

#### THE LOST TOOLS OF LEARNING

(EXTRACTS)

an essay by Dorothy L. Sayers

FIRST DELIVERED AS A SPEECH

Oxford, England



CHRUSTI CAUSA ET SCHOLASTICORUM

Many educators recognize that this essay has provided impetus for the revival of classical education. Institutions within the Association of Classical Christian Schools in general, and New Covenant Schools in particular, have constructed a curriculum for which this essay provides a philosophical framework and guidance on broad points. This essay does not provide a complete philosophy, but its influence has been so far-reaching that NCS offers it to parents as a preliminary way to gain acquaintance with the educational purposes of New Covenant Schools.

*	•	·
•		



#### THE ART OF LEARNING

80 GS

IST NOT THE GREAT DEFECT of our education today that although we often succeed in teaching our pupils "subjects," we fail lamentably on the whole in teaching them how to think? They learn everything, except the art of learning. It is as though we had taught a child, mechanically and by rule of thumb, to play "The Harmonious Blacksmith" upon the piano, but had never taught him the scale or how to read music; so that, having memorized "The harmonious Blacksmith," he still had not the faintest notion how to proceed from that to tackle "The Last Rose of Summer." In certain of the arts and crafts we sometimes do precisely this—requiring a child to "express himself" in paint before we teach him how to handle the colors and the brush. There is a school of thought which believes this to be the right way to set about the job. But observe—it is not the way in which a trained craftsman will go about to teach himself a new medium. He, having learned by experience the best way to economize labor and take the thing by the right end, will start off by doodling about an odd piece of material, in order to "give himself the feel of the tool."

JHE.	MEDIAEVAL SYLI	LABUS -
	80 G9	

THE SYLLABUS WAS DIVIDED INTO TWO PARTS: the trivium and quadrivium. The second part—the quadrivium—consisted of "subjects," and need not for the moment concern us. The interesting thing for us is the composition of the trivium, which preceded the quadrivium and was the preliminary discipline for it. It consisted of three parts: grammar, dialectic, and rhetoric, in that order.

NOW THE FIRST THING WE NOTICE is that two of these "subjects" are not what we should call "subjects" at all: they are only methods of dealing with subjects. Grammar indeed is a "subject" in the sense that it does mean definitely learning a language—at that period it meant learning Latin. But language itself is simply the medium in which thought is expressed. The whole of the trivium was in fact intended to teach the pupil the proper use of the tools of learning, before he began to apply them to "subjects" at all. First, he learned a language: not just how to order a meal in a foreign language, but the structure of language—any language and hence of language itself—what it was, how it was put together and how it worked. Secondly, he learned how to use language: how to define his terms and make accurate statements, how to construct an argument and how to detect fallacies in argument (his own argument and other people's) dialectic, that is to say, embraced logic and disputation. Thirdly, he learned to express himself in language: how to say what he had to say elegantly and persuasively. At this point, any tendency to express himself windily or to use his eloquence so as to make the worse appear the better reason would, no doubt, be restrained by his previous teaching in dialectic. If not, his teacher and his fellow pupils, trained along the same lines, would be quick to point out where he was wrong: for it was they whom he had to seek to persuade. At the end of his course, he was required to compose a thesis upon some theme set by his masters or chosen by himself, and afterwards to defend his thesis against the criticism of the faculty. By this time he would have learned—or woe betide him—not merely to write an essay on paper, but to speak audibly and intelligibly from a platform and to use his wits quickly when



heckled. The heckling, moreover, would not consist solely of offensive personalities or of irrelevant queries about what Julius Caesar said in 55 B.C.—though no doubt mediaeval dialectic was enlivened in practice by plenty of such primitive repartee. But there would also be questions, cogent and shrewd, from those who had already run the gauntlet of debate, or were making ready to run it.

