Giambattista Vico was born in Naples, the son of a bookseller. Although he attended a Jesuit college, his education came chiefly from reading in his father’s shop. He characterizes himself in his autobiography as an autodidact, one who is both self-taught and free from academic prejudice. Vico was appointed professor of rhetoric at the University of Naples in 1699 and served until 1741. The professorship of rhetoric was a minor post, and Vico hoped—though in vain—to be appointed to the much more prestigious chair of civil law. Although a growing number of scholars now see Vico as a major figure in the development of a rhetoric with a culturally based epistemology, in his own time he was regarded as a reactionary because of his opposition to Descartes.

In his major works, Vico criticizes the philosophy of Descartes for stressing that mathematics and science are the only legitimate sources of knowledge and treating other branches of human inquiry—such as law, history, and the arts—as inconsequential. Vico argues that rhetoric provides a superior philosophy of knowledge, for all knowledge, even the scientific, is based on argument and conviction. The excerpts here from “On the Study Methods of Our Time” (1709), originally a scholarly address that opened the school year at the University of Naples, include Vico’s argument against the Cartesian method, which he refers to as “modern philosophical critique,” and his defense of rhetoric as a modern method of study.

In “On the Study Methods of Our Time,” Vico seeks to reconcile humanism (the wisdom of the ancients) with a modern but non-Cartesian science. He objects to Descartes’s insensitivity to the function of language in producing knowledge. Without language, says Vico, the human knower is lost. Language reveals the processes of reason, passion, and imagination, as well as the social conventions and historical circumstances that shape our concerns. The etymology of the national language reveals our social history; similarly, language socializes each individual. Therefore, the university’s curricular philosophy or “study methods” will have a profound effect on both the individual and society. What kind of person, what kind of society, will be fostered by Cartesian disdain for the probabilistic knowledge of law, ethics, politics, and medicine? The Cartesian method is useful, Vico concedes, but it cannot be allowed to overpower the kind of sensus communis or common sense that the study of eloquence stimulates with its appeals to imagination and memory and its practice in the commonplaces of argument.

Not only is Cartesianism ill suited to the kinds of knowledge that affect the affairs of society, says Vico, but it is not even well founded in the science it so prizes. Mathematical proof is ultimately based on our acceptance of the system of axioms created by human beings: We can point to no demonstration of the applicability of our axioms to the world itself. The world is created by God, not human beings, and cannot be directly known. Moreover, the Cartesian method of division focuses ideally on isolated particles of knowledge, stifling the kind of analogic thinking that generates so many insights. Vico also objects to the Cartesian model of the isolated
inquirer, for dialogue fertilizes thought. As a teaching approach, the Cartesian method fails to encourage independent discovery, proceeding instead on a plodding course from axiom to proof. Such a method oppresses rather than inspires students. Thus, if the educational system accepts Cartesianism, it will unduly privilege natural science and mathematics while devaluing other kinds of knowledge, and it will do so to the detriment of society, which will eventually lack leaders educated in public affairs. Vico recommends balance: The method of Descartes is useful for abstract knowledge that finds elemental causes for multiple effects, whereas eloquence finds many possible causes for single events, revealing the complexity of "merely" probable causes. To expect the Cartesian method to cover both kinds of knowledge, he reiterates, is to ignore the essential differences in their character and provenance.

Vico devotes a long section of his speech to the legal system of ancient Rome. Though the system was designed to support the privilege of the patricians, it encouraged eloquence in defense of equity and justice. Arguments produced under these conditions eventually led to a democratization of the courts and to a more equitable legal philosophy. But, Vico claims, the exceptional eloquence of the old courts was no longer necessary, with the result that, on the one hand, eloquence lost respect and, on the other, legal philosophy languished for want of inspired oratory. Finally, Vico proposes a curriculum that concludes with the study of eloquence, a study which he sees as interdisciplinary and (in modern terms) meta-theoretical, a way to link the other disciplines and bring them to bear on important public issues.

In *The New Science* (first edition, 1725; much-revised third edition, 1744), Vico elaborates the argument begun in "Study Methods" about the relationship between truth and human methods of producing knowledge. If, as the argument proposes, we can truly know only what we have made, then true knowledge is of the Cartesian kind, touching created systems of mathematics and science. Observation and experience ("consciousness," as opposed to science) produce uncertain, probabilistic judgments. Vico now proposes a link between these two kinds of knowledge: It is possible, according to this argument, to reach true knowledge in the vast realm of human affairs, in a world that is, after all, created by humans and not "natural." In other words, though history is not a formal system, it is nonetheless made by people, and the appropriate method of study should produce certain knowledge of it. To establish this method, Vico seeks the origins of history in human nature and in an original common language. Through history, human nature and language give shape to social relations and institutions, reflecting historical circumstances and local developments.

Vico posits three stages through which human history evolves: the poetic, the heroic, and the human. In the poetic stage, knowledge is generated by metaphor. Just as young children learn by comparison, Vico argues, humankind in its infancy must have done likewise. In the heroic stage, nations develop, promulgating rigid systems of law to preserve the organization of society. And in the human stage, the self-conscious study of human knowledge leads to greater equity in law and democracy in politics. Here, too, individualism grows, and with it a disdain for communal and national imperatives. As a result, this last stage is fragile, threatened...
by revolutions that will fragment society. Once society is shattered, however, the process begins anew.

Vico maintains that historical circumstances determine the characteristics and purposes of social institutions and individual actions. Historians are therefore in error when they try to evaluate earlier periods using the standards of their own time. To understand history, it is necessary to reconstruct the consciousness of the time and place to be studied, using the myths and language of the time. Etymology is invaluable in determining not only the conditions of life in an earlier age but also the psychological responses to them. Speech and thought are inseparable, in Vico’s view: They evolve together. Thus, what are for us casual or embedded metaphors can reveal the mental processes and perception of the world of those who first employed them. A persistently metaphoric view of the world will be different, too, from a view in which phenomena are identified by abstractions.

In elaborating and illustrating this view of historical analysis, Vico brought together the study of language and literature, social institutions and law, ideology and class structure, and personal psychology and human nature. His cyclical theory of history is easy enough to criticize, and for too long it obscured his contribution to historiography: the combination of a sympathetic perspective and a broad range of intercontextual knowledge. Moreover, in his theory of rhetoric, as John D. Schaeffer has argued, Vico unites ethics and eloquence through his concept of sensus communis, a “common sense” that is both epistemological in function and culturally based. Thus Vico forges a link between rhetoric and philosophy that contemporary thinkers are still exploring.

