circle—followed by the year and your name. Since March 1, 1989, this copyright line is not a legal requirement, but it is recommended as a deterrent to unauthorized use of your work as a whole or in part. Technically, it is “notice,” a warning that the work is not in the public domain. Works published on or after January 1, 1978, are protected from the day they are produced until the end of the author’s life, plus fifty years.

What about your broadcast talk, which someone tapes, transcribes, duplicates, and sells to students for classroom use? The answer is that you must enter your prohibition ahead of time, when you sign the usual agreement with the radio or television station, especially if the station is that of a college or university: allow as many rebroadcasts as you wish, but no transcripts of your words without your permission in writing, and even then with the notice of your copyright as shown above.

When your work is a book, the publisher will usually be committed by contract to obtaining the copyright either in your name or in the firm’s, without either choice implying any rights as to payment for the use of the material. This registration is performed by applying to the Register of Copyrights in Washington, D.C. It should be done in the first three months of the book’s existence. If there is an infringement of its contents, the perpetrator is liable for statutory damages and attorneys’ fees. If registering is done later, only actual damages and profits may be claimed.

If your work is for a magazine, it is protected by the publisher’s getting a copyright on the entire issue. Unless otherwise specified and agreed to, you have granted the publisher only “first publication rights.”15 Once out in that form, absent an agreement to the contrary, it belongs to you again and in full, just as if it were fresh from the mint. Later, in collecting your articles into a book, it is a usual courtesy to thank and name for each item the original publisher: it is also customary, not mandatory, to obtain permission to reprint.16

Advantages versus Drawbacks

What is gained by learning a large number of new and arbitrary moves? One’s re-education gives the power to do many more things mechanically. One can correct and revise (“edit”) text without erasing; one can insert and move and delete text without

1Writers who compose or used to compose at a typewriter find the change to a computer a shorter leap to make, but it is still a leap. The typewriter responds simply and in plain sight to a few sure-fire commands.
cutting and pasting; one can type in footnotes and endnotes with little effort and perfect regularity; one can get pages numbered automatically; one can make as many copies of the finished product as desired; and one can store (“save”) the original in the machine for further revision and the printing of copies at a later time; one can sort research notes quickly and in several different ways; one can even index a book; and with access to the Internet (as we saw) one can get information in abundance.

These are the main advantages of the computer. There are others, such as automatic alphabetizing, checking for typos and spelling, counting words, entering running heads, changing spacing and layout, inserting drawings and tables, as well as not having to take thought or action for the words to run on from the end of the line to the next (“wordwrap”).

But there are constraints. One should be a touch typist and capable of fingerling two dozen additional keys, as well as a “mouse” with three functions. For revising, too, the screen shows only half a page at a time. The beginner must also be prepared for at least three weeks of maddening resistance from the device. It seems not to perform a second time what it readily did the first. This is not altogether an illusion, but for most purposes one need only respect the computer’s demand for the strict repetition of moves. It is not a mathematical device; but a logical one, as indicated by the better name by which it is known in some Continental languages: “ordinator.” It puts in order the successive steps of any operation and will not respond to a sequence that differs.

Other drawbacks include possible effects on the user’s health. Much has been written on the subject, and as a result California has passed a law requiring businesses to observe certain precautions. To be safe from the screen’s low-frequency magnetic radiation, the viewer is urged to sit twenty-eight inches away. And to avoid painful conditions affecting the neck, back, wrist, and lower arm, rest periods of fifteen minutes every two hours have been mandated. Less likely afflictions are esophoria (overconverging of the eyes) and hypophoria (seeing an object higher with one eye than with the other).

