HOW TO READ A BOOK



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Chapter 6

Pigeonholing a Book

We said at the beging of this book that the instruction in reading that it provides applies to anything you have to or want to read. However, in expounding the rules of analytical reading, as we will do in Part Two, we may seem to be ignoring that fact. We will usually, if not always, refer to the reading of whole books. Why is this so? The answer is simple. Reading a whole book, and especially a long and difficult one, poses the severest problems any reader can face. Reading a short story is almost always easier than reading a novel; reading an article is almost always easier than reading a book on the same subject. If you can read an epic poem or a novel, you can read a lyric or a short story; if you can read an expository book—a history, a philosophical work, a scientific treatise—you can read an article or abstract in the same field. Hence everything that we will say about reading books applies to reading other materials of the kinds indicated. You are to understand, when we refer to the reading of books, that the rules expounded refer to lesser and more easily understood materials, too. Sometimes the rules do not apply to the latter in quite the same way, or to the extent that they apply to whole books. Nevertheless, it will always be easy for you to adapt them so that they are applicable. The

Importance of Classifying Books The first rule of analytical

reading can be expressed as follows: Rule 1. You must know what kind of bok you are reading, and you should know this as early in the process as possible, preferably before you begin to read. You must know, for instance, whether you are reading fiction—a novel, a play, an epic, a lyric—or whether it is an expository work of some sort. Almost every reader knows a work of fiction when he sees it. Or so it seems—and yet this is not always easy. Is Portnoy's Complaint a novel or a psychoanalytical 42 CHAPTER 6. PIGEONHOLING A BOOK 43 study? Is Naked Lunch a fiction or a tract against drug abuse, similar to the books that used to recount the horrors of alcohol for the betterment of readers? Is Gone with the Wind a romance or a history of the South before and during the Civil War? Do Main Street and The Grapes of Wrath belong in the category of belles-lettres or are both of them sociological studies, the one concentrating on urban experiences, the other on agrarian life? All of these, of course, are novels; all of them appeared on the fiction side of the best-seller lists. Yet the questions are not absurd. Just by their titles, it would be hard to tell in the case of Main Street and Middletown which was fiction and which was social science. There is so much social science in some contemporary novels, and so much fiction in much of sociology, that it is hard to keep them apart. But there is another kind of science, too—physics and chemistry, for instance—in books like The Andromeda Strain or the novels of Robert Heinlein or Arthur C. Clarke. And a book like The Universe and Dr. Einstein, while clearly not fiction, is almost as

"readable" as a novel, and probably more readable than some of the novels of, say, William Faulkner. An expository book is one that conveys knowledge primarily, "knowledge" being construed broadly. Any book that consists primarily of opinions, theories, hypotheses, or speculations, for which the claim is made more or less explicitly that they are true in some sense, conveys knowledge in this meaning of knowledge and is an expository work. As with fiction, most people know an expository work when they see it. Here, however, the problem is not to distinguish nonfiction from fiction, but to recognize that there are various kinds of expository books. It is not merely a question of knowing which books are primarily instructive, but also which are instructive in a particular way. The kinds of information or enlightenment that a history and a philosophical work afford are not the same. The problems dealt with by a book on physics and one on morals are not the same, nor are the methods the writers employ in solving such different problems. Thus this first rule of analytical reading, though it is applicable to all books, applies particularly to nonfictional, expository works. How do you go about following the rule, particularly its last clause? As we have already suggested, you do so by first inspecting the book—giving it an inspectional reading. You read the title, the subtitle, the table of contents, and you at least glance at the preface or introduction by the author and at the index. If the book has a dust jacket, you look at the publisher's blurb. These are the signal flags the author waves to let you know which way the wind is blowing. It is not