**Selected Bibliography**


From *On the Study Methods of Our Time*

In his small but priceless treatise entitled *De Dignitate et de Augmentis Scientiarum,* 1 Francis Bacon undertakes to point out what new arts and sciences should be added to those we already possess, and suggests how we may enlarge our stock of knowledge, [as far as necessary,] so that human wisdom may be brought to complete perfection.

But, while he discovers a new cosmos of sciences, the great Chancellor proves to be rather the pioneer of a completely new universe than a prospector of this world of ours. His vast demands so exceed the utmost extent of man’s effort that he seems to have indicated how we fall short of achieving an absolutely complete system of sciences rather than how we may remedy our cultural gaps.

This was so, I believe, because those who occupy the heights of power yearn for the immense and the infinite. Thus Bacon acted in the intellectual field like the potentates of mighty empires, who, having gained supremacy in human affairs, squander immense wealth in attempts against the order of Nature herself, by plying the seas with stones, mastering mountains with sail, and other vain exploits forbidden by nature. 2

No doubt all that man is given to know is, like man himself, limited and imperfect. Therefore, if we compare our times with those of the Ancients—if we weigh, on both sides, the advantages and deficiencies of learning—our achievements and those of Antiquity would, by and large, balance. 3

Translated by Elio Gianturco.

1 *Of the Dignity and Advancement of Learning.* (See B con in Part Three.) [Ed.]

2 Unless I am mistaken, this theme is new; but the knowledge of it is so important, that I am amazed it has not been treated yet. In the hope of escaping censure, I ask you to give thought to the fact that my purpose is not to criticize the drawbacks of the study methods of our age or of those of antiquity, but rather to compare the advantages afforded by the study methods of the two epochs. This matter is of direct concern to you: even if you know more than the Ancients in some fields, you should not accept knowing less in others. You should make use of a method by which you can acquire, on the whole, more knowledge...
than the Ancients, and, being aware of the shortcomings of ancient methods of study, you may endure the unavoidable inconveniences of our own.

The better to grasp the subject I am proposing to you, you should distinctly realize that in the present discourse I do not intend to draw parallels between individual branches of knowledge, single fields of sciences or arts of ancient and modern times.

My goal, instead, is to indicate in what respect our study methods are superior to those of the Ancients; to discover in what they are inferior, and how we may remedy this inferiority.

For our purpose we must, if not separate, at least set up a distinction between new arts, sciences, and inventions on one hand, and new instruments and aids to knowledge on the other. The former are the constituent material of learning; the latter are the way and the means, precisely the subject of our discourse.

Every study method may be said to be made up of three things: instruments, complementary aids, and the aim envisaged. The instruments presuppose and include a systematic, orderly manner of proceeding; the apprentice who, after suitable training, undertakes the task of mastering a certain art or science, should approach it in an appropriate and well-ordered fashion. Instruments are antecedent to the task of learning; complementary aids and procedures are concomitant with that task. As for the aim envisaged, although its attainment is subsequent to the process of learning, it should never be lost sight of by the learner, neither at the beginning nor during the entire learning process.

We shall arrange our discourse in corresponding order, and discuss first the instruments, then the aids to our method of study. As for the aim, it should circulate, like a blood-stream, through the entire body of the learning process. Consequently, just as the blood’s pulsation may best be studied at the spot where the arterial beat is most perceptible, so the aim of our study methods shall be treated at the point where it assumes the greatest prominence.

Some of the new instruments of science are, themselves, sciences; others are arts; still others, products of either art or nature. Modern philosophical “critique” is the common instrument of all our sciences and arts. The instrument of geometry is “analysis”; that of physics, geometry, plus the geometrical method (and, in a certain sense, modern mechanics). The instrument of medicine is chemistry and its offshoot, pharmacological chemistry. The instrument of anatomy is the microscope; that of anatomy, the telescope; that of geography, the mariner’s needle.

As for “complementary aids,” I include among them the orderly reduction of systematic rules, of a number of subjects which the Ancients were wont to entrust to practical common sense. Complementary aids are also works of literature and of the fine arts whose excellence designates them as patterns of perfection; the types used in the printing; and universities as institutions of learning.

In view of the easy accessibility, usefulness, and value of the complementary aids, our study methods seem, beyond any doubt, to be better and more correct than those of the Ancients, whether in regard to facility, or to utility, or to merit.

As for the aim of all kinds of intellectual pursuits: one only is kept in view, one is pursued, one is honored by all: Truth.

II

Modern philosophical critique supplies us with a fundamental verity of which we can be certain even when assailed by doubt. That critique could rout the skepticism even of the New Academy. In addition “analysis” (i.e., analytical geometry) empowers us to puzzle out with astonishing ease geometrical problems which the Ancients found impossible to solve.

Like us, the Ancients utilized geometry and mechanics as instrument of research in physics, but not as a constant practice. We apply them consistently, and in better form.

Let us leave aside the question whether geometry has undergone greater development by

3The critique is Descartes’s method. (See the introduction to Part Four.) [Ed.]

3The New Academy is the Second Platonic Academy of the third and second centuries B.C. R., noted for radical skepticism. [Ed.]
means of “analysis,” and whether modern mechanics constitutes something new. What cannot be denied is the fact that leading investigators have available to them a science enriched by a number of new and extremely ingenious discoveries. Modern scientists, seeking for guidance in their exploration of the dark pathways of nature, have introduced the geometrical method into physics. Holding to this method as to Ariadne’s thread, they can reach the end of their appointed journey. Do not consider them as groping practitioners of physics: they are to be viewed, instead, as the grand architects of this limitless fabric of the world: able to give a detailed account of the ensemble of principles according to which God has built this admirable structure of the cosmos.

Chemistry, of which the Ancients were totally ignorant, has made outstanding contributions to medicine. Having observed the similarity which exists between the various phenomena of the human body and those of chemistry, the healing art has been able, not only to hazard guesses concerning many physiological functions and disorders, but to make these plainly discernible to the human eye.

