INTRODUCTION

And thou saidst, "I will not transgress"; when upon every high hill and under every green tree thou wanderest, playing the harlot.
JEREMIAH II:20

A SLIP of the log I am sitting on by my campfire under Mount Sir Donald has given me as an alternative title, "How to *reap* a page," which perhaps better suggests the aim. We assume we know how to read: spell it r e a *p*, and we begin to wonder how we do it.

Twenty years ago a very inexperienced writer commenced authorship with the remark, "A book is a machine to think with." [1] Here he is trying to devise another sort of verbal machine: something which may be a help in using books as machines to *think* with. He seems to have been uneasy about the word "think" then, for he added in a later edition, "but it need not usurp the functions either of the bellows or the locomotive." Some books endeavor to transport their readers or to drag them passively hither and thither; others aim to stuff them, with facts or other supposedly fattening matter; others are microscopes, as it were, which can take the most familiar things and lay scraps and details of them before us, so transmuted by the new conditions under which we see them that we lose all power of recognizing or putting them to-

[1] *Principles of Literary Criticism*, p. 1.

gether again; others behave rather as pulverizers or consolidators. My readers here will have to choose for themselves what sort of machine they will compare this book to. I do not believe that either a washing machine or a combination harvester is the right comparison.

How a page was read has often been a matter of life and death. Misread orders on the battlefield have sent thousands to unnecessary destruction. Their readings of a page of Scripture have led as many to the stake. Written words are very dangerous things:

> Who hath given man speech
> Or who hath set therein
> A thorn for peril and a snare for sin

wrote Swinburne.[2] He was thinking of quarrels, but we are perhaps in most danger when we agree too readily, or think we agree when in fact we do not. One thing here, at least, I am clear about and I hope I can make myself clear on. Neither this book nor any other can say how a page *should* be *read*—if by that we mean that it can give a recipe for discovering what the page *really says*. All it could do—and that would be much—would be to help us to understand some of the difficulties in the way of such discoveries. "How the page should be read" is a typically ambiguous phrase. Everyone can see that it may mean: (a) the right reading, the authentic interpretation; or (b) the right general procedure, or way of tackling the page. I need hardly say that this book keeps its

[2] *Atalanta in Calydon.*

eye on the second of these, and will be content if it can display some of the things which make it easy for us to twist pages to mean what we please—whether in order to damn or to praise them.

It is concerned with pages of all sorts—from plain exposition or instruction, the battle order for example, to poetry or philosophy, or the pages of Scripture referred to above. With the *first* there should be no doubt that there is one right reading which can be discovered or the writer is horribly at fault. But with the pages which on a long view have mattered most to the world, the utterances of the great poets and sages, we may reasonably doubt whether there is one right and only right reading. These greatest sayings of man have an inexhaustible fertility. Different minds have found such different things in them that we would be very rash if we assumed that some one way of reading them which commends itself to us is the right one. And yet . . . to assume so, to suppose that some one reading is the only right one, is our natural and our traditional approach. We feel very strongly that unless there is a right reading, and unless our business is to find it, we are wasting our time with such writings. This would certainly be so if they were like the specifications of an airplane, say, or like a map. A map on which hills and valleys could reasonably change places according to the consulting eye would be condemned as worthless by all. But with the highest poetry and philosophy and moral teaching, something like this happens and rightly. And the great pages lose nothing of their perpetual value because

it happens. Indeed, their value is perpetual because through them, as through nothing else, we gain such opportunities of surveying the possibilities of ourselves and our worlds. There are limitations here clearly. Not every vague saying becomes precious. You will not succeed in making up a sentence which, because it might mean anything, will be permanently interesting. The immortal pages are no such puzzles, though they are the great exercisers of the spirit. But if we read them as though they could say one thing only, or condemn them because they can say many different things, we will be cutting ourselves off from the best which has been known and thought in the world—to use Matthew Arnold's phrase.

A list of the vices of reading should put first, as worst and most disabling, the expectation that everything should be easily understood. Things worth thought and reflection cannot be taken in at a glance. The writer should, of course, have done his utmost to make things easy for us. He could have had nothing (could he?) more important than *that* to do. But where there is still some difficulty remaining, let us beware of blaming it on the author rather than on our own imperfect command of the language. To blame the writer will teach us nothing. To wonder if we are reading right may.

Next to this vice should come that shallow indifference which says, "Well, if the page can mean almost anything, what does it matter how I take it? One reading is as good as another." It isn't. All the value comes from the depth and honesty, the sincerity and

stress of the reflection through which we choose which meanings among its possibilities we will take seriously into our considerations. These things have many meanings because they touch us at points at which each one of us is himself many-minded. Understanding them is very much more than picking a possible reasonable interpretation, clarifying that, and sticking to it. Understanding them is seeing how the varied possible meanings hang together, which of them depend upon what else, how and why the meanings which matter most to us form a part of our world—seeing thereby more clearly what our world is and what we are who are building it to live in.

A chief modern difficulty in such understanding comes from the recent development of the historical sense. Compared with our great-grandfathers, we know incredibly much about the past. Scholarship has made the authors, their times and social conditions, etc., etc., known to us as to no other generation ever. This, at first sight, should make good reading easier. In many ways it does. We can turn to a dictionary such as Dr. Johnson never dreamed of and see how a troublesome word has been used century after century in varying ways. Concordances show us all the other uses the author made of the word. On wider points we can consult histories and biographies. Vast collections of disparate interpretations and comments are available. Around almost every important author an enormous critical apparatus has come into being. Its prime aim is just to help us to read better. But somehow all this wealth of scholarly aid does not

lift up our hearts as it should. It spreads attention out too thinly and daunts us with the thought that we would have to know everything before we could know anything. Doubtless this is true, philosophically, but to readers in search of a method it is unhelpful.

Modern historical scholarship especially terrorizes us with the suggestion that somewhere in the jungle of evidence there is something we happen not to know which would make the point clear, which would show us just what the author did in fact mean. That suspicion of a missing clue is paralyzing—unless we remember firmly that from the very nature of the case essential clues are always missing. However much evidence we amass, we still have to jump to our conclusions. Reading is not detection as the perfect detective practices it. We are never concerned with facts pointing conclusively to a central fact—what happened in an author's mind at a given moment. No facts could ever establish that. If psychoanalysis has done nothing else for the world it has at least helped us to realize that minds—including authors' minds—are private. All we can ever prove by factual evidence is *an act*—that the author wrote such and such words. But what he meant by them is another matter. Our conclusions there must rest, as best they may, upon another sort of consideration. Fundamentally they rest upon analogies—certain very broad similarities in structure between minds: "The all-in-each of every mind," as Coleridge called it.