his fault if you will not stop, look, and listen. What You Can Learn from the Title of a Book The numbers of readers who pay no attention to the signals is larger than you might expect. We have had this experience again and again with students. We have asked them what a book was about. We have asked them, in the most general terms, to tell us what sort of book it was. This is a good way, almost CHAPTER 6. PIGEONHOLING A BOOK 44 an indispensable way, to begin a discussion of a book. Nevertheless, it is often hard to get any kind of answer to the question. Let us take a couple of examples of the kind of confusion that can occur. In 1859, Darwin published a very famous book. A century later the entire English-speaking world celebrated the publication of the book. It was discussed endlessly, and its influence was assessed by learned and not-solearned commentators. The book was about the theory of evolution, and the word "species" was in the title. What was the title? Probably you said The Origin of Species, in which case you were correct. But you might not have said that. You might have said that the title was The Origin of the Species. Recently, we asked some twenty-five reasonably wellread persons what the title of Darwin's book was and more than half said The Origin of the Species. The reason for the mistake is obvious; they supposed, never having read the book, that it had something to do with the development of the human species. In fact, it has little or nothing to do with that subject, which Darwin covered in a later book, The Descent of Man. The Origin of Species is about what its title says it is about—namely the

proliferation in the natural world of a vast number of species of plants and animals from an originally much smaller number of species, owing mainly to the principle of natural selection. We mention this common error because many think they know the title of the book, although few have actually ever read the title carefully and thought about what it means. Here is another example. In this case we will not ask you to remember the title, but to think about what it means. Gibbon wrote a famous, and famously long, book about the Roman Empire. He called it The Decline and Fall of the Roman Empire. Almost everybody who takes up the book recognizes that title; and most people, even without the book in their hand, know the title. Indeed, the phrase "decline and fall" has become proverbial. Nevertheless, when we asked the same twenty-five well-read people why the first chapter is called "The Extent and Military Force of the Empire in the Age of the Antonines," they had no idea. They did not see that if the book as a whole was titled Decline and Fall, then it might be assumed that the narrative would begin with the high point of the Roman Empire, and continue through to the end. Unconsciously, they had translated "decline and fall" into "rise and fall." They were puzzled because there was no discussion of the Roman Republic, which ended a century and a half before the Age of the Antonines. If they had read the title carefully they could have assumed that the Age of the Antonines was the high point of the Empire, even if they had not known it before. Reading the title, in other words, could have given them essential information about the book before

they started to read it; but they had failed to do that, as most people fail to do even with an unfamiliar book. One reason why titles and prefaces are ignored by many readers is that they do not think it important to classify the book they are reading. They do not follow this first rule of analytical reading. If they tried to follow it, they would be grateful to the author for helping them. Obviously, the author thinks it is important for the reader to know the kind of book he is being given. That is CHAPTER 6. PIGEONHOLING A BOOK 45 why he goes to the trouble of making it plain in the preface, and usually tries to make his title—or at least his subtitle—descriptive. Thus, Einstein and Infeld, in their preface to The Evolution of Physics, tell the reader that they expect him to know "that a scientific book, even though popular, must not be read in the same way as a novel." They also construct an analytical table of contents to advise the reader in advance of the details of their treatment. In any event, the chapter headings listed in the front serve the purpose of amplifying the significance of the main title. The reader who ignores all these things has only himself to blame if he is puzzled by the question, What kind of book is this? He is going to become more perplexed. If he cannot answer that question, and if he never asks it of himself, he is going to be unable to answer a lot of other questions about the book. Important as reading titles is, it is not enough. The clearest titles in the world, the most explicit front matter, will not help you to classify a book unless you have the broad lines of classification already in your mind. You will not know the