IT IS, OF COURSE, quite true that bits and pieces of the mediaeval tradition still linger, or have been revived, in the ordinary school syllabus of today. Some knowledge of grammar is still required when learning a foreign language-perhaps I should say, "is again required"; for during my own lifetime we passed through a phase when the teaching of declensions and conjugations was considered rather reprehensible, and it was considered better to pick these things up as we went along. School debating societies flourish; essays are written; the necessity for "selfexpression" is stressed, and perhaps even over stressed. But these activities are cultivated more or less in detachment, as belonging to the special subjects in which they are pigeon holed rather than as forming one coherent scheme of mental training to which all "subjects" stand in subordinate relation. Grammar belongs especially to the subject called "English"; while dialectic has become almost entirely divorced from the rest of the curriculum, and is frequently practiced unsystematically and out of school hours as a separate exercise, only very loosely related to the main business of learning. Taken by and large, the great difference of emphasis between the two conceptions holds good; modern education concentrates on teaching subjects, leaving the method of thinking, arguing, and expressing one's conclusions to be picked up by the scholar as he goes along; mediaeval education concentrated on first forging and learning to handle the tools of learning, using whatever subject came handy as a piece of material on which to doodle until the use of the tool became second nature.

"SUBJECTS" OF SOME KIND THERE MUST BE. One cannot learn the use of a tool by merely waving it in the air; neither can one learn the theory of grammar without learning an actual language, or learn to argue and orate without speaking about something in particular. The debating subjects of the Middle ages were drawn largely from theology, or from the ethics and history of antiquity. Often, indeed, they became stereotyped, especially towards the end of the period; and the far fetched and wire-drawn absurdities of scholastic argument fretted Milton and provide food for merriment even to this day. Whether they were in themselves any more hackneyed and trivial than the usual subjects set nowadays for "essay writing" I should not like to say: we may ourselves grow a little weary of "A Day in My Holidays," "What I Should like to Do When I Leave School," and all the rest of it. But most of the merriment is misplaced, because the aim and object of the debating thesis has by now been lost sight of.

THE	THREE AGES
	- 80 03 <del></del>

MY VIEWS ABOUT child psychology, are, I admit, neither orthodox nor enlightened. Looking back upon myself (since I am the child I know best and the only child I can pretend to know from inside) I recognize in myself three stages of development. These, in a rough-and-ready fashion, I will call the poll-parrot, the pert, and the poetic—the latter coinciding, approximately, with the onset of puberty. The poll-parrot stage is the one in which learning by heart is easy and, on the whole, pleasurable; whereas reasoning is difficult and, on the whole,



little relished. At this age one readily memorized the shapes and appearance of things, one likes to recite the number-plates of cars; one rejoices in the chanting of rhymes and the rumble and thunder of unintelligible polysyllables; one enjoys the mere accumulation of things. The pert age, which follows upon this (and, naturally, overlaps it to some extent) is only too familiar to all who have to do with children: it is characterized by contradicting, answering back, liking to "catch people out" (especially one's elders) and the propounding of conundrums (especially the kind with a nasty verbal catch in them). Its nuisance value is extremely high. It usually sets in about the eighth grade. The poetic age is popularly known as the "difficult" age. It is self-centered; it yearns to express itself; it rather specializes in being misunderstood; it is restless and tries to achieve independence; and, with good luck and good guidance, it should show the beginnings of creativeness, a reaching out towards a synthesis of what it already knows, and a deliberate eagerness to know and do some one thing in preference to all others. Now it seems to me that the layout of the trivium adapts itself with a singular appropriateness to these three ages: grammar to the poll-parrot, dialectic to the pert, and rhetoric to the poetic age.