A Few Rudiments for Beginners

Supposing that you have made up your mind and bought a computer, one of the first difficulties you will find is that the manuals for the various programs are unsatisfactory. They are very thick books, full of illustrations, but they leave almost as many mysteries as they clear up. The vocabulary devised by the engineers for the parts and functions of the device is poorly designed for communication; it is now set and must be learned, and besides, the manuals overlook important terms and operations. The smaller books that come with the machine are still less adequate; they disclose only some of the functions it can perform. One comes across the other uses by chance or by conversation with friends or instructors. In fact, most beginners are well advised to take a one- or two-day course in the use of the program they choose. It may therefore help the prospective user if we mention a few of the working principles behind the detailed functions. Practiced users can skip to the next section p. 297.

The digital computer relies on a simple device: the switch—not of course an ordinary switch, but a complex form to do a simple thing: it controls the transfer of current or resistance—hence the name “trans-sistor.” In alternating this flow of power at amazing speed it creates two “states” that can be made to carry significance: “on” represents the figure 1, “off” is zero. The pulsing is arranged so as to create permutations of these digits within a block of eight called a byte, for example, 01101010. Each byte thus represents a letter, number, or control symbol, which is magnetically recorded on a suitable surface. Reversing the process is what is meant by “reading” that record in the computer’s “memory,” namely that same surface. To manage the various recording disks and reading “heads” is the role of the central unit—the
"microprocessor," the heart of the machine. The storage capacity or "memory" of any model is expressed in thousands or millions of bytes (kilobyte, megabyte). One megabyte of memory holds more than one million characters (letters or numbers).

A computer’s ability to perform consists of three powers: first, what the computer is built to do; next, what the "operating system" organizes in one part of the memory. Think of the former power as the nature of the unit and of the latter as its acquired habits. Third and last is the ability of the system to record whatever the user wishes and to handle it as he ordains.³

³Another analogy, for musicians: the computer is the instrument, with its particular range and timbre. The operating system is the clef marked on the staff, and the program is the key signature—the sharps and flats appear there. The composer then sets down whatever he wants within the three sets of conditions.

This last capacity goes by the misleading name of Random Access Memory (RAM). Far from random, access is precisely directed. Suppose you are working on page 10 of your project and want to refer to an earlier passage. By clicking the mouse you "scroll back" (a good clear term) to page 6, which contains what you need. You find there cause to recall something else, say in the chapter you wrote last week. You summon it up without losing your current place, and can compare statements by splitting the screen into two "windows" that display the passages together.

Inquiring spirits will want to know more about the structure of the computer, the ways of programming (telling it all it must do), and the conclusions of those who design it, when they are inclined to reflect on the consequences of its role. All this can be found in The Philosophical Programmer, by Daniel Kohansky (1998). For a convenient travel guide to the digital world, read The Internet Handbook by McGuire, Stilborne, McAdams, and Hyatt (1997). Word processing, i.e., composing text, is but one of a choice of functions. Others are: the making of spreadsheets (tables, statistics, financial statements, and the like); of databases (filing systems, as for notecards); and of graphics (drawings and diagrams). So much by way of introduction to digital composition.

The Whole Circle of Work: Editing a Classic

The quality of your writing gives the general reader a fair idea of your mind at work. But to a professional judge the test of skill is editing a source or a classic. It is the application of all the components of research; it calls for intellect and not mere attention to detail. The editor of a well-known work has a double obligation, to his author and to his readers. The author’s text must be presented faithfully and also intelligibly. This means recording variants from different editions, explaining allusions, identifying names, and clearing up apparent or real errors and contradictions. An able editor may also want to indicate sources and influences and offer a judgment on points that over the years have created controversies. The latest editor settles everything for his author’s
benefit and the public's, and produces a readable text. A modern practice tends to make the apparatus overwhelm the text. Variants are stuck between brackets in the middle of a sentence, and a blizzard of notes and symbols blankets the comments. The good scholarly editor explains only what needs explanation and disposes his remarks artfully, so that the reader who does not need a particular identification can ignore it easily and the reader who does can find it just as easily. Variants should not pop up where they distract.