To go deeper, the reader, as opposed to the biographer, is not concerned with what as historical

fact was going on in the author's mind when he penned the sentence, but with what the words—given the rest of the language—may mean. We do not read Shakespeare, or Plato, or Lao Tzu, or Homer, or the Bible, to discover what their authors—about whom otherwise we know so little—were thinking. We read them for the sake of the things their words—if we understand them—can do for us. But understanding them, of course, is not making them mean something we know and approve of already, nor is it detecting their ignorance and limitations. It is using them to stretch our minds as they have stretched the minds of so many different readers through the centuries. The interest they have so long had for man is the proof of their importance for us.

Emerson estimated that a man might have, if he were fortunate, some hundreds of reasonable moments in a long life. He was thinking probably of moments of inspiration from sources less traceable than the book in one's hand. The great pages are the most constant and dependable sources of "reasonable moments," if we mean by them moments when we know more completely what we are, and why we are so, and thus "see into the life of things" more deeply than in our everyday routine of existence. Such reasonable moments are the highest aim of reading. In them we do more than communicate with our authors —in the humble sense of communicate. We partake with them of wisdom. This aim is not attained unless we also gain such skill in reading as serves us in all our communications with our fellow human beings.

The arts of reading are a pyramid whose pinnacle rests on the stages below. No one can understand poetry well whose mind cannot take in the prose of discussion and necessary business.

I

HOW A READER MIGHT IMPROVE

Education: expansion of experience by experts.
C. K. OGDEN

WE all enjoy the illusion that we read better than we do; not least, no doubt, those who set out to write about *How to read.* But most of us—or those at least, who are likely to open a book with this title—are satisfied that other people read badly, that they can miss any point and will put their own wild interpretations on even the most obvious remark. In recent years books, papers, and articles which labor this point and accuse the general reader of incompetence with language have been coming out in plenty. Some of them hint despondingly that things are getting worse and threaten us even with universal intellectual collapse unless something is done about it. Authorities tell vast conferences of English teachers every few weeks that they are failing to teach reading. Texts simplified and written down to tenth-grade level are adopted in university courses because the undergraduates cannot, it is alleged, read anything harder. Publicists lament, in popular volumes, the plain man's helpless acceptance of verbal nonsense. Specialists complain that their contributions are

wasted because the other specialists do nothing but misread them. And prophets foretell the downfall of democracy through a decline in the citizen's ability to follow any discussion worth a hearing.

Behind all this there is enough solid evidence to make anyone who studies it very uncomfortable. If most people's reading is really as inefficient as it seems when carefully enough examined, the main staff of education is hardly worth leaning on. What is the advantage of toiling on through thousands of pages, if a chief outcome is an accumulation of misunderstandings? Surely it should be possible to go directly to the root of the trouble, to study verbal misunderstanding, its nature and causes, deeply enough to find and apply a cure?

Accordingly, a considerable literature is coming into being which discusses the theory of language: classification, abstraction, naming, metaphor, and the rest. Unfortunately, it cannot be said to offer us much hope of immediate remedies. And this is not surprising. The questions which our theory of language has to discuss are hardest of all to write clearly about. They are the meeting points of tremendous pressures coming from rival philosophic systems used consciously or unconsciously by those who discuss them. We should expect not only great divergences of view but persistent drastic misinterpretations among their students. Everyone who writes on such matters sighs to think how often he seems to be misread. The layman who looks into this literature extensively enough will be shocked to discover how much seemingly

fundamental disagreement it contains. If he does not go into it far enough to see this, he should be warned not to suppose there is anything at present there corresponding to the agreed doctrines the sciences can offer him. There is no agreed theory of language—as elementary mechanics, for example, is an agreed theory. Later on in this book we will see why there cannot be. Moreover, to get any adequate view of what the rival professors are maintaining, the inquiring layman would have to become an adept at a peculiarly difficult sort of reading in which one is specially apt to suppose he has understood when in fact he has not. It is not likely, therefore, that perusal of those confusing pages will make many people better readers. There is evidence, on the contrary, that misunderstandings acquired from them have made intelligent people more foolish and imperceptive as readers than they would otherwise have been.

The belief that knowledge of linguistic theory will make a man a better reader comes itself from such a misunderstanding. Theory and practice are not so simply connected. It is true that bad theory does lead to bad reading. But good theory will not necessarily produce good reading. Between the principles in the theory and the actual words to be read comes the task of seeing which principles apply to which cases, the problem of recognizing what the actual situation is. Theory can give us no *direct* help in this, more's the pity! We have to rely on whatever sagacity we have developed. Nothing, alas, is easier than to fit our distinctions to the wrong instances. And in most reading

there are strong motives at work which tempt us to do this. I will be analyzing some examples in detail later.

We are all of us learning to read all the time. All our thinking is a part of the process as affecting the way we will on some occasion take some sentence. Whenever we use words in forming some judgment or decision, we are, in what may be a painfully sharp sense, "learning to read." The lover scanning his mistress's scribble or her scowling brows is learning to read. So is the theologian comparing the ideas of *eros* and *agape* (see Chapter Nine).

There is an ambiguity here which is brought out by asking, learning to read what?—the written word? or by means of that word the face, or the heart, of Nature?

The answer, of course, is, "Both." We cannot separate them. We always read for some purpose—unless some sad, bad, mad schoolteacher has got hold of us. There is no such thing as merely reading words; always through the words we are trafficking or trying to traffic with things—things gone by, present, to come or eternal. So a person who sets up to teach reading should recognize that he may be more ambitious than he seems. He may pretend he is only concerned to help people not to mistake one word for another, or one construction for another. *That*, so far, doesn't look like an attempt to finger the steering wheel of the universe. But "Which word is it?" turns into "Which use?"; and the question "Which construction?" into "What implications?" Before long the would-be authority on interpretation has become indistinguishable from an authority on "What's what?"—a question which belongs to a more divine science than he may wittingly aspire to.

Nonetheless, by being more aware of this he will be better able to pursue his main task—the cultivation of general verbal sagacity.