LET US BEGIN, THEN, WITH GRAMMAR. This, in practice, means the grammar of some language in particular; and it must be an inflected language. The grammatical structure of an uninflected language is far too analytical to be tackled by any one without previous practice in dialectic. Moreover, the inflected languages interpret the uninflected, whereas the uninflected are of little use in interpreting the inflected. I will say at once, quite firmly, that the best grounding for education is the Latin grammar. I say this, not because Latin is traditional and mediaeval, but simply because even a rudimentary knowledge of Latin cuts down the labor and pains of learning almost any subject by at least 50 percent. It is the key to the vocabulary and structure of all the Romance languages and to the structure of all the Teutonic languages, as well as to the technical vocabulary of all the sciences and to the literature of the entire Mediterranean civilization, together with all its historical documents.

THOSE WHOSE PEDANTIC PREFERENCE for a living language persuades them to deprive their pupils of all these advantages might substitute Russian, whose grammar is still more primitive. Russian is, of course, helpful with the other Slav dialects. There is something also to be said for classical Greek, but my own choice is Latin. Having thus pleased the Classicists, I will proceed to horrify them by adding that I do not think it either wise or necessary to cramp the ordinary pupil upon the Procrustean bed of the Augustan age, with its highly elaborate and artificial verse-forms and oratory. The post-classical and mediaeval Latin, which was a living language down to the end of the Renaissance, is easier and in some ways livelier, both in syntax and rhythm.

LATIN SHOULD BE BEGUN AS EARLY AS POSSIBLE—at a time when inflected speech seems no more astonishing than any other phenomenon in an astonishing world; and when the chanting of "amo, amas, amat" is as ritually agreeable to the feelings as the chanting of "eeny, meeny, miney, mo."

DURING THIS AGE WE MUST, of course, exercise the mind on other things beside Latin grammar. Observation and memory are the faculties most lively at this period; and if we are to learn a contemporary foreign language we should begin now, before the facial and mental



muscles become rebellious to strange intonations. Spoken French or German can be practiced alongside the grammatical discipline of the Latin.

THE	FUNCTION	ΟF	MEMORY
··· <del>·· ·</del>		o —	

IN INGLISH, VERSE AND PROSE can be learned by heart, and the pupil's memory should be stored with stories of every kind—classical myth, European legend, and so forth. I do not think that the classical stories and masterpieces of ancient literature should be made the vile bodies on which to practice the techniques of grammar—that was a fault of mediaeval education which we need not perpetuate. The stories can be enjoyed and remembered in English, and related to their origin at a subsequent stage. Recitation aloud should be practiced—individually or in chorus; for we must not forget that we are laying the ground work for disputation and rhetoric.

THE GRAMMAR OF HISTORY SHOULD CONSIST, I think, of dates, events, anecdotes, and personalities. A set of dates to which one can peg all later historical knowledge is of enormous help later on in establishing the perspective of history. It does not greatly matter which dates: those of the Kings of England will do very nicely, provided that they are accompanied by pictures of costume, architecture, and all "every-day things," so that the mere mention of a date calls up a strong visual presentment of the whole period.

GEOGRAPHY WILL SIMILARLY BE PRESENTED in its factual aspect, with maps, natural features and visual presentment of customs, costumes, flora, fauna and so on; and I believe myself that the discredited and old-fashioned memorizing of a few capital cities, rivers, mountain ranges, etc. does not harm. Stamp-collecting may be encouraged.

SCIENCE, IN THE POLL-PARROT PFRIOD, arranges itself naturally and easily around collections—the identifying and naming of specimens and, in general, the kind of thing that used to be called "natural history," or, still more charmingly, "natural philosophy." To know the names and proporties of things is, at this age, a satisfaction in itself; to recognize a devil's coach-horse at sight, and assure one's foolish elders that, in spite of its appearance, it does not sting; to be able to pick out Cassiopeia and Pleiades, and possibly even to know who Cassiopeia and the Pleiades were; to be aware that a whale is not a fish, and a bat not a bird—all these things give a pleasant sensation of superiority; while to know a ring-snake from an adder or a poisonous from an edible toadstool is a kind of knowledge that has also a practical value.