sense in which Euclid's Elements of Geometry and William James' Principles of Psychology are books of the same sort if you do not know that psychology and geometry are both sciences—and, incidentally, if you do not know that "elements" and "principles" mean much the same thing in these two titles (though not in general), nor will you further be able to distinguish them as different unless you know there are different kinds of science. Similarly, in the case of Aristotle's Politics and Adam Smith's The Wealth of Nations, you can tell how these books are alike and different only if you know what a practical problem is, and what different kinds of practical problems there are. Titles sometimes make the grouping of books easy. Anyone would know that Euclid's Elements, Descartes' Geometry, and Hilbert's Foundations of Geometry are three mathematical books, more or less closely related in subject matter. This is not always the case. It might not be so easy to tell from the titles that Augustine's The City of God, Hobbes' Leviathan, and Rousseau's Social Contract are political treatises, although a careful perusal of their chapter headings would reveal the problems that are common to these three books. Again, however, to group books as being of the same kind is not enough; to follow this first rule of reading you must know what that kind is. The title will not tell you, nor all the rest of the front matter, nor even the whole book itself sometimes, unless you have some categories you can apply to classify books intelligently. In other words, this rule has to be made a little more intelligible if you are to follow it intelligently. It can

only be made intelligible by drawing distinctions and thus creating categories that make sense and will stand up to the test of time. We have already discussed a rough classification of books. The main distinction, we said, was between works of fiction, on the one hand, and works conveying knowledge, or expository works, on the other hand. Among expository works, we can further distinguish history from philosophy, and both from science and mathematics. Now this is all very well as far as it goes. This is a classification scheme with fairly perspicuous categories, and most people could probably place most CHAPTER 6. PIGEONHOLING A BOOK 46 books in the right category if they thought about it. But not all books in all categories. The trouble is that as yet we have no principles of classification. We will have more to say about these principles as we proceed in our discussion of the higher levels of reading. For the moment, we want to confine ourselves to one basic distinction, a distinction that applies across the board to all expository works. It is the distinction between theoretical and practical works. Practical vs. Theoretical Books Everyone uses the words "theoretical" and "practical," but not everyone knows what they mean, perhaps least of all the hardheaded practical man who distrusts all theorists, especially if they are in the government. For such persons, "theoretical" means visionary or even mystical; "practical" means something that works, something that has an immediate cash return. There is an element of truth in this. The practical has to do with what works in some way, at once or in the long run. The theoretical

concerns something to be seen or understood. If we polish the rough truth that is here being grasped, we come to the distinction between knowledge and action as the two ends a writer may have in mind. But, you may say, in dealing with expository books, are we not dealing with books that convey knowledge? How does action come into it? The answer, of course, is that intelligent action depends on knowledge. Knowledge can be used in many ways, not only for controlling nature and inventing useful machines or instruments but also for directing human conduct and regulating man's operations in various fields of skill. What we have in mind here is exemplified by the distinction between pure and applied science, or, as it is sometimes very inaccurately expressed, between science and technology. Some books and some teachers are interested only in the knowledge itself that they have to communicate. This does not mean that they deny its utility, or that they insist that knowledge is good only for its own sake. They simply limit themselves to one kind of communication or teaching, and leave the other kind to other men. These others have an interest beyond knowledge for its own sake. They are concerned with the problems of human life that knowledge can help to solve. They communicate knowledge, too, but always with a view to and an emphasis upon its application. To make knowledge practical we must convert it into rules of operation. We must pass from knowing what is the case to knowing what to do about it if we wish to get somewhere. This can be summarized in the distinction between knowing that and

knowing how. Theoretical books teach you that something is the case. Practical books teach you how to do something you want to do or think you should do. This book is practical, not theoretical. Any guidebook is a practical book. Any book that tells you either what you should do or how to do it is practical.

Thus you see that the class of practical books includes all expositions of arts to be learned, all manuals of practice in any field, such as engineering or medicine CHAPTER 6.

PIGEONHOLING A BOOK 47 or cooking, and all treatises that are conveniently classified as moral, such as books on economic, ethical, or political problems. We will later explain why this last group of books, properly called "normative," constitutes a very special category of practical books. Probably no one would question our calling expositions of arts to be learned and manuals or rule books, practical works. But the "practical" man to whom we have referred might object to the notion that a book on ethics, say, or one on economics, was practical. He might say that such a book was not practical because it was not true or would not work. In fact, this is irrelevant to the point, although a book about economics that is not true is a bad book. Strictly speaking, any ethical work teaches us how to live our lives, tells us what we should do and not do, and often informs us of the rewards and punishments attached to doing and not doing it. Thus, whether or not we agree with its conclusions, any such work is practical. (Some modern sociological studies merely report the actual behavior of men, without judging it.