Pharmacology, of course, a derivate of chemistry, was among the ancients merely a desideratum. Nowadays, we have converted that desideratum into a reality. Some of our researchers have applied chemistry to physics; others, mechanics to medicine. Our physical chemistry can faithfully, and, so to speak, manually, reproduce a number of meteors and other physical phenomena. Mechanical medicine can describe, by inferences drawn from the motions of machines, the diseases of the human body, and can treat them successfully. And anatomy clearly reveals not only the circulation of the blood, but the nerves, roots, countless humors, vessels, and ducts of the human body (notice that such descriptions already constitute notable advances over ancient medicine), and moreover—thanks to the microscope—the nature of miliary glands, of the most minute internal organs, of plants, of silkworms, and of insects. To modern anatomy, furthermore, we are indebted for an insight into the process of generation, as demonstrated by the growth of the incubated egg. All these things were entirely outside of the narrow range of sight of the science of the Ancients; modern science throws a flood of light upon them.

As for astronomy, the modern telescope has brought within our ken a multitude of new stars, the variability of sun-spots, and phases of the planets. These discoveries have made us aware of several defects in the cosmological system of Ptolemy.

In the domain of geographical exploration, the Ancients guessed vaguely, in a prophetic sort of way, at the existence of transoceanic lands. By the use of the mariner’s compass, the modern age has actually discovered them. As a result, a wonderful luster has been bestowed upon geography.

It seems almost unbelievable that in our days men should not only be able to circumnavigate the globe along with the sun, but to outreach the sun’s march and to negotiate its full course in less time than it takes that planet to complete it.

From geometry and physics, taught by the present method, the science of mechanics has received major impulses and has rendered possible a great number of outstanding and marvelous inventions, which have vastly enriched human society. It may be said that it is from these three sciences that our technique of warfare derives. Our art of war is so immeasurably superior to that of the Ancients, that, compared with our technique of fortifying and attacking cities, Minerva would contempt her own Athenian citadel and Jupiter would scorn his three-pronged lightning as a blunt and cumbersome weapon.

Such are the “instruments” employed by our modern sciences; let us now turn to the complementary aids employed in the various sectors of our culture.

Systematic treatments (artes) have been set up of certain subjects which the Ancients left to unaided common sense. Among these subjects is the law, which the Ancients, balked by the difficulty of the task, gave up hope of organizing into a systematically arranged, methodical body of theory.

In the fields of poetry, oratory, painting, sculpture, and other fine arts, based on the imitation of nature, we possess a wealth of supremely accomplished productions, on which the admiration of posterity has conferred the prestige of the archetypal exemplarity. Thanks to the guidance
offered by these masterworks, we are able to imi­
tate, correctly and easily, Nature at her best. The
invention of printing places at our disposal an
enormous number of books. Hence, our scholars
are not compelled to restrict their competence to
the knowledge of one or another author, but can
master a multiple, diversified, almost boundless
domain of culture.

Finally, we have great institutions of learning,
i.e., universities, which are the repositories of all
our sciences and arts, and where the intellectual,
spiritual, and linguistic abilities of men may be
brought to perfection. Almost all of these spheres
of mental activity have as their single goal the in­
quiry after truth. Were I to set out to extol this in­
quiry, I would arouse wonder at my eulogizing
something that no one ever thought of disparag­
ing.

Let us now scrutinize these advantages of our
study methods, and try to ascertain whether these
methods lack some of the good qualities pos­
tessed by those of antiquity: or whether, instead,
they are impaired by faults from which ancient
methods were exempt. Let us examine whether
we can avoid our deficiencies and appropriate the
good points of the ancient methods, and by what
means this may be done; and let us see whether
those among our deficiencies which are unavoid­
able may be offset by the shortcomings of an­
tiquity.

III

Let us begin with the instruments with which
modern sciences operate.

Philosophical criticism is the subject which
we compel our youths to take up first. Now, such
speculative criticism, the main purpose of which
is to cleanse its fundamental truths not only of all
falsity, but also of the mere suspicion of error,
places upon the same plane of falsity not only
false thinking, but also those secondary verities
and ideas which are based on probability alone,
and command us to clear our minds of them.
Such an approach is distinctly harmful, since
training in common sense is essential to the edu­
cation of adolescents, so that that faculty should
be developed as early as possible; else they break
into odd or arrogant behavior when adulthood is
reached. It is a positive fact that, just as knowl­
dge originates in truth and error in falsity, so
common sense arises from perceptions based on
verisimilitude. Probabilities stand, so to speak,
midway between truth and falsity, since things
which most of the time are true, are only very
seldom false.

Consequently, since young people are to be
educated in common sense, we should be careful
to avoid that the growth of common sense be
stifled in them by a habit of advanced speculative
criticism. I may add that common sense, besides
being the criterion of practical judgment, is also
the guiding standard of eloquence. It frequently
occurs, in fact, that orators in a law court have
greater difficulty with a case which is based on
truth, but does not seem so, than with a case that
is false but plausible. There is a danger that in­
struction in advanced philosophical criticism
may lead to an abnormal growth of abstract intel­
lectualism, and render young people unfit for the
practice of eloquence.

Our modern advocates of advanced criticism
rank the unadulterated essence of “pure,” primary
truth before, outside, above the gross semblances
of physical bodies. But this study of primal
philosophical truths takes place at the same time
when young minds are too immature, too unsure.
to derive benefit from it.

Just as old age is powerful in reason, so is
adolescence in imagination. Since imagination
has always been esteemed a most favorable omen
of future development, it should in no way be
dulled. Furthermore, the teacher should give the
greatest care to the cultivation of the pupil’s
memory, which, though not exactly the same as
imagination, is almost identical with it. In adoles­
cence, memory outstrips in vigor all other facul­
ties, and should be intensely trained. Youth’s nat­
ural inclination to the arts in which imagination
or memory (or a combination of both) is preva­
lent (such as painting, poetry, oratory, jurispru­
dence) should by no means be blunted. Nor
should advanced philosophical criticism, the
common instrument today of all arts and sci­
ences, be an impediment to any of them. The An­
cients knew how to avoid this drawback. In
almost all their schools for youths, the role of
logic was fulfilled by geometry. Following the
example of medical practitioners, who concentrate their efforts on seconding the best of Nature, the Ancients required their youths to learn the science of geometry which cannot be grasped without a vivid capacity to form images. Thus, without doing violence to nature, but gradually and gently and in step with the mental capacities of their age, the Ancients nurtured the reasoning powers of their young men.