THE GRAMMAR OF MATHEMATICS BEGINS, of course, with the multiplication table, which, if not learned now, will never be learned with pleasure; and with the recognition of geometrical shapes and the grouping of numbers. These exercises lead naturally to the doing of simple sums in arithmetic; and if the pupil shows a bent that way, a facility acquired at this stage is all to the good. More complicated mathematical processes may, and perhaps should, be postponed, for reasons which will presently appear.

SO FAR, EXCEPT, OF COURSE, FOR THE LATIN our curriculum contains nothing that departs very far from common practice. The difference will be felt rather in the attitude of the teachers, who must look upon all these activities less as "subjects" in themselves than as a



gathering-together of material for use in the next part of the trivium. What that material actually is, is only of secondary importance; but it is as well that anything and everything which can usefully be committed to memory should be memorized at this period, whether it is immediately intelligible or not. The modern tendency is to try and force rational explanations on a child's mind at too early an age. Intelligent questions, spontaneously asked, should, of course, receive an immediate and rational answer, but it is a great mistake to suppose that a child cannot readily enjoy and remember things that are beyond its power to analyze—particularly if those things have a strong imaginative appeal (as, for example, Kubla Khan), an attractive jingle (like some of the memory rhymes for Latin genders), or an abundance of rich, resounding polysyllables.

## THEOLOGY: THE MISTRESS-SCIENCE

HIS REMINDS ME OF THE GRAMMAR of theology. I shall add it to the curriculum, because theology is the Mistress-science, without which the whole educational structure will necessarily lack it final synthesis. Those who disagree about this will remain content to leave their pupils' education still full of loose ends. This will matter rather less than it might, since by the time that the tools of learning have been forged the student will be able to tackle theology for himself, and will probably insist upon doing so and making sense of it. Still, it is as well to have this matter also handy and ready for the reason to work upon. At the grammatical age, therefore, we should become acquainted with the story of God and man in outline—i.e. the Old and New Testaments presented as parts of a single narrative of Creation, Rebellion, and Redemption—and also with "the Creed, the Lord's Prayer and the Ten Commandments." At this stage, it does not matter nearly so much that these things should be fully understood as that they should be known and remembered. Remember, it is material that we are collecting.

IT IS DIFFICULT TO SAY AT WHAT AGE, precisely, we should pass from the first to the second part of the trivium. Generally speaking, the answer is: so soon as the pupil shows himself disposed to pertness and interminable argument (or, as a schoolmaster correspondent of mine more elegantly puts it: "When the capacity for abstract thought begins to manifest itself"), For as, in the first part, the master-faculties are observation and memory, so in the second, the master-faculty is the discursive reason. In the first, the exercise to which the rest of the material was, as it were, keyed, was the Latin grammar; in the second, the key exercise will be formal logic. It is here that our curriculum shows its first sharp divergence from modern standards. The disrepute into which formal logic has fallen is entirely unjustified; and its neglect is the root cause of nearly all those disquicting symptoms which we may note in the modern intellectual constitution. Logic has been discredited, partly because we have fallen into a habit of supposing that we are conditioned almost entirely by the intuitive and the unconscious. There is no time now to argue whether this is true; I will content myself with observing that to neglect the proper training of the reason is the best possible way to make it true, and to ensure the supremacy of the intuitive, irrational and unconscious elements in our make-up. A secondary cause for the disfavor into which formal logic has fallen is the belief that it is entirely based upon universal assumptions that are either unprovable or tautological. This is not true. Not all universal propositions are of this kind. But even if they were, it would make no difference, since every syllogism whose major premise is in the form "All A is B" can be recast in hypothetical form. Logic is the art of arguing correctly: "If A, then B"; the method is not invalidated by the



hypothetical character of A. Indeed, the practical utility of formal logic today lies not so much in the establishment of positive conclusions as in the prompt detection and exposure of invalid inference.