These are neither ethical nor practical books. They are

theoretical works—works of science.) Similarly with a work on economics. Apart from reportorial, mathematical, or statistical studies of economic behavior, which are theoretical rather than practical, such works usually teach us how to organize our economic life, either as individuals or as societies or states, tell us what we should do and not do, and also inform us of the penalties involved if we do not do what we should. Again, we may disagree, but our disagreement does not make the book unpractical. Immanuel Kant wrote two famous philosophical works, one called The Critique of Pure Reason, the other, The Critique of Practical Reason. The first is about what is and how we know it—not how to know it, but how we in fact do know it—as well as about what can and cannot be known. It is a theoretical book par excellence. The Critique of Practical Reason is about how men should conduct themselves and about what constitutes virtuous or right conduct. This book places great emphasis on duty as the basis of all right action, and that emphasis may seem repellent to many modern readers. They may even say it is "impractical" to believe that duty is any longer a useful ethical concept. What they mean, of course, is that Kant is wrong, in their opinion, in his basic approach. But that does not mean that his book is any less a practical work in the sense we are employing here. Apart from manuals and moral treatises (in the broad sense) one other instance of practical writing should be mentioned. An oration a political speech or moral exhortation—certainly tries to tell you what you should do or how you should feel about

something. Anyone who writes practically about anything not only tries to advise you but also tries to persuade you to follow his advice. Hence there is an element of oratory or exhortation in every moral treatise. It is also present in books that try to teach an art, such as this one. Thus, in addition to trying to teach you to read better, we have tried, and will continue to try, to persuade you to make the effort to do so. Although every practical book is somewhat oratorical and hortatory, it does not follow that oratory and exhortation are coextensive with the practical. CHAPTER 6. PIGEONHOLING A BOOK 48 There is a difference between a political harangue and a treatise on politics, between economic propaganda and an analysis of economic problems. The Communist Manifesto is a piece of oratory, but Marx's Capital is much more than that. Sometimes you can detect that a book is practical by its title. If the title contains such phrases as "the art of" or "how to," you can spot it at once. If the title names fields that you know are practical, such as ethics or politics, engineering or business, and in many cases economics, law, or medicine, you can classify the book fairly readily. Titles can tell you even more than that. John Locke wrote two books with similar titles: An Essay Concerning Human Understanding and A Treatise Concerning the Origin, Extent, and End of Civil Government. Which of these is theoretical, which practical? From the titles alone we may conclude that the first is theoretical, because any analysis of understanding would be theoretical, and that the second is

practical, because problems of government are themselves

practical. But one could go beyond that, employing the techniques of inspectional reading that we have described. Locke wrote an introduction to the book on understanding. There he expressed his intention as being to inquire into the "origin, certainty, and extent of human knowledge." The phrasing resembles the title of the book on government, but with one important difference. Locke was concerned with the certainty or validity of knowledge in the one case, and with the end or purpose of government in the other. Questions about the validity of something are theoretical, whereas to raise questions about the end of anything, the purpose it serves, is practical. In describing the art of inspectional reading, we noted that you should not ordinarily stop after reading the front matter of a book and perhaps its index. You should read passages in the book that appear to be of a summary nature. You should also read the beginning and end of the book and of its major parts. This becomes necessary when, as is sometimes the case, it is impossible to classify a book from its title and other front matter. In that case, you have to depend on signs to be found in the main body of the text. By paying attention to the words and keeping the basic categories in mind, you should be able to classify a book without reading very far. A practical book will soon betray its character by the frequent occurrence of such words as "should" and "ought," "good" and "bad," "ends" and "means." The characteristic statement in a practical book is one that says that something should be done (or made); or that this is the right way of doing (or making) something; or

