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THE RENEWAL OF THE ANCESTRAL^a ITALIAN PHILOSOPHY
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PART I: METHOD

CHAPTER I: THE TOPIC AND PURPOSE OF THIS BOOK

1

Three centuries have passed since every natural science began to proceed skillfully and successfully toward its goal. The situation is the reverse in the domain of philosophy, which today, as in the past, seems troubled by opposing systems and utterly unsure of any of its truths. Like many before us, we too have set out to find the cause of this because we are unsatisfied with the common view – that every conflict of philosophical opinion arises from the insuperable difficulty of the subject.

The reasoning behind this view is that any investigation of a hard subject leads to one of three results: either proving that knowledge of certain parts of the subject is impossible, as geometers deal with a number of their problems; or constructing a field in a purely empirical way while paying no attention at all to general principles, as used to be the case in chemistry; or only using analogies that are plentiful or helpful to establish the likelihood of some number of things – removed from certainty, more or less – as one sees the geologists doing. But none of these three conclusions applies [at all *per anco* ???] to philosophy.

No one has managed to establish the impossibility of constructing a rational philosophy. And yet for their part the skeptics never relax their zealous efforts, every now and then, to flatten and destroy what dogmatists have worked so hard to build. Likewise, if some are convinced that philosophy can be no more than some kind of probable or experimental information, empirical and diffuse, a hundred others rise up and emphatically assert the opposite. For such people philosophy is a real science and completely dogmatic. Its duty is to provide all the other sciences whatever measure of certainty and rationality they have.

2

So let us seek some other reason for the turmoil in philosophy, something other than the difficulty of the subject, though we have nowhere to look but in the nature or use of the faculties employed in the study of philosophy itself. For in any human activity there are three things, and three only, to consider: the content, the instrument and the purpose. Hence, since the cognitive powers are the same in every field, since people have no organ that is better or worse for philosophy, no special means of understanding or reflecting, in

^a *antica*

the end we have had to examine the use of the cognitive powers and to suspect this use of being deceptive and defective because it has not been able to lead science to a firm and clear outcome.

Here again, however, the need arises to explain why it is only in philosophy that the cognitive powers have been badly applied.... Only in philosophy does one encounter a double subject and a double purpose. As a science of the human mind, which is how many have seen it, philosophy makes up part of the natural history of our existence. But as the science that governs all others, it moves beyond the bounds of anthropology and crosses into metaphysics. Again, the result is plain to see: in philosophy alone one finds the content and the instrument adapted-to and confused-with one another. While studying the faculties and activities of the intellect, with what do we undertake such a study except the intellect itself? This is what compounds the difficulties and often leads to the error of arguing in a circle.

3

Thus we have become convinced that philosophy's mistakes, ancient and modern, and its incessant disputes are to be attributed to no other cause than the incorrect use of the cognitive faculties or, as we would put it, fallacious, divergent and distorted methods. In fact, anyone who reads the records of the whole period from Galileo onward clearly sees a common direction, always perfectly consistent, governing the various types of physical inquiry, [one after the other *di mano in mano* ???]. On the other hand, what one sees in theoretical studies – and more than occasionally – is the emergence of methods that are not just different but opposed, none of them capable in itself of recognizing the truth.

Indeed, there are philosophers who think that a supreme and completely certain science, such as a first philosophy should be, can be based only on the universal, the changeless and the necessary, and hence that it cannot come from changeable, limited and accidental experience. They have therefore constructed an *a priori* philosophy, following the method of geometry. While never proving its authority, they have thereby accepted absolute and general principles, from which they derive every subsequent demonstration – not to mention their never having succeeded in getting beyond abstractions to particularized knowledge of concrete, sensible objects. Others assume that they can follow the natural method of the physicists exactly, without regard for the very special circumstances of philosophy, and the result is that they explain the highest principles of reason and experience by those principles themselves.

Having noted this egregious error, some adhere to the natural method of the physicists only for what concerns the empirical observation of phenomena. As for the highest principles of the intellect, they resolutely profess neither to know them nor to be able to produce any proof of them beyond their being instinctively evident. With one blow they thus abolish any theory of first philosophy and put in its place a bare experiential history of the mind and its instincts. Some prefer a more daring route and a novel one. Returning to the old geometrical method, they try to make it productive by applying various clever conjectures, thereby constructing the whole science of truth and being

partly *a priori* and partly *ex hypothesi*, adding the flaw of arbitrary notions to the defects of the geometrical method. Nor do we lack proponents of a method called *historical*. They say that philosophy should be constructed bit by bit of fragments taken from each school in every period. Finally, others have mixed these various learned procedures together, but not in a way that has yielded anything better.