THE	RELATION	ŢO	DIAL	ECTIO
		<u>~</u>		

ET US NOW QUICKLY REVIEW our material and see how it is to be related to dialectic. On the *Language* side, we shall now have our vocabulary and morphology at our finger tips; henceforward we can concentrate more particularly on syntax and analysis (i.e., the logical construction of speech) and the history of Language (i.e., how we came to arrange our speech as we do in order to convey our thoughts).

OUR READING WILL PROCEED from narrative and lyric to essays, argument, and criticism, and the pupil will learn to try his own hand at writing this king of thing. Many lessons—on whatever subject—with take the form of debates; and the place of individual or choral recitation will be taken by dramatic performances, with special attention to plays in which an argument is stated in dramatic form.

- Mathematics—algebra, geometry, and the more advanced kind of arithmetic—will now enter
  into the syllabus and take its place as what it really is: not a separate "subject" but a subdepartment of logic. It is neither more nor less than the rule of the syllogism in its particular
  application to number and measurement, and should be taught as such, instead of being, for
  some, a dark mystery, and for others, a special revelation, neither illuminating, nor
  illuminated by any other part of knowledge.
- History, aided by a simple system of ethics derived from the grammar of theology, will
  provide much suitable material for discussion: Was the behavior of this statesman justified?
  What was the effect of such an enactment? What are the arguments for and against this or
  that form of government? We shall thus get an introduction to constitutional history—a
  subject meaningless to the young child, but of absorbing interest to those who are prepared to
  argue and debate.
- Theology itself will furnish material for argument about conduct and morals; and should have
  its scope extended by a simplified course of dogmatic theology (i.e., the rational structure of
  Christian thought), clarifying the relations between the dogma and the ethics, and lending
  itself to that application of ethical principles in particular instances which is properly called
  casuistry.
- Geography and the sciences will all likewise provide material for dialectic.

PERT	CRITICISM
	80 G8 ————

WHEREVER THE MATTER FOR DIALECTIC is found, it is, of course, highly important that attention should be focused upon the beauty and economy of a fine demonstration or a well-tuned argument, lest veneration should wholly die. Criticism must not be merely



destructive; though at the same time both teacher and pupils must be ready to detect fallacy, slipshod reasoning, ambiguity, irrelevance and redundancy, and to pounce upon them like rats.

TI IIS IS THE MOMENT when précis-writing may be usefully undertaken; together with such exercises as the writing of an essay, and the reduction of it, when written, by 25 or 50 percent. IT WILL DOUBTLESS BE OBJECTED that to encourage young persons at the pert age to browbeat, correct, and argue with their leaders will render them perfectly intolerable. My answer is that children of that age are intolerable anyhow; and that their natural argumentativeness may just as well be canalized to good purpose as allowed to run away into the sands. It may, indeed, be rather less obtrusive at home if it is disciplined in school; and, anyhow, elders who have abandoned the wholesome principle that children should be seen and not heard have no one to blame but themselves. The teachers, to be sure, will have to mind their step, or they may get more than they bargained for. All children sit in judgment on their masters; and if the Chaplain's sermon or the Headmistress's annual Speechday address should by any chance afford an opening for the point of the critical wedge, that wedge will go home the more forcibly under the weight of the dialectical hammer, wielded by a practiced hand. That is why I said that the teachers themselves would have to have undergone the discipline of the trivium before they set out to impose it on their charges.

ONCE AGAIN THE CONTENTS of the syllabus at this stage may be anything you like. The "subjects" supply material; but they are all to be regarded as mere grist for the mental mill to work upon. The pupils should be encouraged to go and forage for their own information, and so guided towards the proper use of libraries and books of reference, and shown how to tell which sources are authoritative and which are not.