Framing explanatory footnotes is by no means easy. It calls for combining scattered facts to throw light on a particular point. For example, identifying an obscure name: "Claude Ruggieri (fl. 1630) was descended from a large family of pyrotechnic experts who came to France under Louis XIV and who maintained their specialty through the ensuing regimes." Or again, about a source: "This supplement, dated 1867, does not occur in the National Edition of Mazzini's works, but only in the six-volume English selection from the writings. It is therefore given in the words of the English translator of that edition, who presumably worked from the Italian original." Conciseness is imperative; for the editor has invariably turned up more information than was needed; he must not be tempted to unload it all on the reader. For a model of intelligent editing see Roy P. Basler's Collected Works of Abraham Lincoln.

Speaking What You Have Learned

The researcher no doubt looks to the printed word as the means by which his findings will reach others. But latterly, thanks to talk shows, the public already used to the Sunday sermon willingly attends innumerable lectures. So a few words on giving a talk will suggest attitudes and habits that are desirable for lecturing. The two facts to ascertain before preparing any sort of talk are: "how long am I expected to speak?" and "who and how many are expected to attend?" The first determines the amount and kind of material to present; the second, the vocabulary, tone, and degree of complexity that are appropriate. Knowing the characteristics of your audience, you can pitch your remarks at the right level. If, for example, you are addressing the League of Women Voters you can count on a degree of political sophistication that allows you to present your ideas on a public issue with confidence that it will be listened to with a ready grasp. The requirements of a freshman class at the beginning of the year or of a mixed public audience seeking diversion will naturally be different. You must supply more detail and proceed step-by-step.

An academic lecture usually lasts fifty minutes, and a practiced lecturer will find that on any subject he knows well he can deliver, without looking at the clock, fifty minutes' worth of coherent information. To prepare a lecture of any sort means carving out a subject that has unity; assembling and organizing the material; writing out a text or notes; and measuring the time of delivery. You measure by rehearsing the speech with an eye on the clock, or by writing out every word and counting. A good rate of delivery is 125 words a minute. It allows for variations of speed as well as pauses for rest or emphasis.

All lecturers should limit themselves to a few points—six at most. These ideas, conclusions, issues, questions form the invisible structure of the performance. One may announce them near the beginning, refer to any later on to show relationships, and restate them in conclusion. This device makes up for the uncertainties and elusiveness of communication by word of mouth: the listener cannot turn back the page or request "please say that again" and cannot stop and think over a new idea or interpretation. On his side, the lecturer cannot help forging ahead. When the listener is taking notes, a gap of time and thought will quickly widen between them. Hence the lecturer repeats main points in different words; the auditor gets a second chance to follow what all parties hope is consecutive thought.

4The English advocate Marshall Hall spoke, in at least one famous case, at the rate of 158 words a minute. His opponent, Rufus Isaacs, spoke 120 words a minute (Edward Marjoribanks, The Life of Sir Edward Marshall Hall, London, 1929, 307-308). These are perhaps the two extremes.
The speaker must be equipped with an aid to memory. It is all too easy to forget Point 3 when its time comes or to anticipate it at the wrong place through association of ideas. On formal occasions lecturers bring a text fully written out. Improvisation is a sign of disrespect. Among risks entailed by speaking without text, the worst is waste of time: stumbling, backtracking, and repeating tediously. With a complete text the speaker says more in the same number of minutes and says it more exactly.

On informal occasions, or on subjects frequently treated, one lectures from notes, brief or full. Full notes, such as a set of selected paragraphs or of heads and subheads when the thoughts between, are sure to come, or often in the outline style, should be clearly typed so that the lecturer seizes on the clue at a glance. Brief notes will fit on a 3x5 card that lists the four or five main heads; five or six cards accommodate a group of key words under each heading. Old-time after-dinner speakers used to jot down the hints on their starched cuffs, from which grew the expression “to speak off the cuff.” The impromptu, off-the-cuff speaker can give himself and his hearers a special pleasure, but only if he is fluent, clear, witty, and coherent. He seems like a friend addressing each listener intimately. He sounds spontaneous, unprepared, even his cuff is not in sight. Such artistry is the fruit of much preparation and long practice.