Whence comes, then, the development of this sagacity so much needed if we are to see what is happening? The answer is "Experience," of course; experience of a certain sort. But "experience" is one of the words we are all always most likely to misunderstand, because we all use it in so many ways. As a rule, we are not more than dimly aware of the great differences between its possible meanings. In most sentences it can say very different, sometimes even contradictory, things to different readers. And these different meanings will, as a rule, all make fairly good sense. There is an interesting and not too obvious reason for this. With most uses of "experience," the other words round about in the neighboring sentences are ready to shift their meanings to conform with its meanings. Most explanations of "experience" will be found to contain words like "mind," "observation," "attention," "knowledge," "feeling," "consciousness," which systematically vary in meaning in corresponding ways. So to say what we may mean or what anyone else may mean by "experience" or by any of these words is no easy undertaking—though it is what these pages attempt.

It is no one's fault that these words behave so. It is a sign of their importance. All ⁹understanding⁹ of

anything of general importance turns on our mastery of the ranges of ideas which such words cover. I put ᵠunderstandingᵠ here in these specialized quotation marks (*q* for *query*) to note the fact that it is another of them and to suggest that in reading it we have to make out, if we can, which of its possible meanings it probably has. To assume that we know this too soon with any such word is the most frequent cause of bad reading. Later—at the end of Chapter Four—we will consider the use of various specialized quotation marks as part of the technique of analyzing the difficulties met with in reading.

This *systematic* ambiguity of all our most important words is a first cardinal point to note. But "ambiguity" is a sinister-looking word and it is better to say "resourcefulness." They are *the most important words* for two reasons:

1. They cover the ideas we can least avoid using, those which are concerned in all that we do as thinking beings.
2. They are words we are forced to use in explaining other words because it is in terms of the ideas they cover that the meanings of other words must be given.

A short list of a hundred such words will help to make these reasons for their importance clearer.

Amount, Argument, Art, Be, Beautiful, Belief, Cause, Certain, Chance, Change, Clear, Common, Comparison, Condition, Connection, Copy, Decision,

Degree, Desire, Development, Different, Do, Education, End, Event, Example, Existence, Experience, Fact, Fear, Feeling, Fiction, Force, Form, Free, General, Get, Give, Good, Government, Happy, Have, History, Idea, Important, Interest, Knowledge, Law, Let, Level, Living, Love, Make, Material, Measure, Mind, Motion, Name, Nation, Natural, Necessary, Normal, Number, Observation, Opposite, Order, Organization, Part, Place, Pleasure, Possible, Power, Probable, Property, Purpose, Quality, Question, Reason, Relation, Representative, Respect, Responsible, Right, Same, Say, Science, See, Seem, Sense, Sign, Simple, Society, Sort, Special, Substance, Thing, Thought, True, Use, Way, Wise, Word, Work.

I have, in fact, left 103 words in this list—to incite the reader to the task of cutting out those he sees no point in and adding any he pleases, and to discourage the notion that there is anything sacrosanct about a hundred, or any other number. A discussion of why they were chosen comes in Chapter Seven, and a commentary on some of the behavior of the most important of them keeps my last four chapters busy. Notes on others pepper these pages. Here the point to make is that the very usefulness which gives them their importance explains their ambiguity. They are the servants of too many interests to keep to single, clearly defined jobs. Technical words in the sciences are like adzes, planes, gimlets, or razors. A word like "experience," or "feeling," or "true" is like a pocketknife. In good hands it will do most things—not very

well. In general we will find that the more important a word is, and the more central and necessary its meanings are in our pictures of ourselves and the world, the more ambiguous and possibly deceiving the word will be. Naturally these words are also those which have been most used in philosophy. But it is not the philosophers who have made them ambiguous; it is the position of their ideas, as the very hinges of all thought.

To say, then, that a reader's sagacity comes from *experience* in reading is not to say much unless we can do something to clear up what is meant here by "experience." In a rough way everyone will agree. A good doctor gets his ability to diagnose from experience. A good judge gets his discernment from experience. But what is this experience which gives some men so much and others so little? It is not having many things happen to one merely. Some who have read little read well; others who have read much read badly. What happened and how it happened matter more than the quantity or variety of happenings. If we are to get any light on the reading process, on why it goes wrong and on how it might be improved, we must look as closely as we can into our own minds as we read and form as live a conception as we may of the sort of experience with words in sentences which makes better readers.

In the chapters which follow a connected series of passages will be put before the reader with which he may study his own proceedings as he reads. Some of them offer stiff challenges to any reader. Points of

interpretation are then taken up and what they seem to turn on is discussed. These studies are designed to lead, in an order which will not be evident till later, to a grasp, in practice rather than in theory, of the main differences between better and worse reading. Further, these passages themselves discuss questions upon which anyone must enter who is interested in the art of learning, which is the growth and control of ideas. The plot thus is double: a series of exercises in reading to be studied introspectively, and a development of doctrine on the fundamentals of reading which is largely contained in the material of the exercises. After this the book takes up, in groups, some of the great words of the language, to distinguish some of the different ways in which we use them daily and the connections and contrasts between their uses. What is studied here is almost all expository prose. But a parallel book on the reading of poetry would have the same problems to face, and would find in the behavior of the same words the same answer.

II

AN OBVIOUS CHARACTERISTIC OF ALL ANIMALS

When I raised my brows a little more, I saw
the Master of those who know, seated amid
the philosophic family.
INFERNO IV, 131

THE main source of any view, sound or silly, which we have of how we read must be our own observations of our own doings while we are reading. We should supplement this by observations of others' behavior and their reports, but inevitably in interpreting such other evidence we start from and return to that picture of a mind at work which only introspection can supply.

We do not realize what an opportunity our reading affords us for these self-observations. There, in the most convenient form, is an admirable experimental setup. We need no colleague to set us tasks; the author takes that duty over. All that we have to do is to cultivate the trick of changing our easily observed reactions from a communion or dispute with him into notes on our own deliberations. There must, however, be some difficulty in the page we face to stir us to noteworthy maneuvers. Otherwise this page prefaced by "I saw that . . ." would serve as a record of our

doings. Any page which stretches our power of comprehending can teach us much about how we grope, and comparison of a number of pages—if we did not let our interest in the search too soon overcome our interest in the searching—could show us useful differences between guessing and grasping. On the other hand, there must be something on the page we really care about understanding. Otherwise we will go through the motions of reading only and the result will be uninstructive.

It is an advantage if the passages we use for these experiments form a series presenting in different settings and with different verbal expression somewhat similar problems to thought. The operations with which we work at them—generalization, abstraction, deduction, induction, division, exemplification, assumption, definition—have flavors of their own, which we learn to recognize as we become clearer as to what we are doing in them. As topics to *discuss* they are all but stupefying. Logicians long ago proved that to us. Only adepts long inured to them can keep awake. Only a minimum of such discussion will appear in these pages. We propose to practice these operations rather than to discuss them. And through practice we can become better aware of what they do than through even the clearest discussion.

