. Of this there can be no doubt. Scrappy reading

A thought-revival. and no thinking seems to be the order of the day. But what is the first step

a reformer should take to bring about a better state of things? How can he stir dormant intellect into activity? There are more ways than one, but for ourselves we thought it best to begin with an outline of the thinking faculty, and in the chapter bearing that title we discussed

Feeling, intellect, and will. feeling, intellect, and will, and their inter-relations, adding also a section on

the laws of thought. We then passed on to consider how thoughts are born and the mind furnished with ideas. "Use your eyes and ears: in a word, *observe*. *Reflect* upon what

Thought production. you see; *read* with a critical and creative mind the best books; cultivate enlightened *conversation*; and, as opportunity serves, *travel*, and see the world of men and things."

How to think correctly was then dealt with. Negative rules came first: what to avoid as

dangerous. At great length we treated of prejudice, that bugbear of all true thought. We saw how *birth* and *nationality* could blind a man to excellent things beyond the **Prejudice.** borders of his own country; how *temperament* pre-disposes us in favour of some theories and against others; how the *theorist* was open to the danger of squeezing facts to fit his hypothesis, and how an *unintelligent conservatism* can obscure the beauty of newly discovered truth. Along with the dangers of prejudice we discussed the dangers of emotion. **Dangers of** *Pride, fear, sympathy, and admiration* **emotion.** were considered in turn as to the way in which they magnetized the mind from the orbit of correct thought. At the same time we pleaded that emotion had a rightful place in all true thinking.

Positive aspects were then studied. The importance of *method* was emphasized, also the necessity of acquiring the *art of concentration*. The *laws of evidence* were next dwelt **General rules** upon, followed immediately by sections on drawing *distinctions*, the use and abuse of *authority*, the treachery of *words*, and the need of *health*.

The positive element proper was dealt with in the chapter on constructive thinking. Attention was called to the necessity of being sure about *facts*, and of a true system of *classification*; reasoning from the known to the unknown by *analogy*, and the use of the *constructive imagination* came in for brief notice; we also had something to say on careful *generalisation* and *conducive moods* for mental productiveness, closing the chapter by citing examples of synthetic methods. A few words on the *moral aspect of thought*, and on the *commercial value of trained intelligence*, brought our investigations to an end.

The questions we have attempted to answer, when put in tabulated form, are as follow :

The Mind.

- (1) What is it?—Chap. II.
 - (2) How is it furnished?—Chap. III.
 - (3) How can I think correctly?—Chaps. IV., V., and VI.
 - (4) How can I think creatively?—Chap. VI.
 - (5) How can I think morally?—Chap. VIII.
- We conclude with one request. Regarding

this little book for the moment as a prescription for thoughtful habits, we feel bound to urge that before the reader casts the prescription away as useless to cure the mental ills from which he may suffer, he will do us the honour of a careful trial.

APPENDIX

AN ADDITIONAL LIST OF BOOKS FOR THINKERS

AMONG literary productions, nothing offers an easier target for criticism than a book list. The compiler lays himself open to the omission of a reader's favourite authors, and thus provides "copy" for long and grievous complaints. A second reader finds his speciality omitted altogether, and he turns away disgusted. A third reader, who perhaps believes in one book only, growls at the number put down on the list, and declares his scepticism that so many could possibly be digested, darkly hinting that authors and publishers conspire together to defeat the aims of true learning. However, if it be necessary, as it seems to be, to define and defend our object in submitting a book list, let it be said at once that we confine ourselves to books that suggest new thoughts to thoughtful minds.

Some of the volumes recommended are "no picnic"; they are hard reading, and mean close study. Others are of lighter calibre, but none the less useful. At the same time, some regard has been paid to price and general suitability for unprofessional readers. The best book on any particular subject is not necessarily the work of the greatest authority on that subject, or published at the highest price. For the purposes of this list the best book is the work of the man who can write so that untechnical readers can follow him. Sometimes, as in the case of Professor Huxley, the expert is the best popular writer; but it is not always the case. Lastly, a book list is a sort of literary *menu*, from which we can select the fare that pleases us best. If we have succeeded in satisfying all palates in moderate degree, our labour will not have been in vain.

In the Mental Sciences, we would ask attention to the following:—

J. Royce, *Outlines of Psychology*.

A. Sidgwick, *The Process of Argument* (A. & C. Black).

W. E. H. Lecky, *A Survey of English Ethics* (Longmans).

Norman Lockyer, *On the Influence of Brain Power on History* (Macmillan).