Whoever wants a grateful audience should learn to enunciate properly and pay attention to his words, not mumbling, halting, or dropping his voice at the end of every sentence. That terminal swallow, which sometimes comes at a joke or ironic comment, is tiresome. To be avoided for the same reason are tricks of the hand, head, and limbs—fiddling with objects, rocking on your feet; or clutching your chair, lectern, or elbows.

Most important, the lecturer must always imply that he and his listeners are on the same plane of intellect, equals in their concern with the subject and in their mutual courtesy. Lecturers who intend to read their text need a warning about their prose: the essay style is not suited to oral delivery. It is difficult to follow and it sounds authoritative in the wrong way. The mind when listening cannot immediately grasp the thought as it unfolds, because the periodic structure recommended for good order and conciseness in silent reading (see Chapter 10), puts a burden on the memory when spoken. If a statement begins: “Although the conditions of . . . , even when . . . it remains in most cases undoubtedly true that . . . ,” the ideas that come between although and the close are quickly forgotten and the sense of something lost is unsettling. So keep sentences short and put modifiers and explanations after the main assertion.

An audience for the same reason likes an occasional signpost about the progress of the journey; for example: “At this point we have seen . . . now we go on to . . . .” Or: These three reasons are perhaps enough to show that . . . , but let me assure you that a few more could be given.” The you-and-I attitude of friendly talk is appropriate for lecturing, formal and informal. And however formal, the tone should be modest. True, as lecturer you know more than “they”, but collectively they know more than you. In a question period you should readily admit errors of fact or expression that are brought to your notice. But this does not mean that you should be patient under heckling or insults. In that event the speaker with a word of apology to the civil part of the audience, retires from the place of turmoil.

**heading Committees and Seminars**

Besides writing and lecturing, the researcher loaded with relevant information may be asked to act in a capacity that some quite
At our last meeting, my purpose was to give you an account of the rise of art as a religion in the nineteenth century. By showing how art came to be regarded as the supreme expression of man’s spiritual powers, I was able to explain how at the same time art necessarily became the ultimate critic of life and the moral censor of society.

At the end of my lecture I said I would next discuss the final phase of this claim and this duel, the phase of estheticism and of abolitionism which fills the quarter-century.

A lecture to be read is typed triple-spaced in a large and legible font. It is then marked. Any convenient signs will do, provided they are used consistently. The vertical line(s), short or long, suggest pauses of corresponding length—for emphasis or the separation of ideas. The dotted horizontal indicate that the voice must hold up to the end, which is often not visible to the right. Numbers in reverse order over a series of terms show how many equal and matching parts are to come. The curved arrows point when necessary to the next phrase or line as needing utterance without pause.

The modern world is a mass of committees; nothing gets done without a meeting. A seminar, a professional association that presents its work in sections, an editorial conference, a discussion class at any level—all these are in essence committees: such groups do not lead themselves. An agenda no doubt has been prepared, but a leader is needed to run the show. Too often, he or she is present but missing: the meeting drags on pointlessly; everybody is restless and bored and goes away grumbling. Hence the complaint: “Another meeting?—Oh no!” To run a meeting efficiently and fairly is an acquired skill, because obstacles to transacting business are to be expected. So general advice about dealing with them is needed.

The point to settle first is whether the kind and size of the meeting call for an impartial arbiter, a chairman properly so called, or for a moderator who is allowed to contribute ideas on an equal footing with the other members. If the person in the chair is to lead a large group, he or she must master the Rules of Order set down by the indispensable Robert. Most of them have a commonsense reason that is not hard to guess. For example, nominations may be debated but need not be seconded, because everybody should have an equal chance to gain office—no need to have two friends, or even one, to put one’s name in the hopper.

Meetings usually can be run informally, because the membership of ten or twelve develops conversational ease. Still, someone must keep order, while drawing out individual opinion. As it comes out haphazardly, he helps to organize it into collective wisdom. To do so, a leader should hold in mind the stated subject and insist on pursuing it. Failure to guide the speakers from point to point is the cause of futile palaver. Not that the moderator aims at a particular outcome, he aims at some outcome or other.