In reading we are performing these operations all the time. Each has its own characteristic mishaps, and these stumblings have their own distinctive feelings. We can sometimes know that we are going wrong without being able yet to see what has happened. It

is such observations that we will be on the lookout for.

I will add after each passage a commentary designed to help a reader:

1. to notice what he does with them in a first perusal.
2. to compare this with what happens in later, more questioning attention.
3. to compare both with various suggested possibilities.
4. to notice upon what points any decision about the meaning of the passage turns for him.

Inevitably I will have my own views about the interpretations of the passages. To hide them would be artificial and the attempt would probably fail. My aim will not be to get the reader to agree with me in my readings. I have no very robust confidence that they are right. So I will not be expounding them as I would if persuasion were the aim. Just what our passages say is, for our purpose here, less important than *how* they say it and how they may say different things to different readers. It is the reading process rather than the products we are to study.

On the other hand, it would be idle to invite so much attention to passages which could not say rather important things, or in which the ambiguities were not of a sort which recur everywhere in writing. My extracts will therefore be, most of them, from great writers, and will treat questions of the first order of importance. And these questions will be those we will inevitably have in mind in considering our experience while reading. Thus we may with them sometimes be catching more than one bird with the same throw of the net. Most of the passages will be difficult, some very. It is the difficulties of reading we are studying. In each case please read through once carefully. Then sit back and try to collect and survey what you have gathered before reading my remarks and returning to study the passage.

My first passage, which is among the hardest, gives us Aristotle's account of "learning by experience." It comes from the last pages (99^b 33–100^a 9) of the *Posterior Analytics*.

It will be followed by a version in Basic English (see Chapter Seven below). I shall be making much use of the techniques of Basic English throughout. Being pinched within the limits of 850 words forces one to look at the original one is translating with an intentness hard to keep up otherwise. By cutting out the easy synonym it makes one go into the possibilities of the forbidden words more deeply. Here "perception" (which Aristotle is describing for us) will be the only non-Basic word used.

Aristotle has asked how we get to know the basic, primary or immediate, premises from which demonstration leading to scientific knowledge sets out. Demonstration has to start from things undemonstrated. How have we come to know such things? Are we born with the knowledge and does the infant just fail to notice he has it? That would be too strange. On the

other hand, it can't just pop into our minds complete without there being anything from which it is developed.

Therefore we must possess a capacity of some sort, but not such as to rank higher in accuracy than these developed states. And this at least is an obvious characteristic of all animals, for they possess a congenital discriminative capacity which is called sense-perception. But though sense-perception is innate in all animals, in some the sense-impression comes to persist, in others it does not. So animals in which this persistence does not come to be have either no knowledge at all outside the act of perceiving, or no knowledge of objects of which no impression persists; animals in which it does come into being have perception and can continue to retain the sense-impression in the soul: and when such persistence is frequently repeated a further distinction at once arises between those which out of the persistence of such sense-impressions develop a power of systematizing them and those which do not. So out of sense-perception comes to be what we call memory, and out of frequently repeated memories of the same thing develops experience; for a number of memories constitute a single experience. From experience again—i. e., from the universal now stabilized in its entirety within the soul, the one beside the many which is a single identity within them all—originate the skill of the craftsman and the knowledge of the man of science, skill in the sphere of coming to be and science in the sphere of being.

The first time we read through this we are likely at places to feel a little like those animals in whom no impression persists. What is said seems too cloudy or

too folded over upon itself to be taken in. One such place will be perhaps at lines 9–10, where the *either . . . or* comes. This feels like a crumple in the discourse. It is as though Aristotle were saying the thing twice, or we were seeing double. And we may notice the same effect at other places, as in the following sentence: "animals in which it [What's *it*? The persistence of course] does come into being have perception and can continue to retain the sense-impression in the soul." Here if "the persistence does come into being" it seems unnecessary to add that the animals "can continue to retain the sense-impression in the soul." That is said already. This redundancy of expression is very characteristic of Aristotle and may have something to do with his lecturing technique. These are lecture notes, and the repetitions can be so inflected by the voice that they amount to emphasis, or a sort of soothing confirmation to the listener that he *has* got the point. In reading with the eye we miss these pointers as to when it is a new nail being driven or just another tap on one already home. It will be found in general that reading a passage aloud with this sort of thing in mind is an enormous help in giving perspective to an argument, making its structure more evident, and focusing one's attention on the right places.

Developing the structure of the argument in this way goes, of course, along with questioning the meaning of its words and phrases and with tentative decisions as to what is said. As a means of getting that ready for discussion, let me offer here a simplified

translation. (Of the English passage as it stands. I have no pretensions to be able to comment on the fidelity of the Oxford version to the Greek.) This version may both bring out the structure, as I see it, and give you something to compare with what you have found.

So we have to be able to get this knowledge in some way but not in a way which makes it righter than the knowledge which comes out of it. And this is clearly true of all animals, for they have from birth a power to see different things as different, which is named "sense-perception." But though all animals have sense-perception by birth, some of them keep what it takes in, and some of them don't. Those which don't ever become able to keep these things have no knowledge at all when the act of sensing isn't going on. Those that are able to keep the effects of sensing and keep them again and again are of two sorts. There are those which become able through keeping them to put them into some order and those which don't. So out of sense-perception comes to be what is named "memory." And out of frequent memories of the same thing comes experience; for a number of memories make up one experience. From experience again—that is, from the general form now fixed as a complete thing in the mind, the one thing which is the same in any number of examples—come the art of the workman and the knowledge of the man of science, art as having to do with changing things and science as having to do with what is ever the same.

Now let us compare this rendering with the original and note some of the problems which came up in making it:

1. line 2, *higher in accuracy: righter,* as one answer to a question is nearer to the right answer than another. *Accuracy, precision, exactness* are difficult words to be clear about. They share some of the troubles of *true* and some of those of *definite.* A definite answer need not be true, nor a true one definite. If we try hard enough to see what *true* and *definite* may mean we will not be surprised that true and definite interpretations are so hard to arrive at.

2. line 5, *congenital discriminative capacity: power to see different things as different. See* is (by metaphor) short for "perceive through any of the senses." That would not mislead. But *see* might suggest that all animals do more than respond differently to some sorts of different things, that they *see* (i. e., understand as a philosopher might) what the differences are. Aristotle is thinking of no such intellectual feat. This discriminative capacity is just the ability to be affected differently when their surroundings are different in certain ways, that is, to vary with their surroundings in certain ways. Lifeless bodies have this ability too—in very limited ways, however. A billiard ball is affected differently by different pushes, but it is little influenced by smells if at all.