that one thing is better than another as an end to be sought, or a means to be chosen. In contrast, a theoretical book keeps saying "is," not "should" or "ought." It tries to show that something is true, that these are the facts; not that things would be better if they were otherwise, and here is the way to make them better. Before turning to theoretical books, let us caution you against supposing that the problem is as simple as telling whether you are drinking coffee or milk. We have merely suggested some signs whereby you can begin to make CHAPTER 6. PIGEONHOLING A BOOK 49 discriminations. The better you understand everything that is involved in the distinction between the theoretical and the practical, the better you will be able to use the signs. For one thing, you will have to learn to mistrust them. You have to be suspicious in classifying books. We have noted that although economics is primarily and usually a practical matter, there are nevertheless books on economics that are purely theoretical. Similarly, although understanding is primarily and usually a theoretical matter, there are books (most of them are terrible) that purport to teach you "how to think." You will also find authors who do not know the difference between theory and practice, just as there are novelists who do not know the difference between fiction and sociology. You will find books that are partly of one sort and partly of another, such as Spinoza's Ethics. It remains, nevertheless, to your advantage as a reader to detect the way an author approaches his problem. Kinds of Theoretical Books The traditional subdivision of theoretical books classifies them

as history, science, and philosophy. Everybody knows the differences here in a rough way. It is only when you try to refine the obvious, and give the distinctions greater precision, that you get into difculties. For the moment, let us try to skirt that danger and let rough approximations suffice. In the case of history, the title usually does the trick. If the word "history" does not appear in the title, the rest of the front matter is likely to inform us that this is a book about something that happened in the past—not necessarily in the far past, of course, because it may have happened only yesterday. The essence of history is narration. History is knowledge of particular events or things that not only existed in the past but also underwent a series of changes in the course of time. The historian narrates these happenings and often colors his narrative with comment on, or insight into, the significance of the events. History is chronotopic. Chronos is the Greek word for time, topos the Greek word for place. History always deals with things that existed or events that occurred on a particular date and in a particular place. The word "chronotopic" can remind you of that. Science is not concerned with the past as such. It treats of matters than can happen at any time or place. The scientist seeks laws or generalizations. He wants to find out how things happen for the most part or in every case, not, as the historian does, how some particular things happened at a given time and place in the past. The title of a scientific work is usually less revealing than the title of a history book. The word "science" sometimes appears, but more often the name of the subject

matter appears, such as psychology or geology or physics. Then we must know whether that subject matter belongs to the scientist, as geology clearly does, or to the philosopher, as metaphysics clearly does. The trouble comes with the cases that are not so clear, such as physics and psychology, which CHAPTER 6. PIGEONHOLING A BOOK 50 have been claimed, at various times, by both scientists and philosophers. There is even trouble with the very words "philosophy" and "science," for they have been variously used. Aristotle called his book on Physics a scientific treatise, although according to current usage we should regard it as philosophical; and Newton titled his great work Mathematical Principles of Natural Philosophy, though for us it is one of the masterpieces of science. Philosophy is like science and unlike history in that it seeks general truths rather than an account of particular events, either in the near or distant past. But the philosopher does not ask the same questions as the scientist, nor does he employ the same kind of method to answer them. Since titles and subjectmatter names are not likely to help us determine whether a book is philosophical or scientific, how can we tell? There is one criterion that we think always works, although you may have to read a certain amount of the book before you can apply it. If a theoretical book emphasizes things that lie outside the scope of your normal, routine, daily experience, it is a scientific work. If not, it is philosophical. The distinction may be surprising. Let us illustrate it. (Remember that it applies only to books that are either science or philosophy, not to books that are neither.)