If the leader knows where he is along the way, he can afford to let the group digress occasionally (and briefly) into interesting sidelines. For if pressed too hard forward, some participants will feel regimented or manipulated. But if not hauled back, the talkers will wander far afield and the clock will tick on and on to no purpose. To maintain interest in the proceedings the chair limits repetition. It cannot be prevented, but it can be cut off diplomatically and with an even hand. To move ahead, each speaker should be nudged into adding his or her thought to the previous point, not start a hare half a mile off. Nor should two or three members be allowed to monopolize the time. Nothing alienates the less vocal sooner than this abuse; it is the leader’s duty to involve as many people as possible in the work. Then no complaint is heard later that “my” or “her” useful ideas were neglected. Unless the “meeting manager” is forearmed in these ways against the muddle that occurs whenever a group comes together, the transaction of business will be slow and painful, or will not take place at all.

The Etiquette of Leadership

But in what manner, with what words, to exert firm control, on the one hand, and arousal on the other? Holding down the garrulous takes tactful timing and phrasing. After a reasonable stretch of some member’s monologue, the chairman breaks into the flood with a soothing remark, such as: “Good way of looking at it, but I wonder what others think of the idea.” A particular person may even be called on. To elicit still more suggestions, put a question about the topic: “I hear no views expressed on this proposal, the last one, by the way, on our agenda.” Again, the prodding may refer to the inanimate state of the group itself: “Come now, I know it’s late and we’re all tired, but we must get done; we surely don’t want another meeting.” In teaching (since until the final week of the term “another meeting” is inevitable), let all questioning bear on subject matter, not individuals. Young people are tender-skinned; they respond best to the firm hand in the kid glove. Such are the main features of life when one is leading a group.

Making the Most of Time

You have now reached the end of a long course of instruction, exhortation, and advice. It may seem as if there were too many things to observe at once to enhance your research, writing or speaking. You have been made aware of traps and have been given many useful pointers, but not the blueprint for your present project. Quite so: your reading has not been in vain; you have been made to reflect on the talents you must exert and the responsibilities you must fulfill, but you remain free agents.

You and only you can adapt and transfer the suggestions to your work. Do not worry: no new knowledge can ever be grasped and made use of in one sweep of the mind. Time is needed to assimilate it and form new habits. If necessary, go back to one or another topic and refresh your memory about what was actually said. In short, begin to use this book as a reference work.

One matter not mentioned before calls for your decision, the matter of when and how to work. Chapter 2 gave some hints about the division of tasks in research, and we may repeat them here: keep your clearest stretches of time for the uninterrupted study of your main sources. Verifying dates, hunting down references, and, generally, all broken-field running should be reserved for occasions when you have a shorter time at your disposal or when you are feeling less alert or energetic than usual. Your best mind should go to what takes thought, not simply attention.

The same principle applies to writing, with variations and additions. Faced with the need to write, most people (including practiced writers) experience a strong and strange impulse to

8An elaborate treatment of the discussion method will be found in Education for Judgment: The Artistry of Discussion Leadership, eds. C. Roland Christensen, David A. Garvin, and Ann Sweet (Boston, 1991).
put off beginning. To confront that blank screen or sheet of paper is like facing a firing squad. Why not turn aside, look up another source, reconsider the organization of the paper, refresh the memory by another look at the notes; or ultimate cowardice—you think of some shopping that cannot wait. There is no cure for the urge to escape. But there are palliatives, and some good enough to turn the struggle into a game.

The palliative principle is that only a regular force can overcome a recurrent inertia. Arrange to write regularly, never missing a date with yourself, regardless of mood, and you have won half the battle. Start on the dot. What you produce at first may not please you, nor should you expect a set amount, but some writing you must do from the hour that is kept sacred for the purpose. The writer's problem is the inverse of the reformed drunkard's. The latter must never touch a drop; the former must always do his stint. Skip but one writing period and you are set back for days.