3. line 6, *innate: by birth.* I hesitated between *by, from,* and *at birth* here. *By* might suggest that the process of birth gave them the power, but that is

not a likely interpretation. *From* and *at* suggest that they have it the moment they are born. But an innate power may come into operation only later. Kittens have to open their eyes before they see different things as different. The notion of innate powers, like that of inheritance, collapses if we look at it too closely, as Aristotle knew. "Innate" and "congenital" say no more than that an animal has the power under the right conditions. What we are born with has to have certain conditions if it is to come out. So the contrast between heredity and environment is a false one if we make them independent. Under different conditions we would be found to have inherited different powers.

4. line *13, and when such persistence is frequently repeated: those that are able to keep the effects of sensing and keep them again and again.* The problem here is whether the impressions which have to be kept if the power of systematizing them is to develop are of the same sort or not. I was tempted to write "able to keep the different effects of sensing." That would make a more satisfactory theory. But Aristotle might only have in view the return again and again of the same impression $a_1a_2a_3 \ldots a_n$ leading to A, the universal or form which they share. On the other theory the thing would be more complex. By "the persistence is frequently repeated" he would mean that $a_1\ a_2\ a_3\ \ldots$

and $b_1\ b_2\ b_3\ \ldots$

and $c_1\ c_2\ c_3\ \ldots$ came back. Not only

that but there would be such repetitions as

$a_1\ b_1\ a_2\ b_2\ a_3\ b_3\ \ldots$

$a_1\ c_1\ a_2\ c_2\ a_3\ c_3\ \ldots$

$a_1\ b_1\ c_1\ a_2\ b_2\ c_2\ a_3\ b_3\ c_3\ \ldots$

The same sense impressions come back *in varying frames of other impressions,* and it would be through *that,* not through mere unvarying repetition, that "the power of systematizing them" would be developed. It is hard to see why any number of repetitions of the same impression, however well they are retained, should become anything other than an embarrassing crowd of them. But "the universal . . . the one beside the many which is a single identity within them all" is certainly not a swarm of impressions. The impressions are the many; the one is their form, that which makes them the same. The evidence *here* that Aristotle held the more complex theory is the next phrase I now discuss.

5. line *16, systematizing them: putting them into some system.* I might have written (still in Basic), "sorting and ordering them and separating their different connections with one another," for that is what has to be done if this kind of knowledge is to arise. The systematizing which constitutes experience and supplies our basic premises is very much more than merely noting "thingumbob again!" A typical basic premise, guaranteed by experience, is: *tapping with one's fingernail on a table makes a sharp little sound.* This is woven in

with such other premises as *tapping so on a can, on a stove . . . makes a different sound,* and *tapping so with the soft tip of the finger makes hardly any sound.* The fabric these belong to is so vast that I could easily fill this book with nothing but such commonplaces of experience all connected with one another through universals. The universal which my wording makes prominent here is *tapping.* These are all instances of tapping. A much more embracing universal is *make,* which is indeed one of the topmost powers in the hierarchy (makes a sound, makes sense, etc.). *Tapping* is a fairly specific universal. It divides up into light-impacts-between-surfaces-of-solids, say, all of which are more general universals. *Make* is a very general universal and is perhaps indivisible. We meet a baffling simplicity if we try to say what making is. *Systematizing* here is the coming into the soul of universals and the growth of their connections with one another there. It is these connections which stabilize them. "The soul is the place of forms," says Aristotle elsewhere. Here he says, "within the soul." Maybe we confuse ourselves with this spatial metaphor *in* the soul. We would if we took it seriously. But the metaphor is too convenient to be abandoned. It might be more accurate to say that the soul just is the universals which knit together all it knows, as we might say that its knowledge (compare the metaphor in *cognition*) was that knitting together. But these are hardly lucid ways of talking. (Or overlucid? We have with

them the same difficulty that we have in seeing empty space.)

6. line *13, soul: mind.* Basic does not include the word "soul," but adds it for its version of the Bible. "Soul" identifies for us Aristotle's word here (ψυκή), but we should not lightly identify Aristotle's conception of the soul with a Christian one or with any other. He is writing psychology here, and modern psychology in spite of its name has for such uses replaced "soul" by "mind." My change would therefore not mislead unless the reader were thinking of other Greek words which would have to be translated by "mind."

7. line *18, memory.* Psychology distinguishes memory from retention, the persistence Aristotle is talking of here, and limits "memory" to remembering and what is remembered. When we remember some event we look back to it. But the effects of the event may persist without our remembering it. We do not have to remember former acts of tapping tables in order to know what sound will be made. It is retention—the persistence of past events—which forms experience here. It is not memory in the sense in which you will use your memory when you write your memoirs.

8. line *20,* a number of memories *constitute a single experience: make up one experience.* "Experience" here plainly means something very different from the most frequent current use—"That raid was a

terrific experience"—or the sense in which teachers, for example, talk so much about "worth-while experiences." In Aristotle's sense we do not get experience by just going through events but by learning something *general* or universal therein. "I regard as genuine knowledge only that which returns again as power," said Coleridge. The power is the ability to recognize, to know again that universal (or *with* that universal, if we make it the power of knowing rather than what is known).

Constitute is a troublesome word. Does it mean "set up" or "actually are"? A number of words have this same trick: *compose, consist* ("By Him all things consist—*Colossians* I:17), *form,* and *make* are examples. They are very convenient when we do not know which we mean, or when it does not matter, but they are a nuisance at places like this. The only thing to do is to explore both possibilities as far as we can. We get two theories:

a. That Aristotle is stating as a matter of fact that a number of persisting impressions develop into or cause to come into being *something else,* a universal.
b. That he is pointing out that, after all, an experience (as a universal) really is what is common to a number of persisting impressions. As soon as the impressions are taken together by the mind as being *of the same thing,* the universal is at work. They couldn't be of the *same* thing, without it.

Why a *single* experience? To raise the contrast driven home in the next sentence between the plural impressions and the one universal. We keep this use in sentences like "My experience is that such men don't go far." On the other hand, most pedagogic talk about "worth-while experiences" is about multifarious impressions.

9. line 22, *in its entirety: as a complete thing.* Universals seem hard to think of, or even self-contradictory, chiefly because we try to imagine them, to see them in the mind's eye as if they existed in space. So when we say a universal is *in* many things and *in* many minds, if we do not take these *in's* literally, at least we give them a ghost's body. We think of universals as having parts: the phrase "in its entirety" is there to defend us from this habit.