In our days, instead, philosophical criticism alone is honored. The art of “topics,” far from being given first place in the curriculum, is utterly disregarded. Again I say, this is harmful, since the invention of arguments is by nature prior to the judgment of their validity, so that, in teaching, that invention should be given priority over philosophical criticism. In our days, we keep away from the art of inventing arguments, and think that this skill is of no use. We hear people affirming that, if individuals are critically endowed, it is sufficient to teach them a certain subject, and they will have the capacity to discover whether there is any truth in that subject. It is claimed that, without any previous training in the art of inventing arguments, and the probabilities which surround any ordinary topic, and to evaluate them by the standard employed in the sifting of truth. But who can be sure that he has taken into consideration every feature of the subject on hand? The most eloquent epithet that can be given to a speech is that it is “comprehensive”; praise is due to the speaker who has left nothing untouched, and has omitted nothing from the argument, nothing which may be missed by his listeners.

Nature and life are full of incertitude; the foremost, indeed, the only aim of our “arts” is to assure us that we have acted rightly. Criticism is the art of true speech; “ars topicus,” of eloquence. Traditional “topics” is the art of finding the “media,” i.e., the middle term: in the conventional language of scholasticism, “medium” indicates what the Latins call argumentum. Those who know all the loci, i.e., the lines of argument to be used, are able (by an operation not unlike reading the printed characters on a page) to grasp ex temporeaneously the elements of persuasion inherent in any question or case. Individuals who have not achieved this ability hardly deserve the name of orators. In pressing, urgent affairs, which do not admit of delay or postponement, as most frequently occurs in our law courts—especially when it is a question of criminal cases, which offer to the eloquent orator the greatest opportunity for the display of his powers—it is the orator’s business to give immediate assistance to the accused, who is usually granted only a few hours in which to plead his defense. Our experts in philosophical criticism, instead, whenever they are confronted with some dubious point, are wont to say: “Give me some time to think it over!”

I may add that in the art of oratory the relationship between speaker and listeners is of the essence. It is in tune with the opinions of the audience that we have to arrange our speech. It often happens that people unmove by forceful and compelling reasons can be jolted from their apathy, and made to change their minds by means of some trilling line of argument. Consequently, in order to be sure of having touched all the soul-strings of his listeners, the orator, then, should run through the complete set of the loci which schematize the evidence. It is quite unfair to blame Cicero for having insisted on many a point of little weight. It was exactly by those points of little weight that he was able to dominate the law courts, the Senate, and (most important of all) the Assemblies of the people. It was by that method that he became the speaker most worthy of being considered a representative of Rome’s imperial greatness. Is it not significant that it is precisely the orator whose only concern is the bare truth who gets stranded in cases in which a different speaker succeeds in extricating himself, by paying attention to credibility as well as the facts? The contrast of opinion between Marcus Brutus and Cicero, regarding the manner in which each of them thought that the defense of Milo should be conducted, provides an instructive case for reflection.

Marcus Brutus, who had been trained in a kind of philosophical, rationalistic criticism closely akin to ours (for he was a Stoic), thought that Milo should be defended by throwing his case upon the judges’ mercy, and that he should
seek acquittal on the ground of the distinguished services he had performed for the Republic, and on the ground of having rid Rome of Clodius, a noxious criminal.

Cicero, instead, an expert in the *ars topica*, deemed it unsafe to throw such a defendant upon the judges’ indulgence, considering the conditions prevalent at that time. As a consequence, he based his defense speech entirely on conjectural reasons. Had he been given the chance of delivering that speech in court, he would certainly have brought about Milo’s acquittal, as Milo himself declared.

Nevertheless, Antoine Arnauld, a man of commanding scholarship, scorns the *ars topica*, and considers it of absolutely no use.

Whom shall we believe? Arnauld, who rejects the *ars topica*, or Cicero, who asserts that his own eloquence is chiefly due to the art of skillfully arraying a set of effective lines of argument? Let others decide; as for me, I am unwilling to award to the one what I would have to take away from the other: I shall limit myself to stating that a severely intellectualistic criticism enables us to achieve truth, while *ars topica* makes us eloquent. In antiquity, the Stoics devoted themselves entirely to philosophical criticism, while the Academics cultivated topics. Similarly, today the jejune and aridly deductive reasoning in which the Stoics specialized is followed by the moderns, whereas the Aristotelians of the recent past are characterized by the varied and multi-form style of their utterance.

It is significant that the representatives of the schools of ancient philosophy became the more eloquent in proportion as they were less inclined to a strictly philosophical criticism. The advocates of Stoicism (for whom, as for our *moderni*, pure reason is the regulative standard of truth), were the thinnest and leanest of all philosophers. The Epicureans, according to whom the regulative standard of truth resides in sense-perception, were simple in expression, and unfolded their doctrines in more detail. The ancient Academics instead, being disciples of Socrates who intended that he knew nothing but his own ignorance, were masters of an overflowing and lavishly embellished expression. As for the neo-Academics, who admitted that they did not even know that they did not know anything, they overwhelmed their listeners with torrential outbursts and snowdrifts of oratory.

Both Stoics and Epicureans came out in support of only one side of the argument: Plato inclined towards one or the other side, depending on which appeared to him more probable; Carneades, instead, was wont to embrace both of the sides of any given controversy. He would, for instance, affirm one day that justice exists, another day, that it does not, bringing forth equally compelling arguments for both positions and displaying an unbelievable power of argumentation. This was due to the fact that whereas truth is *one*, probabilities are many, and falsehoods numberless.

Each procedure, then, has its defects. The specialists in topics fall in with falsehood; the philosophical critics disdain any traffic with probability.

To avoid both defects, I think, young men should be taught the totality of sciences and arts, and their intellectual powers should be developed to the full; thus they will become familiar with the art of argument, drawn from the *ars topica*. At the very outset, their common sense should be strengthened so that they can grow in prudence and eloquence. Let their imagination and memory be fortified so that they may be effective in those arts in which fantasy and the mnemonic faculty are predominant. At a later stage let them learn criticism, so that they can apply the fullness of their personal judgment to what they have been taught. And let them develop skill in debating on either side of any proposed argument.