## THE IMAGINATION

OWARDS THE CLOSE OF THIS STAGE, the pupils will probably be beginning to discover for themselves that their knowledge and experience are insufficient, and that their trained intelligences need a great deal more material to chew upon. The imagination—usually dormant during the pert age—will reawaken, and prompt them to suspect the limitations of logic and reason. This means that they are passing into the poetic age and are ready to embark on the study of rhetoric. The doors of the storehouse of knowledge should now be thrown open for them to browse about as they will. The things once learned by rote will now be seen in new contexts; the things once coldly analyzed can now be brought together to form a new synthesis; here and there a sudden insight will bring about that most exciting of all discoveries: the realization that a truism is true.

# THE STUDY OF RHETORIC

IT IS DIFFICULT TO MAP any general syllabus for the study of rhetoric: a certain freedom is demanded. In literature, appreciation should be again allowed to take the lead over destructive criticism; and self-expression in writing can go forward, with its tools now sharpened to cut clean and observe proportion. Any child that already shows a disposition to specialize should be



given his head; for, when the use of the tools has been well and truly learned, it is available for any study whatever. It would be well, I think, that each pupil should learn to do one, or two, subjects really well, while taking a few classes in subsidiary subjects so as to keep his mind open to the inter-relations of knowledge. Indeed, at this stage, our difficulty will be to keep "subjects" apart, for as dialectic will have shown all branches of learning to be interrelated, so rhetoric will tend to show that all knowledge is one. To show this, and show why it is so, is pre-eminently the task of the Mistress-science. But whether theology is studied or not, we should at least insist that children who seem inclined to specialize on the mathematical and scientific side should be obliged to attend some lessons in the humanities and vice versa. At this stage also, the Latin grammar, having done its work, may be dropped for those who prefer to carry on their language studies on the modern side; while those who are likely never to have any great use or aptitude for mathematics might also be allowed to rest, more or less, upon their oars. Generally speaking, whatsoever is mere apparatus may now be allowed to fall into the background, while the trained mind is gradually prepared for specialization in the "subjects" which, when the trivium is completed, it should be perfectly well equipped to tackle on its own. The final synthesis of the trivium—the presentation and public defense of the thesis—should be restored in some form; perhaps as a kind of "leaving examination" during the last term at school.

THE SCOPE OF RHETORIC depends also on whether the pupil is to be turned out into the world at the age of sixteen, or whether he is to proceed to public school and/or university. Since, really, rhetoric should be taken at about fourteen, the first category of pupil should study grammar from about nine to eleven, and dialectic from twelve to fourteen; his last two school years would then be devoted to rhetoric, which, in his case, would be of a fairly practical career. A pupil of the second category would finish his dialectical course in this Preparatory School, and take rhetoric during his first two years at his Public School. At sixteen, he would be ready to start upon those "subjects" which are proposed for his later study at the university, and this part of his education will correspond to the mediaeval quadrivium. What this amounts to is that the ordinary pupil, whose formal education ends at sixteen, will take the trivium only; whereas scholars will take both the trivium and quadrivium.

#### THE UNIVERSITY ATSIXTEEN?

Is THE TRIVIUM, then, a sufficient education for life? Properly taught, I believe that it should be. At the end of the dialectic, the children will probably seem to be far behind their coevals brought up on old-fashioned "modern" methods, so far as detailed knowledge of specific subjects is concerned. But after the age of fourteen they should be able to overhaul the others hand over fist. Indeed, I am not at all sure that a pupil thoroughly proficient in the trivium would not be fit to proceed immediately to the university at the age of sixteen, thus proving himself the equal of his mediaeval counterpart, whose precocity often appears to us so astonishing and unaccountable. This, to be sure, would make hay of the public school system, and disconcert the university very much—it would, for example, make quite a different thing of the Oxford and Cambridge boat-race. But I am not now considering the feelings of academic bodies; I am concerned only with the proper training of the mind to encounter and deal with the formidable mass of undigested problems presented to it by the modern world. For the tools of learning are the same, in any and every subject; and the person who knows how to use them will, at any age,



get the mastery of a new subject in half the time and with a quarter of the effort expended by the person who has not the tools at his command. To learn six subjects without remembering how they were learned does nothing to case the approach to a seventh; to have learned and remembered the art of learning makes the approach to every subject an open door.