10. line 26, *the sphere of being: what is ever the same.* Science is knowledge of the unchanging. This may seem odd since the scientific worker is studying changes all the time. But what he is trying to know is the law of some change; and laws are unchanging. *Art,* since for Aristotle here it is concerned with making things, or with practical activity as in medical treatment, is a knowledge of how to make changes. Both originate in experience. The scientist would have no changes to study and the artist-workman no *things* to change, if the universals had not been stabilized in their soul as experience. They would merely be indescribable chaoses.

III

TO LEARN, COMPARE

No one can justly or successfully discover the nature of any one thing in that thing itself, or without numerous experiments which lead to farther inquiries.
FRANCIS OF VERULAM'S *Great Instauration*

WE may now pause to consider what, so far, in the process of reading as we have been observing it here in our minds, offers any suggestion toward a technique for improving reading. A number of points seem worth noting. I believe most readers will confirm them.

1. When eye reading alone does not give us a clear sense of the grammar and of the logical structure, we tend to switch speaking and hearing on. We can do this in two ways which are, as it were, degrees of realization or actualization of the sentences.

(a) We read it in imagination—producing *images* of the speech movements and of the sound of the words.

(b) We really utter the words faintly or out loud.

I have already mentioned the aid that vocal reading can be in giving structure to the argument. It is

an experimental manipulation, a testing procedure on trial-and-error lines. We shall be considering trial and error as a mode of learning in some detail shortly—in connection with motive, reward, and experience, and as to its bearing on reading. While noting that reading a thing out loud may be a great help, we should not forget that it can be a great hindrance. As the name "trial and error" (rather than "trial and triumph") suggests, there are likely to be more errors than successes. The eye is a more neutral agent than the voice. Or, to put it more fairly, the voice, if there has been failure, can easily add a very persuasive garb or garble of rhythm and intonation to support the misinterpretation. This commonly happens when the cause of the misinterpretation has been prejudice—the interference of some sentiment. Nothing is easier than to make words ring out or fall flat as we please, to our own ears—especially if we don't know we are doing it. So the chances of our detecting the twist we are giving in our reading are much reduced. When other people read things to us, we often think, "So long as you read it *that way* you can't possibly understand what it says!" We should more often be saying the same thing to ourselves. In particular, a certain querulous questioning tone—"What *can* it mean?"—is an enemy of comprehension. Read it as though it made sense and perhaps it will.

2. In addition to reading the words on the page to ourselves in various ways and with various tones, we can add to them—anything from ejaculations, de-

lighted or derisive, to an analytic commentary. Some people do no little talking to themselves while reading. For them, it is very much a part of the reading process. With argumentative matter the reader should talk back as much as possible unless he is merely fighting, talking for a victory there will be no one but himself to award. Though debate is silly, reasoning is still dialogue, as Plato said.

This touches a large theme—the different modes of reading suited to different types of writing. I will make only one comment here. It is absurd to read everything—poetry, prose, pulp—alike, especially to read it all as *fast* as possible. Whom are they fleeing from, these running readers? I fear the only answer is, "Themselves." Anything that is worth *studying* should be read *as slowly* as it will let you, and read again and again till you have it by heart. Only so will the persistencies be repeated frequently enough for a power of systematizing them to develop. But "Let us not pass an act of uniformity against poets," said Coleridge. I would add, "or against readers either." Still most of us read too fast rather than too slowly. This opinion goes bang in the teeth, I know, of the massed professional teachers of the reading art, those who are telling one another so often that they are failing to teach it. They will brandish their figures to show that the fastest readers get most. Their conception of comprehension, however, and of the aim of reading is so very different from that presented in these pages that I am not daunted. One may still ask: How do you

know they would not have got something of another order if they had not sped so fast? Have their speeding teachers themselves got quite enough out of their reading to be able to judge? And these are things which no "comprehension test" yet devised can measure. But all this belongs to our conclusions, when we have studied the process of reading in much greater detail.

3. From internal dialogue to rephrasing is a small step. Most people find that having two versions of a passage before them opens up the task of exploration immensely. This is true even when one version is clearly very inferior; its presence still throws the implications of the other into relief. So a black-and-white reproduction of a picture can make us see what the color in the original is doing. A better parallel, perhaps, is with photographic surveying. Two versions are like two views from slightly different angles. If we can fit them together, each tells us much about the things seen in the other. This parallel with visual space might be taken further: compare Chapter Six and Chapter Ten on *See*.

These effects are striking enough to promise (if we can study them successfully) some real improvement in reading. And tradition in teaching backs up this hope. Translation work has been the main technique of literary education in the past. Now no one who knows how translation—whether from Latin into English or back again or with French or German either way—is ordinarily done and has ordinarily been done

in the past will see in that dreary and largely mechanical routine any saving virtue. It is only in the best translation work, which comes after the mechanics of the strange tongue have been mastered, and only in the hands of teachers who are themselves exacting readers, that the incessant comparisons required between different ways of saying more or less the same thing become any royal road to good reading. *Thorough* mastery of a foreign language, no doubt, always improves our understanding of the mother tongue in some degree. Getting a smattering does not. Even the first steps in a foreign tongue *can* be made a profitable study of our own language, but current practice fails to do this; and the grim toil which follows consists mainly in replacing, one by one, words we hardly understand at all with words we have not time to consider—or vice versa. So my reference here to translation as a method of improving reading will not cheer up anyone to whom translation means primarily that. But there is an altogether different sort of translation in which both languages, as to the routine handling of their mechanics and the pocket-dictionary senses of their words, are fully grasped. The task then can become a deep exploration of meaning, a perfect exercise for developing resource and justice in interpretation.

The same merits can be possessed by English—English translation, if we put certain controls on it which bar out synonym trading and glosses which dodge or veil the difficulties. Basic English offers us many possibilities of such controls, which are touched

on in Chapter Seven, but here I wish to keep to the hints which reflection on our reading of the Aristotle passage may give us.

Comparison seems to be the key to all learning of this type. Learning to read is not fundamentally different from learning to be a good judge of wine, or of horses, or of men. Persistence of effects must be repeated frequently enough to become systematized. And, for progress to be rapid, effects whose similarities and differences—their sameness amid difference rather—are instructive should persist together. Some people can compare things across wide intervals of time. They go ahead faster than the rest of us. Others cannot make subtle comparisons between things which do not overlap in their effects. Everything depends, of course, on what things are being compared by whom. What I have just been saying applies chiefly to first comparisons between somewhat novel things in somewhat novel respects—the earliest stages of the systematization about which Aristotle was talking. The more any body of perceptions becomes systematized, the easier it becomes to span vast stretches of time in comparing examples within it. A real expert can identify a wine and its condition even though he has not tasted any similar wine for years. But that is only because his experience became well systematized in the bygone days when he was tasting such wines. And then, no doubt, his comparisons were not very widely spaced apart.