Were this done, young students, I think, would become exact in science, clever in practical matters, fluent in eloquence, imaginative in understanding poetry or painting, and strong in memorizing what they have learned in their legal studies.

They would not feel the impulse to step rashly

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5 Coauthor (with Pierre Nicole) of the 1662 *Port-Royal Logic*. (See the introduction to Part Four.) [Ed.]

6 A skeptical philosopher of the second century B.C.E. [Ed.]
into discussions while they are still in process of learning; nor would they, with pedestrian slavishness, refuse to accept any viewpoint unless it has been sanctioned by a teacher. In this sphere, the Ancients seem to me to be superior to us.

A five-year period of silence was enjoined upon all of Pythagoras' students. After that time, they were allowed to maintain what they had learned, but had to ground their reasons only upon the authority of their master. "He said it," was their motto. The chief duty of a student of philosophy was to listen. Most appropriately were they called "auditors."

Arnauld himself, although his words seem to spurn this procedure, actually confirms and professes what I am stating. His treatise on Logic is replete with far-fetched and involved illustrations, with difficult examples drawn from the deep storehouses of each discipline. Naturally, these illustrations and examples prove to be unintelligible to the young student, unless he is already more proficient in those arts and sciences from which those supporting materials are taken, and unless his teacher devotes great efforts and a great deal of eloquent skill to the explanation of them. If logic is studied at the terminal stage of the school curriculum, these deficiencies, besides those I have mentioned before, are avoided. What Arnauld presents, though he provides useful examples, is hardly to be understood; the materials offered by the Aristotelians, instead, though perfectly intelligible, are of no use whatever....

VII

But the greatest drawback of our educational methods is that we pay an excessive amount of attention to the natural sciences and not enough to ethics. Our chief fault is that we disregard that part of ethics which treats of human character, of its dispositions, its passions, and of the manner of adjusting these factors to public life and eloquence. We neglect that discipline which deals with the differential features of the virtues and vices, with good and bad behavior-patterns, with the typical characteristics of the various ages of man, of the two sexes, of social and economic class, race, and nation, and with the art of seemingly conduct in life, the most difficult of all arts. As a consequence of this neglect, a noble and important branch of studies, i.e., the science of politics, lies almost abandoned and untended.

Since, in our time, the only target of our intellectual endeavors is truth, we devote all our efforts to the investigation of physical phenomena, because their nature seems unambiguous; but we fail to inquire into human nature which, because of the freedom of man's will, is difficult to determine. A serious drawback arises from the uncontrasted preponderance of our interest in the natural sciences.

Our young men, because of their training, which is focused on these studies, are unable to engage in the life of the community, to conduct themselves with sufficient wisdom and prudence; nor can they infuse into their speech a familiarity with human psychology or permeate their utterances with passion. When it comes to the matter of prudential behavior in life, it is well for us to keep in mind that human events are dominated by Chance and Choice, which are extremely subject to change and which are strongly influenced by simulation and dissimulation (both preeminently deceptive things). As a consequence, those whose only concern is abstract truth experience great difficulty in achieving their means, and greater difficulty in attaining their ends. Frustrated in their own plans, deceived by the plans of others, they often throw up the game. Since, then, the course of action in life must consider the importance of the single events and their circumstances, it may happen that many of these circumstances are extraneous and trivial, some of them bad, some even contrary to one's goal. It is therefore impossible to assess human affairs by the inflexible standard of abstract right; we must rather gauge them by the pliant Lesbic rule, which does not conform bodies to itself, but adjusts itself to their contours.

The difference, therefore, between abstract knowledge and prudence is this: in science, the outstanding intellect is that which succeeds in reducing a large multitude of physical effects to a single cause; in the domain of prudence, excellence is accorded to those who ferret out the greatest possible number of causes which may have produced a single event, and who are able to identify each cause rather than subtract
to conjecture which of all these causes is the true one. Abstract knowledge—science—is concerned with the highest verity; common sense, instead, with the lowest. On the basis of this, the distinguished features of the various types of men should be marked out: the fool, the astute ignoramus, the learned man destitute of prudence, and the sage. In the conduct of life the fool, for instance, pays no attention to the highest or the meanest truths; the astute ignoramus notices the meanest but is unable to perceive the highest; the man who is learned but destitute of prudence, deduces the lowest truths from the highest; the sage, instead, derives the highest truths from the unimportant ones. Abstract, or general truths are eternal; concrete or specific ones change momentarily from truths or untruths. Eternal truths stand above nature; in nature, instead, everything is unstable, mutable. But congruity exists between goodness and truth; they partake of the same essence, of the same qualities. Accordingly, the fool, who is ignorant of both general and particular truths, constantly suffers prompt penalties for his arrogance. The astute ignoramus, who is able to grasp particular truths but incapable of conceiving a general truth, finds that cleverness, which is useful to him today, may be harmful to him tomorrow. The learned but imprudent individual, traveling in a straight line from general truths to particular ones, bulls his way through the tortuous paths of life. But the sage who, through all the obliquities and uncertainties of human actions and events, keeps his eye steadily focused on eternal truth, manages to follow a roundabout way whenever he cannot travel in a straight line, and makes decisions, in the field of action, which, in the course of time, prove to be as profitable as the nature of things permits.

Therefore, it is an error to apply to the prudent conduct of life the abstract criterion of reasoning that obtains in the domain of science. A correct judgment deems that men—who are, for the most part, but fools—are ruled, not by forethought, but by whim or chance. The doctrinaires judge human actions as they ought to be, not as they actually are (i.e., performed more or less at random). Satisfied with abstract truth alone, and not being gifted with common sense, unused to following probability, those doctrinaires do not bother to find out whether their opinion is held by the generality and whether the things that are truths to them are also such to other people.

This failure to concern themselves with the opinions of others has not only been a source of blame, but has proved to be extremely prejudicial, not only to private persons but to eminent leaders and great rulers as well. Let an example which is right to the point be quoted here: While the assembly of the French Estates was in session, Henry III, King of France, ordered Duke Henry de Guise, a very popular member of the French aristocracy, to be put to death, in spite of the fact that the Duke was under the protection of a safe conduct. Although just cause underlay that order of the king, such cause was not made manifest. The case having been brought up in Rome, Cardinal Ludovico Madruzzi, a man of great judgment in public affairs, commented: "Rulers should see to it not only that their actions are true and in conformity with justice, but that they also seem to be so."