Of course these writing periods must be close enough together to create a rhythm of work, and they must be truly convenient given your present mode of life. If possible, choose a time with no other fixed obligation at the end; that will keep you from looking at the clock halfway through the session. Use the same common sense as to the place. Do not try to write at home if you can hear your brother's DVD or the symphony of kitchen and nursery noises. A private office is ideal if the phone is cut off and your associates are cooperative.

What causes the distaste for beginning to write is that it is an act of self-exposure. When we plan to publish—in print or vocally—our aim is to show our thought to the outside world; everybody is given a look inside our mind. Self-protection and shyness combine with a sense of our mental confusion or uncertainty to make us postpone the exhibition. Hence the value of being alone when writing. In silence our thoughts become more settled and coherent, and as soon as a few of them are satisfactorily on paper, they draw out the rest. They gather momentum until after a time the sheer bulk of work sets up a desire to keep adding to it. One may even find oneself waiting for the set time or day the work being truly in progress.

In the light of this analysis, other rules of thumb follow as corollaries:

1. Do not wait until you have gathered all your material before starting to write. Nothing adds to inertia like a mass of notes, the earliest of which recede in the mists of time. Rather, begin drafting your ideas as soon as some portion of the topic appears to hang together in your mind.
2. Do not be afraid of writing down something that you think may have to be changed. A first draft is malleable substance to be molded and remolded as many times as needed.
3. Do not hesitate to write in any order the sections of your work that have grown ripe in your mind. There is a moment in any research where details come together naturally, despite small gaps and doubts. Seize that moment whether or not the portions that result are consecutive.
4. Once started, keep going. Resist the temptation to get up and verify a fact. Leave a blank or put in a question mark in the margin. Do the same for the word or phrase that refuses to come to mind. It will do so by itself on revision. This economy of time also serves momentum.
5. When you get stuck in the middle of a passage, reread the last two or three pages and see if that will not propel you past dead center. Many writers begin the day's work by reading over the previous day's accumulation. Some prefer to warm up by answering one or two letters, transcribing a few notes, making a diary entry, and the like—in short, writing. But ignore this type of running start if it distracts you from the main task.
6. When you come toward the end of your writing session, break off in the middle of a topic, not at the end of any natural division. The next day you take up the story in midstream, instead of having to begin the day and the new section together. Some writers make a point to break off the day's work before they run down and while they still have ideas in mind. They
scribble two or three in shorthand phrases to jump-start the next day's labors.

7. Since the right openings for chapters or sections are difficult (see Chapter 8), special attention must be paid to them. They require bearing in mind throughout your work. Be on the watch for ideas or facts or words that would make a good beginning and jot them down.9

8. It may happen that the opening sentences of the piece (or a part) will on rereading seem unrelated to what follows. That first portion was but the warming-up, and the true beginning is a few lines down. This "false beginning" is comforting, because it proves that a sluggish start on Saturday morning is no reason for discouragement.

9. To write with a sense of freedom, any preferences and peculiarities as to the mechanics of composing had best be humored. You use a pen better than a machine; favor a certain size or color of paper; want to arrange the books and notes on your desk just so; may prefer certain clothing, posture, or lighting. In all these matters one is entitled to complete self-indulgence. One has thus no excuse for putting off the task. And stick to your choices, so that the very sight of your working environment will trigger all your good habits.

With the first draft done, the back of the job is broken. It is then a pleasure—or it should be—to carve, cut, add, and polish until the script conveys what you have learned. Earlier chapters (2, 9, 10) have described the big and the small operations to perform in Revision. With the best will in the world, your work will not be free from error. But the bulk of it that is sound, clear, readily grasped and remembered will be a contribution, no matter how limited its scope, to that explicit order among facts and ideas that is called knowledge. For as Francis Bacon wisely observed in his New Method, "Truth will sooner come out from error than from confusion."

9See again p. 267.