Now, if reading is a matter of organized comparisons between meanings, as it certainly is, it should

not be difficult to arrange things so that the best opportunities for the growth of this organization or systematization are secured. What we have to do is put the materials for distinctions and connections about which we are not clear enough *together*, so that the universals can develop through comparison. And we will do this best by using different ways of saying "the same thing" in close collocation.

But four very important qualifications must be made or this program will lead us into nothing but folly:

(a) We must know which are the important distinctions and connections.
(b) We must be very much on our guard with the phrase "the same thing."
(c) We must respect the fundamental conditions of interest.
(d) We must recognize that failure to see an important distinction or connection is most often due to our not *wanting* to see it.

I will take these up in turn, and then pass on to some experiments with another passage in the light of these reflections.

(a) I have mentioned already—when listing my hundred great words—the chief reasons which make some distinctions and connections more important than others. Let me restate them here in another form. The most important ideas (and an idea here is a form of distinction and connection) are the *necessary* ones

in the sense that we cannot do without them. They enter inevitably into all our thinking, for thinking is just another name for the operation of these ideas. Typical among them are the ideas covered by *same, different, change, cause, thing, idea, part, whole, abstract, concrete, general, special, form, implies, matter, quality,* and *relation.* Language has an inexhaustible variety of ways of expressing these ideas, and we may easily fail to notice that they are serving still as the structure of our thought. Sometimes, too, we may handle them better through language which does not make them prominent by using these bald and somewhat formidable words. More often, though, we miss a point or confuse an argument by failing to see that under the attractively novel phrasing, and behind its special graces, we have to do with the same familiar joints and muscles and bones.

To say we cannot do without these ideas may seem to get us into a difficulty. If we have them and use them all the time already, what is the point of working up great programs for teaching ourselves about them? The point is that no one is as skillful with them as he might be, and that much of the inefficiency of thought and language comes from needless blundering with these ideas. But here again we must note that skill with them is not in the least the same thing as being able to propound even the best theories about them. A first-rate authority on the foundations of mathematics might well be a poor mathematician. And so it is throughout. Our aim will not be improved theory of language but improved conduct with it.

If we can improve our conduct of these ideas, our reward is everywhere. That is why time given to the words which can handle them least confusingly is better spent than time given to distinctions and connections which are only locally useful.

If we open a dictionary of synonyms we are faced with thousands of subtle problems. The early nineteenth-century compilers used to attempt to *state* distinctions between usages—with all but uniformly absurd results. The only thing that will show us what these different implications are is watching them at work. And only then, when we see with the help of all around it what a word is doing, can we fruitfully attempt to state this, or by experiment explore differentiations. When we do so we discover that there is a certain limited set of words which we use most in such attempted elucidations. They form a language within a language—the words needed in explaining the rest of the language. The ideas these words cover are fewer than we suppose, though there is something very artificial about pretending that we can *count* such things as ideas. All we can say is that the meanings of words are relatively compound or simple, and that careful analysis *in contexts* can as a rule break down a complex meaning into simpler ideas acting together in a certain form. It is the simpler ideas (and the words which handle them best) that are the most important for us to study if we are to improve our reading. No one will pretend, of course, that an improved understanding of these ideas will by itself teach us what different things different complexes of them will

do. For that we need experience of the complexes themselves at work. But better knowledge of the simples will certainly help to form that experience of complexes at work.

(b) We have now to take a look at some of the problems behind the innocent-seeming words "say the same thing." Both "say" and "same" need our best attention. Their meanings are closely intertwined.

When something is *said,* words are uttered (whether through waves in the air or patterns of rays from the surface of paper does not matter here) which have certain effects. How widely and generally, or how narrowly and specifically, are we to take these effects? Looked at closely enough, they are never the same for two readers or for the same reader twice. Looked at undiscriminatingly enough, they are much the same always. (What other words come with them, what the situation is, and so on, must, of course, be kept in mind throughout.) Whether for practical purposes we account them *the same* depends upon two things: upon our purpose and upon the respects in which they are the same and different. (Compare Chapter Ten, on DO, for an illustration.)

All this, which is wearying to write out and still more wearing to read, we all know in a sense very well already. Yet we endlessly talk and frequently (alack) think as if in forgetfulness of it. We assert that two phrases say the same or that they do not, as if that were something which turned on the phrases alone—in utter independence of who reads them and

when and why and within what setting. Probably when we do this we are assuming a host of things: including a standard reader with some sort of normal purpose and a standard setting and range of situations. We would be very hard put to it, indeed, if we had to be specific about these assumptions. But we are rather suspiciously careful not to explore them. We take them for granted and people are only too ready, in fact, to grant them. We seem even to suffer from a fear that questioning these assumptions will lead to no good, will shake the foundations of communication perhaps and let anyone with any word mean anything he pleases.

This background fear is empty, though its roots are perhaps deep in man's first speculations about language when he first began to experience its magical powers. Nobody perhaps, after reflection, now believes that words have their meanings in their own right, as our bodies have their minds. We have replaced that old belief with another which looks much more plausible but is as groundless. It is the belief in a sort of compact or agreement between all good users of the language to use words only in certain limited ways.[1] It is true enough that we do behave with words *as if* some such compact ruled their uses. But the explanation in terms of usage agreement is wrong. The stability of the language has other causes. It comes from our experience of the ways in which

[1] I have written at some length and in detail about this in my *Interpretation in Teaching*, Harcourt Brace, New York, 1938. See Chapter XVI. Also in my *Philosophy of Rhetoric*, Oxford Press, New York, 1936, Lecture III.

words are tied up with one another. A language is a fabric which holds itself together. It is a fabric which, for the most part brokenly and confusedly but sometimes with startling and heartbreaking clarity (as we may see later), reflects the fabric of universals which is our world.

There is no risk whatever, then, in questioning the assumptions which make us say two phrases must or can't mean the same. And to be able to question them —not as a piece of linguistic theory but in practice as they come up—is a large part of the art of reading. We ought to be incessantly ready to ask of two phrases which seem "more or less to mean the same" just wherein (and for whom) are their effects alike and wherein different. And to decide whether—for the purpose in hand, which is what the whole passage is swayed by—the differences are relevant. If they are not, we can be indifferent to them. But with a slight change in the purpose they might become very important. Any ruling on such points which does not take the purpose into account *is* an attack on language. We ought to fear pedants who cry, "But that *isn't* the meaning of the word," much more than any rash or wanton innovator.