Madruzzi's statement was proved true by the calamities which overtook France shortly after.

The Romans, who were great experts in political matters, paid particular attention to appearances. Both their judges and their senators, on giving out an opinion, were always wont to say: "It seems."

To summarize: It was because of their knowledge of the greatest affairs that philosophers were, by the Greeks, called "politici," i.e., experts in matters bearing on the total life of the body politic. Subsequently, philosophers were called Peripatetics and Academicians, these names being derived from two small sections of the town of Athens, where their schools stood. Among the Ancients, the teaching of rational, physical, and ethical doctrines was entrusted to philosophers who took good care to adjust those doctrines to the practical common sense that should govern human behavior.

Today, on the contrary, we seem to have reverted to the type of physical research which was typical of pre-Socratic times.

There was an epoch when the "fourfold philosophy" (i.e., logic, physics, metaphysics, and ethics) was handed down by its teachers in a manner fitted to foster eloquence: i.e., the attempt
was made to fuse philosophy with eloquence. Demosthenes was a product of the Lyceum; Cicero, of the Academy: there is no doubt that they were the two foremost speakers of the two most splendid of languages. Today, those branches of philosophical theory are taught by such a method as to dry up every fountain of convincing expression, of copious, penetrating, embellished, lucid, developed, psychologically effective, and impassionate utterance. The listeners’ minds undergo a process of constriction, so as to assume the shape of those young virgins.

... whom their mothers compel to bend their shoulders, to stoop, to bind their bosom in order to achieve slenderness;
if one of the girls is fleshier, they call her “the boxer”
and stint her on food;
if by nature she is healthy, they reduce her, by a special cure,
to the slenderness of a reed.
[Terence, The Eunuch II.iii.23–26]

Here some learned pundit might object that, in the conduct of life, I would have our young students become courtiers, and not philosophers; pay little attention to truth and follow not reality but appearances; and cast down morality and put on a deceitful “front” of virtue.

I have no such intention. Instead, I should like to have them act as philosophers, even at court; to care for truth that both is and has the appearance of truth, and to follow that which is morally good and which everybody approves.

As for eloquence, the same men assert that the modern study methods, far from being detrimental, are most useful to it. “How much preferable it is,” they say, “to induce persuasion by solid arguments based on truth, to produce such an effect on the mind that, once that truth coalesces with reason, it can never again be separated from it, rather than to coerce the listener’s soul by meretriciously eloquent allurements, but blazes of oratorical fire which, as soon as they are extinguished, cause him to revert to his original disposition!”

The answer is that eloquence does not address itself to the rational part of our nature, but almost entirely to our passions. The rational part in us may be taken captive by a net woven of purely intellectual reasonings, but the passionall side of our nature can never be swayed and overcome unless this is done by more sensuous and materialistic means. The role of eloquence is to persuade; an orator is persuasive when he calls forth in his hearers the mood which he desires. Wise men induce this condition in themselves by an act of volition. This volition, in perfect obedience, follows the dictates of their intellect; consequently, it is enough for the speaker to point their duty to such wise men, and they do it. But the multitude, the vulgus, are overpowered and carried along by their appetite, which is tumultuous and turbulent; their soul is tainted, having contracted a contagion from the body, so that it follows the nature of the body, and is not moved except by bodily things. Therefore, the soul must be enticed by corporeal images and impelled to love; for once it loves, it is easily taught to believe; once it believes and loves, the fire of passion must be infused into it so as to break its inertia and force it to will. Unless the speaker can compass these three things, he has not achieved the effect of persuasion; he has been powerless to convince.

Two things only are capable of turning to good use the agitations of the soul, those evils of the inward man which spring from a single source: desire. One is philosophy, which acts to mitigate passions in the soul of the sage, so that those passions are transformed into virtues; the other is eloquence, which kindles these passions in the common sort, so that they perform the duties of virtue.

It may be objected that the form of government under which we live at present no longer allows eloquence to exercise its control over free peoples. To which I answer that we ought to be thankful to our monarchs for governing us not by fist but by laws. However, even under the republican form of government, orators have gained distinction by their fluent, broad, impassioned style of delivery in the law courts, the assemblies, and the religious convocations, to the greatest advantage of the state, and to the signal enrichment of our language.

But let us approach what may be a basic point. The French language is abundantly endowed
with words designating abstract ideas. Now, abstraction is in itself but a dull and inert thing, and does not allow the comparative degree. This makes it impossible for the French to impart an ardent and emotional tone to their ideas, inasmuch as such an effect can only be achieved by setting thought in motion, and a vehement motion at that; nor can they amplify or elevate their discourse. Nor can they invert the order of words: the conceptual abstraction being the most general category, it does not supply us with that "middle term" where the extreme points of a metaphor are able to meet and unite. It is therefore impossible in French for a single noun to be the vehicle of a metaphor; and metaphors composed of two nouns are, as a rule, somewhat stilted. Furthermore, when the French writers attempt the periodic style, they are unable to get very far, on account of the shortness of the sentence segments. Nor can French poets compose lines of greater breadth than those which are called "alexandrines"; and these alexandrines, besides consisting of two symmetrical portions, are more dragging and spindly than the Latin elegiac lines. (Each verse contains a simple thought, and they rhyme in pairs; the first feature reduces their scope, the second impairs their gravity.) French words have only two kinds of stress; they are accented on the ultima and on the penult, whereas Italian stresses the ante-penult. In French the accent shifts to the penult, which results in a somewhat tenuous and thin sound. For these reasons, French is not fit for stately prose, nor for sublime verse. But though the French language cannot rise to any great sublimity or splendor, it is admirably suited to the subtle style. Rich in substantives, especially those denoting what the Scholastics call abstract essences, the French language can always condense in a small compass the essentials of things. Since arts and sciences are mostly concerned with general notions, French is therefore splendidly suited to the didactic genre. While we Italians praise our orators for fluency, lucidity, and eloquence, the French praise theirs for reasoning truly. Whenever the French wish to designate the mental faculty by which we rapidly, aptly, and felicitously couple things which stand apart, they call it esprit, and are inclined to view as a naive, simple trick what we consider as forceful power of combination; their minds, characterized by exceeding penetration, do not excel in synthetic power, but in piercing subtlety of reasoning. Consequently, if there is any truth in this statement, which is the theme of a famous debate, "genius is a product of language, not language of genius," we must recognize that the French are the only people who, thanks to the subtlety of their language, were able to invent the new philosophical criticism which seems so thoroughly intellectualistic, and analytical geometry, by which the subject matter of mathematics is, as far as possible, stripped of all concrete, figural elements, and reduced to pure rationality. The French are in the habit of praising the kind of eloquence which characterizes their language, i.e., an eloquence characterized by great fidelity to truth and subtlety, as well as by its notable deductive order. We Italians, instead, are endowed with a language which constantly evokes images. We stand far above other nations by our achievements in the fields of painting, sculpture, architecture, and music. Our language, thanks to its perpetual dynamism, forces the attention of the listeners by means of metaphorical expressions, and prompts it to move back and forth between ideas which are far apart. In the keenness of their perception, the Italians are second only to the Spaniards. Theirs is a language which, in the rich and elevated style (i.e., that of Herodotus, Livy, and Cicero), possesses a Guicciardini; in the grand and vehement style of Thucydides, Demosthenes, and Sallust, it has others; in Attic elegance, it has Boeaccio; in the new lyric style, Petrarch. Ariosto, in the grandeur of his plots and the ease of his diction, puts one in mind of Homer; while a poet like Tasso, by the enchantingly musical sublimity of his rhyme, comes fully up to Virgil. Shall we then not cultivate a language possessing such felicitous qualities?