W. T. Marvin, *An Introduction to Systematic Philosophy* (Macmillan)

A. E. Taylor, *Elements of Metaphysics* (Methuen).

J. R. Illingworth, *Personality: Human and Divine* (Macmillan).

J. Brough, *The Study of Mental Science* (Longmans).

On the broader lines of a philosophical treatment of life and its phenomena we suggest the following :—

W. H. Hudson, *Rousseau and Naturalism in Life and Thought* (T. & T. Clark).

C. H. Pearson, *National Life and Character* (Macmillan).

Carl Snyder, *New Conceptions in Science* (Harper).

James Orr, *David Hume and his Influence on Philosophy and Theology* (T. & T. Clark).

W. H. Hutton, *The Influence of Christianity on National Character* (W. Gardner).

- J. Brierley, *Ourselves and the Universe* (J. Clarke & Co.).
- Carl Hilty, *Happiness* (Macmillan).
- W. E. H. Lecky, *The Map of Life* (Longmans).
- William James, *The Varieties of Religious Experience* (Longmans).
- R. G. Moulton, *The Moral System of Shakespeare* (Macmillan).
- Oliver Lodge, *Modern Views on Matter* (Froude).
- Gustave Le Bon, *The Crowd: A Study of the Popular Mind* (Unwin).

Politics and social affairs are increasingly before the public eye, and inquiring readers will find food for reflection in the following books:—

- Montesquieu, *Spirit of Laws* (G. Bell and Sons).
- H. Sidgwick, *The Development of European Polity* (Macmillan).
- D. G. Ritchie, *Darwinism and Politics* (Sonnenschein).
- J. Bascom, *Sociology* (G. P. Putnam's Sons).
- C. Letourneau, *Sociology, based upon Ethnology* (Chapman & Hall).

- E. S. Loch, *Methods of Social Advance* (Macmillan).
- W. E. H. Lecky, *The Political Value of History* (Arnold).
- S. Buxton, *Handbook to Political Questions of the Day* (Murray).

In Religion and Theology one or two treatises have already been referred to, and we add the following:—

- S. H. Mellone, *Converging Lines of Religious Thought* (P. Green).
- J. Martineau, *A Study of Religion* (Clarendon Press).
- Leo Tolstoy, *My Religion* (W. Scott).
- C. C. Starbuck, *Psychology of Religion* (W. Scott).
- R. M. Wenley, *Contemporary Theology and Theism* (T. & T. Clark).
- O. Pfleiderer, *Rational Theology* (Sonnenschein).
- W. R. Cassels, *Supernatural Religion* (Watts and Co.).
- W. H. Mallock, *Religion as a Credible Doctrine* (Chapman & Hall).
- “Six Oxford Tutors,” *Contentio Veritatis: Essays in Constructive Theology* (Murray).

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Percy Gardner, *Exploratio Evangelica* (A. & C. Black).

J. R. Seeley, *Ecce Homo* (Macmillan).

Among literary, artistic, and miscellaneous productions, the list subjoined gives a representative collection :—

—J. Brierley, *Essays in Philistia* (J. Clarke & Co.).

—F. P. Holden, *Audiences* (U.S.A.).

—L. A. Tollemache, *Stones of Stumbling* (Whittaker).

—L. A. Tollemache, *Safe Studies* (Whittaker).

T. J. Hudson, *The Law of Psychic Phenomena* (Deacon).

—C. G. Montefiore, *Liberal Judaism* (Macmillan).

C. Waldstein, *Art in the Nineteenth Century* (C. J. Clay).

—E. B. Bax, *Outlooks from the New Standpoint* (Sonnenschein).

—W. B. Worsfold, *Judgment in Literature* (Dent).

—G. S. Lee, *The Lost Art of Reading* (G. P. Putnam's Sons).

R. Garnett, *Browning's Essay on Shelley*.

Georg Brandes, *Main Currents in Nineteenth Century Literature* (Heinemann).

—S. L. Wilson, *The Theology of Modern Literature* (T. & T. Clark).

- H. Joly, *The Psychology of the Saints* (Wash-
bourne).
- W. J. Henderson, *What is Good Music?*
(Murray).
- H. C. Beeching, *The Study of Poetry* (Cam-
bridge University Press).
- M. Kaufmann, *Utopias* (Kegan Paul).
- A. P. Call, *Power Through Repose* (Low).
- W. Hazlitt, *Essays* (Warne).

THE END

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