One other quirk in our behavior with phrases said to mean the same is also perhaps connected with remnants of magical beliefs. My Basic English version of the Aristotle passage, for example, says, *more or less*, what the Oxford translation says. In comparing two versions our minds sometimes perform this antic: instead of regarding them as two sets of words

which in some ways have similar outcomes in other ways different, we may suddenly find ourselves thinking, of one, "So *that* is what he was trying to say!" We are then likely to follow it up with, "It's a pity he didn't say it!" In extreme cases (and none such will probably occur in this instance) what happens is that the reader then identifies the thought with the *words* of the version he prefers. They become for him what the other passage is (inefficiently) saying, and he makes no comparison between meanings. He is helped in this by the chief regular systematic ambiguity of *say:* We say certain words and then *they* may say more than we are saying with them. These three *say's* say very different things—as we see if we replace them with more explicit phrases: We give voice to certain words and then they may be taken to mean more than we have in mind.

(c) There are few important words which are not in varying patterns systematically ambiguous; *say* is typical. These *regular* shifts of sense as a rule give us little trouble in reading. Later, in Chapter Eight, I distinguish them as Part-Whole Shifts. But all untechnical words also *change* their meanings from place to place in discourse under the pressures of the purpose and the setting. And these Sense Content Changes (see Chapter Nine), because they are so closely related to the purpose, are specially important to follow. We need not *notice* them and usually do not; but we must submit to them if we are not to misread. But because they are made against the resistance of the word's normal relations with other words, the likelihood of misreading is considerable. If we accept the change we will probably never be aware that it occurred. If we don't, then we will either boggle at the passage and find discontinuity or nonsense in it, or more probably we will go on happily assured of a meaning which a better reader would see was not intended. If an author's purposes lead him to change the meanings of too many words, people do not go on reading him. He becomes too hard to follow—unless he is so great a writer and so adroit in relating his changes to one another that he reshapes language for us. Shakespeare is the great example. The interest of what he is doing has made us accept an experimental handling of language which otherwise would have been unreadable. He wrote, though, for an audience which was very skillful in interpretation. Thus language protects itself.

It is possible to collect examples of important words pushed out of their normal uses by various pressures. The great dictionaries contain such collections in an early, as yet little organized, stage of development. By drawing on these collections and appending paraphrases to show how words which in one place say one thing in another say another, tables and exercises affording unlimited opportunities for comparisons can be prepared. It might well be thought that these would provide the best means of improving reading. The traditional grammar books, however, by failing to teach the lessons they intended, have taught us another, of more value perhaps. We do not learn lin-

guistic points from tables and examples; we learn through using the language—not in exercises but in the pursuit of a meaning we are seeking for a specific not a general purpose. In other words, the desire to improve our reading, worthy though it is, won't help us unless it operates through the work of puzzling out a passage because we care what it says. The persistencies of effects—no matter how well we make them overlap—will not systematize themselves into experience (knowledge that returns as power) unless they are heated by an immediate sustaining interest.

(d) But interest, the great weldor (as the weldors spell it now, a *welder* being a machine: compare *actor* and *sailor*) of universals, is also the great logic-breaker. If we want to, or if something in us wants to establish something, we grow blind to any thwarting idea, however familiar it is or however obvious it might otherwise be; we deform our distinctions and connections to meet our aim, commit every sort of injustice and make the very word "argument" a term of derision. Mercury, the interpreter and messenger of Heaven, was also the patron god of rogues.

Most mistakes in reading look willful—not only to the man in the other camp but to the impartial eye. Few of them are, but it is harder to be fair-minded in reading than we know, and a passion for the truth is misinterpretation's favorite guise.

I propose, then, that we study now in detail an example of controversial misreading. It is from the pen

of a trenchant writer and accomplished scholar, and illustrates, I believe, some of the most powerful and frequent techniques of misrepresentation with unusual clarity. With this, of course, I am prejudicing the case as much as I can. I am doing it of set purpose, counting on your natural tendency to ask if *I* am not perhaps doing the misreading. The passages I cite have the advantage that they take up again from another angle the problem of learning by experience. They take it up under the heading Learning by Trial and Error. We shall thus have the opportunity, while studying our own proceedings in reading them, to compare our interpretations with those we formed of Aristotle's teaching. In order to refresh and amplify these, I will close this chapter with the paragraphs in which Aristotle summarizes his view.[2]

We conclude that these states of knowledge are neither innate in a determinate form, nor developed from other higher states of knowledge, but from sense-perception. It is like a rout in battle stopped by first one man making a stand and then another, until the original formation has been restored. The soul is so constituted as to be capable of this process.

Let us now restate the account given already, though with insufficient clearness. When one of a number of logically indiscriminable particulars has made a stand, the earliest universal is present in the soul: for though the

[2] I am indebted to the Clarendon Press for permission to make these citations from the translation of the *Posterior Analytics* by G. R. G. Mure, "The Works of Aristotle," under the editorship of W. D. Ross.

act of sense-perception is of the particular, its content is universal—is man, for example, not the man Callias. A fresh stand is made among these rudimentary universals, and the process does not cease until the indivisible concepts, the true universals, are established: e. g., such and such a species of animal is a step towards the genus animal, which by the same process is a step towards a further generalization.

IV

RANDOM SCRATCHING AND CLAWING

For however men may amuse themselves, and admire, or almost adore the mind, it is certain, that like an irregular glass, it alters the rays of things, by its figure, and different intersections.

FRANCIS OF VERULAM'S *Great Instauration*

MY passages come from Chapter XII of R. G. Collingwood's *Metaphysics*.[1] Its title is "A Pseudo-Science Refutes Itself," which gives us fair warning. The pseudo-science is psychology. I happen myself to have a strong prejudice against the sort of psychology Collingwood is attacking, and considerable sympathy with his philosophic positions as I understand them, so I seem to be well placed to observe his proceedings. He begins:

Among the characteristic features of a pseudo-science are the following. (1) Red herrings, or the pretence of discussing a topic belonging to the field with which it professes to deal, while in fact discussing a different topic not belonging to that field. . . .

1. *Example of Red Herrings.* I take a standard textbook, Professor W. McDougall's *Outline of Psychology*, and

[1] R. G. Collingwood, *An Essay on Metaphysics*, Clarendon Press, 1940.