In conclusion: whosoever intends to devote his efforts, not to physics or mechanics, but to a political career, whether as a civil servant or as a member of the legal profession or of the judiciary, a political speaker or a pulpit orator, should not waste too much time, in his adolescence, on those subjects which are taught by abstract geometry. Let him, instead, cultivate his mind with an inge-
nious method; let him study topics, and defend both sides of a controversy, be it on nature, man, or politics, in a freer and brighter style of expression. Let him not spurn reasons that wear a semblance of probability and verisimilitude. Let our efforts not be directed towards achieving superiority over the Ancients merely in the field of science, while they surpass us in wisdom; let us not be merely more exact and more true than the Ancients, while allowing them to be more eloquent than we are; let us equal the Ancients in the fields of wisdom and eloquence as we excel them in the domain of science.

XIV

As for universities, the amazing fact is that, whereas the Ancients possessed, so to speak, universities for the body, i.e., baths and athletic fields, where young men could develop their strength and agility by exercises such as racing, jumping, boxing, javelin- and discus-throwing, swimming and bathing, they never thought of establishing universities where young minds could be cultivated and strengthened.

In Greece, a single philosopher synthesized in himself a whole university. The Greek language, so fertile in potential developments that it was admirably fitted to express not only all the occurrences of common, everyday life, but the most recondite and abstruse ideas of all sciences and arts in apt terms, the beauty of which terms was commensurate with their appropriateness and felicity; the Greek genius for lawmaking, which was so exceptional that other nations came to borrow laws from Greece while Greece had no necessity to borrow from them—these fostered among the Hellenes the conviction of their immense superiority over other nations. They were wont to ask a question, acutely symptomatic of national conceit: “Art thou a Greek or a barbarian?” as if they esteemed themselves to be worth as much as half of the world, and to be the better part of it.

Things being so, since the Greeks devoted intense, undivided attention to the cultivation of philosophy, the mother, midwife, and nursling of all sciences and arts; since they did not, in the philosophical domain, rely on authority, but discussed all problems on no other merits but the intrinsic ones, each Greek philosopher was capable of achieving a mastery of all learning, both secular and religious, and it was from him alone that students learned thoroughly whatever it was necessary for them to know in the field of public affairs.

With the Romans, the case was different. Although their speech was not autochthonous but derived from other tongues, they proudly sprang all effort to prove that a Roman word derived from other languages. In the case of the words,

... which fall from Grecian well-spring, but slightly changed,

[Horace, *Ars Poetica* 53]

they preferred the frivolous, erroneous, foolish interpretation, rather than admit that one of their terms had non-native origins. Although their laws had largely been borrowed from Greece, they expended great ingenuity in grafting those enactments onto their own political system, so that they seemed to spring spontaneously from their soil. In respect to both language and law, the Romans equaled the Greeks. The need for universities was felt by the Romans even less than by the Greeks, since, as I have pointed out, they thought that wisdom consisted in the art and practice of law, and learned to master it in the everyday experience of political affairs. Since the patricians kept law-lore concealed, as if it were an arcanum of state, far from feeling any need for universities, the Romans had no interest whatever in establishing them.

But with the transformation of republic into principate, it being in the interest of the emperors that the science of law should be propagated as legal doctrine, this discipline gradually attained greater range and compass through the multitude of writers and their division into doctrinal schools. Regular institutions of teaching were recognized, and the “Academies” of Rome, Constantinople, and Beirut were founded.

Our need for universities is considerably greater. We must have a thorough knowledge of the Scriptures and, in addition, of Eastern languages and of the canons of the ecclesiastic Councils, some of which were held in Asia, some in Europe, some in Africa, in different countries.
and cities, from apostolic to modern times. We must familiarize ourselves with the laws of Romans and Lombards, with feudal law, the theories of Greeks, Latins, and Arabs, which were introduced into our customary public law. We must guard against scribal garblings, plagiarisms, forgeries, interpolations of alien hands through which it is difficult for us to recognize the originals, and to grasp the author's true meaning. What we need to know is contained in so many books in languages that are extinct, composed by authors belonging to nations long since vanished. These books contain allusions to custom often unknown, in corrupted codices; therefore the attainment of any science or art has become so difficult for us, that at the present time no person can master even a single subject. This has made the establishment of universities necessary. In these universities, all branches of knowledge are taught by a number of scholars, each of whom is outstanding in his particular field. But this advantage is offset by a drawback. Arts and sciences, all of which in the past were embraced by philosophy and animated by it with a unitary spirit, are, in our day, unnaturally separated and disjointed. In antiquity, philosophers were remarkable for their coherence; their conduct was in full accord not only with the theories they professed but with their method of expounding them as well. Socrates, who maintained that "he knew nothing," never brought up any subject for discussion on his own initiative, but pretended to feel a desire to learn from the Sophists. His habit was to confine himself to advancing a series of minute questions, from the replies to which he drew his own inferences. The Stoics, instead, whose main principle was that the mind is the standard of all things, and that the sage should not entertain "mere opinions" about anything, established, in conformity with their requirements, a number of unquestionable truths, linking them, by continuous concatenation, through secondary propositions, to doubtful conclusions; and employed as their instrument of argumentation the figure of the *sorites.*

7A *sorites* is a chain of syllogisms in which the conclusion or implied conclusion of each one is the premise, major or minor, of another one. [Ed.]