IT IS CLEAR THAT THE SUCCESSFUL teaching of this neo-mediaeval curriculum will depend even more than usual upon the working together of the whole teaching staff towards a common purpose. Since no subject is considered as and end in itself, any kind of rivalry in the staff-room will be sadly out of place. The fact that a pupil is unfortunately obliged, for some reason, to miss the history period on Fridays, or the Shakespeare class on Tuesdays, or even to omit a whole subject in favor of some other subject, must not be allowed to cause any heart-burnings—the essential is that he should acquire the method of learning in whatever medium suits him best. If human nature suffers under this blow to one's professional pride in one's own subject, there is comfort in the thought that the end-of-term examination results will not be affected; for the papers will be so arranged as to be an examination in method, by whatever means.

I WILL ADD THAT IT IS HIGHLY important that every teacher should, for his or her own sake, be qualified and required to teach in all three parts of the trivium; otherwise the masters of dialectic, especially, might find their minds hardening into a permanent adolescence. For this reason, teachers in Preparatory Schools should also take rhetoric classes in the Public Schools to which they are attached; or, if they are not so attached, then by arrangement in other schools in the same neighborhood. Alternatively, a few preliminary classes in rhetoric might be taken in preparatory schools from the age of thirteen onwards.

## SQUANDERING EDUCATIONAL CAPITAL

BEFORE CONCLUDING these necessarily very sketchy suggestions, I ought to say why I think it necessary, in these days, to go back to a discipline which we had discarded. The truth is that for the last 300 years or so we have been living upon our educational capital. The post-Renaissance world, bewildered and excited by the profusion of new "subjects" offered to it, broke away from the old discipline (which had, indeed, become sadly dull and stereotyped in its practical application) and imagined that henceforward it could, as it were, disport itself happily in its new and extended quadrivium without passing through the trivium. But the scholastic tradition, though broken and maimed, still lingered in the public schools and universities: Milton, however much he protested against it, was formed by it—the debate of the Fallen Angels, and the disputation of Abdiel with Satan have the tool-marks of the schools upon them, and might, incidentally, profitably figure as set passages for our dialectical studies. Right down to the nineteenth century, our public affairs were mostly managed, and our books and journals were for the most part written, by people brought up in homes, and trained in places, where that tradition was still alive in the memory and almost in the blood. Just so, many people today who are atheist or agnostic in religion, are governed in their conduct by a code of Christian ethics which is so rooted in their unconscious assumptions that it never occurs to them to question it.



#### NEGLECTED ROOTS

80 G8

BUT ONE CANNOT LIVE on capital for ever. A tradition, however firmly rooted, if it is never watered, though it dies hard, yet in the end it dies. And today a great number— the perhaps the majority-of the men and women who handle our affairs, write our books and our newspapers, carry out research, present our plays and our films, speak from our platforms and pulpits-yes, and who educate our young people, have never, even in a lingering traditional memory, undergone the scholastic discipline. Less and less do the children who come to be educated bring any of that tradition with them. We have lost the tools of learning—the axe and the wedge, the hammer and the saw, the chisel and the plane—that were so adaptable to all tasks. Instead of them, we have merely a set of complicated jigs, each of which will do but one task and no more, and in using which eye and hand receive no training, so that no man ever sees the work as a whole or "looks to the end of the work." What use is it to pile task on task and prolong the days of labor, if at the close the chief object is left unattained? It is not the fault of the teachers—they work only too hard already. The combined folly of a civilization that has forgotten its own roots is forcing them to shore up the tottering weight of an educational structure that is built upon sand. They are doing for their pupils the work which the pupils themselves ought to do. For the sole true end of education is simply this: to teach men how to learn for themselves; and whatever instruction fails to do this is effort spent in vain.

80 G3