Galileo's Two New Sciences requires you to imagine, or to repeat for yourself in a laboratory, certain experiments with inclined planes. Newton's Opticks refers to experiences in dark rooms with prisms, mirrors, and specially controlled rays of light. The special experience to which the author refers may not have been obtained by him in a laboratory. The facts that Darwin reported in The Origin of Species he observed in the course of many years of work in the field. They are facts that can be and have been rechecked by other observers making a similar effort. But they are not facts that can be checked in terms of the ordinary daily experience of the average man. In contrast, a philosophical book appeals to no facts or observations that lie outside the experience of the ordinary man. A philosopher refers the reader to his own normal and common experience for the verification or support of anything the writer has to say. Thus, Locke's Essay Concerning Human Understanding is a philosophical work in psychology, whereas many of Freud's writings are scientific. Locke makes every point in terms of the experience all of us have of our own mental processes. Freud can make many of his points only by reporting what he observed under the clinical conditions of the psychoanalyst's office. William James, another great psychologist, took an interesting middle course. He reports many examples of the special experience that only the careful, trained observer can know about, but he also frequently asks the reader to judge whether what is being said is not true from his own experience. Thus James' Principles of Psychology is

both a scientific and a philosophical work, although it is primarily scientific. The distinction proposed here is popularly recognized when we say that science is experimental or depends upon elaborate observational researches, whereas philosophy is merely armchair thinking. The contrast should not be invidious. There are certain problems, some of them very important, that can be CHAPTER 6. PIGEONHOLING A BOOK 51 solved in an armchair by a man who knows how to think about them in the light of common, human experience. There are other problems that no amount of the best armchair thinking can solve. What is needed to solve them is investigation of some sort—experiments in the laboratory or research in the field—extending experience beyond the normal, everyday routine. Special experience is required. This does not mean that the philosopher is a pure thinker and the scientist merely an observer. Both have to observe and think, but they think about different sorts of observations. And however they may have arrived at the conclusions that they want to prove, they prove them in different ways, the scientist by pointing to the results of his special experiences, the philosopher by pointing to experiences that are common to all. This difference in method always reveals itself in philo sophical and scientific books, and that is how you can tell which sort of book you are reading. If you note the sort of experience that is being referred to as a condition of understanding what is being said, you will know whether the book is scientific or philosophical. It is important to know this because, apart from the different kinds of

experiences that they depend on, scientists and philosophers do not think in exactly the same way. Their styles in arguing are different. You must be able to find the terms and propositions—here we are getting a little ahead of ourselves that constitute these different sorts of argumentation. The same is true of history. Historical statements are different from scientific and philosophical ones. A historian argues differently and interprets facts differently. Furthermore, the typical history book is narrative in form. A narrative is a narrative, whether it be fact or fiction. The historian must write poetically, which means he must obey the rules for telling a good story. Whatever other excellences Locke's Essay on Human Understanding or Newton's Principia may have, neither is a good story. You may object that we are making too much of the classification of books, at least before one has read them. Is it really all that important? We may be able to meet the objections by calling your attention to one obvious fact. If you walked into a classroom in which a teacher was lecturing or otherwise instructing students, you could tell very soon whether the class was one in history, science, or philosophy. There would be something in the way the teacher proceeded, the kind of words he used, the type of arguments he employed, the sort of problems he proposed, and the kind of responses he expected from his students, that would give him away as belonging to one department or another. And it would make a difference to you to know this, if you were going to try to listen intelligently to what went on. In short, the methods of teaching

different kinds of subject matter are different. Any teacher knows this. Because of the difference in method and subject matter, the philosopher usually finds it easier to teach students who have not been previously taught by his colleagues, whereas the scientist prefers the student whom his colleagues have already prepared. And so forth and so on. Now, just as there is a difference in the art of teaching in different fields, so there is a reciprocal difference in the art of being taught. The activity of CHAPTER 6. PIGEONHOLING A BOOK 52 the student must somehow be responsive to the activity of the instructor. The relation between books and their readers is the same as that between teachers and their students. Hence, as books differ in the kinds of knowledge they have to communicate, they proceed to instruct us differently; and, if we are to follow them, we must learn to read each kind in an appropriate manner.