The Institutes of Justinian (sixth century c.E.) codify Roman law. The Pandects are a digest of that law. The *Codex* is the code of canon law of the Roman Catholic church. Vico's point is that related branches of a subject may be taught by adherents of conflicting theories or approaches. [Ed.]
constant effort, within the very limited range of my powers, to be useful to human society. But if my remarks should be considered false or lacking in practicality, my unquestionably honorable ambition and my earnest efforts towards a grand goal shall earn me a pardon.

It may be objected that, whereas facing danger when necessary is a sign of courage, undertaking a risk when there is no need of doing so is a sign of foolhardiness. "Why should you have undertaken to treat this subject which involves a knowledge of all sciences?"—some one will ask.

In answer, I will say: As G. B. Vico, I have no concern; but as a professor of eloquence, great concern in this undertaking. Our ancestors, the founders of this University, clearly showed, by assigning the professor of eloquence the task of delivering every year a speech exhorting our students to the study of the principles of various sciences and arts, that they felt he should be well versed in all fields of knowledge. Nor was it without reason that the great man, Bacon, when called upon to give advice to James, King of England, concerning the organization of a university, insisted that young scholars should not be admitted to the study of eloquence unless they had previously studied their way through the whole curriculum of learning.

What is eloquence, in effect, but wisdom, ornamented and copiously delivered in words appropriate to the common opinion of mankind? Shall the professor of eloquence, to whom no student may have access unless previously trained in all sciences and arts, be ignorant of those subjects which are required by his teaching duties? The man who is deputed to exhort young students to grapple with all kinds of disciplines, and to discourse about their advantages and disadvantages, so that they may attain those and escape these, should he not be competent to expound his opinions on such knowledge?

For these reasons, teachers willing to bear this burden (a burden, I fear, vastly surpassing the strength of my shoulders) deserve to be likened, I feel, to C. Cilnius Maecenas, Crispus Sallustius, and other equites illustres, who, though possessed of financial means superior to those which the law prescribed for admission to senatorial rank, insisted on their wish to remain within the equestrian order. It was, therefore, not my duty alone as professor of eloquence, but my right as well to take up the subject of this discourse. What determined me was by no means the desire to diminish the prestige of a colleague or to place myself in the spotlight.

As you saw, whenever drawbacks had to be pointed out, I passed individual authors in silence; and whenever it was necessary to mention these authors, I did it with the utmost respect, since it was not for an unimportant man like me to censure persons so eminently great. As for the drawbacks, I sedulously set them forth as unobtrusively as possible.

From childhood, I have imposed on myself this rule (which the weakness of my fellow men has made a sacred one), to be as indulgent to the shortcomings of others as I would like others to be indulgent to my own, especially since others may have done many important things well, and failed only in a few cases, whereas I may have been guilty of countless errors in matters requiring but little ability.

In the present discourse, I have carefully refrained from any boasting; though my speech could have been pompously entitled "On the reconciliation of the study methods of antiquity with those of our time," I have preferred a more modest and usual designation. My purpose has been not to draw smoke from the brightness of light, but to bring out light from smoky murk.

[Horace, Ars Poetica 143]

I chose not to clothe my thought in high-sounding words, lest I should offend the intelligence of this assembly of listeners, every member of which knows how to reason with his own head and is fully conscious of his right to judge any author as he thinks best.

But, someone will object, "You were certainly bragging when you said that your theme was new." Not in the least. The fact that a theme is new is not automatically a recommendation; monstrous and ridiculous things may also be

These illustrious members of the wealthy (but not patrician) equestrian class chose public service without the honor of official rank and title. [Ed.]
novelties. But to bring forward new things and to
treat them in the right manner is unquestionably
worthy of praise. Whether I did so, or not, I shall
leave to the judgment of my listeners and to the
common judgment of scholars, from whom, I
vow, I shall never depart. In my life I have al-
ways had the greatest apprehension of being
alone in wisdom; this kind of solitude exposes
one to the danger of becoming either a god or a
fool.

But, it will be urged, you have shown yourself
thoroughly presumptuous in choosing a subject
where you had to show a mastery of all learned
disciplines and where you had to pass peremp-
tory and pretentious judgment on them, as if you
had been fully and deeply familiar with every
one of them. To fend off the objection, I beg
whosoever wants to press it to reflect on the
kinds of judgments I have passed. Let him ob-
serve that a certain doctrine may be either benefi-
cial or prejudicial to some persons; let him ascer-
tain how the harm that such doctrine is likely to
cause may be avoided. He will find out that judg-
ment cannot be passed except by a man who has
studied all of these matters, but

of all these things, no one more deeply than all
others,
yet all of them indeed, in moderation.

[Terence, The Lady of Andros 58-59]

It is a common experience to see an individual
who has concentrated all of his efforts on a single
branch of study, and who has spent all his life on
it, think that this field is, by far, more important
than all others, and to see him inclined to make
application of its specialty to matters wholly for-
ign to it. This may be due to the weakness of
our nature, which prompts us to take an inordi-
nate delight in ourselves and in our own pursuits.

Though I am afraid of delivering false judg-
ments on all subjects, I am particularly afraid of
advancing erroneous views on eloquence, since I
profess it.

After stating this in defense of my assignment
and of the way I have discharged it, permit me to
say that I shall be greatly indebted to any one
who wishes to criticize with pertinence and with
concrete reference to their intrinsic purport, the
points that I have brought up, so as to free me
from eventual errors. He will be certain to enlist
my gratitude by his mere intent to do so.