By comparing the opposed systems of method that appear in the domain of theoretical subjects, and by setting what we have said about them alongside the single system that governs physical studies so effectively, we get a clear sense of the reason why theoretical subjects remain so persistently quarrelsome and full of obscurity.... For subjects of reasoning, so much conflict and so much uncertainty of opinion can never in any way be reduced, in our view, unless theoretical minds commit themselves, with a shared will, to solve the problem before us, which is to derive from deep inquiry into philosophy's content and purpose the specific changes and correct practices that must govern the general teaching of the natural method. This and only this, so it seems to us, must be the introduction to any philosophy.

4

However, as we reached the conclusions that arose in this way from the history of instability in knowledge, two forces were acting on us at the same time. One was a concept of the best philosophical method, which took shape gradually. The other was the discovery of this rather remarkable fact: that honor and glory belongs to our Italian ancestors^b not only for restoring the natural method in all its parts but also for applying it more than capably to the special circumstances of philosophy, permitting the Italians to begin reaping the fruits of a true and stable science from this method. Their honor and glory were then obscured and interrupted by violent fortune, but it seems to us that this book of ours should win them back again, if our weak powers are up to the task. Part of our proposal, then, is to show clearly, though very briefly, that the best conception of philosophical method possible today, including its slow and judicious application to the hardest parts of metaphysics, must be the restoration and pursuit of older^c principles of method found by Italians, along with the development of some of the older principles of truth discovered by them. These are the two things that we call a *Renewal of the Ancestral Italian Philosophy*.

5

As we glanced at the history of knowledge and looked at it comparatively, two parallel series of ideas arose in our thought, and they will be described in the subsequent course of the book. In other words, as we set ourselves to noting our thoughts on the best philosophical method and also some of its difficult applications, we shall also note how these coincide with ancestral Italian teachings. The book's purpose will also be twofold. The intent is both to increase honor to the fatherland by refreshing memories of her

^b*antichi Italiani*

^c*antichi*

ancestral wisdom and also to explain concepts that we have gathered about the method and its applications, thus finding a way to halt the war of opinions in the sphere of philosophy and bring some of them into a steady and definite state of knowledge.

CHAPTER II: ATTEMPTS TO RESTORE HUMAN UNDERSTANDING

1

The general history of knowledge reveals this continuing progress of the human intellect. Humans are taught by nature about the best, and likewise the shortest, route leading to the level of truth that suits the powers of their cognitive faculties. And yet there are enough causes of error, multiplying over time, to turn human understanding away from the route taken by the happy exercise of instinct....

Certainly, Socrates did much and labored hard to lead people back to rules of common sense. And in that adage of his, *gnôthi se auton*, he planted a precious seed of philosophical reform. Besides a moral rule, this maxim may contain a rule of method – making psychological criticism a basis for philosophizing. But because Socrates had a mind that turned more readily to practical than to theoretical teachings, and also because he never taught as if the dictates of common sense could be kept subject to rigid laws, the madness of the past reappeared after a short time. Next, the Alexandrian restoration aimed to remedy the old weakness with intelligences that bent under the weight of new dogmas colored by an artificial, mystical glow. Proclus, who gave a sad example by assuming more than he ought about the powers of demonstration, dressed Neoplatonic fantasies in a geometric garment. Only in Italy, then, and notably through the work of the mighty Galileo, did the human intellect return with constancy and care to the evidence of nature.

2

From what we can tell, Archimedes had also begun a philosophical restoration in Italy, even though fate opposed his lofty design. In the time of this supreme genius, it seems that the Italic school could not rise above the attacks of skeptics or the quibbles of sophists, such were the depths into which extravagant Eleatic dogma had plunged it.

In fact, this same school had produced three great principles of philosophical method: first, a primal certainty, residing in the subjective state of our consciousness; second, Zeno's dialectic, containing the results and rules of the technique of demonstration; third, the intention, kept always in view, to satisfy reason's demands by attempting to explain the authority of its supreme laws by way of apodictic science. If one wants to add to this the observational, experimental and inductive spirit of old Empedocles, the whole result might include all the best principles of philosophical method.

Archimedes then renewed and enlarged the induction of Empedocles and Zeno's demonstrative power so effectively that no thinker of later times has been able to surpass

him. Had he been allowed to found a school of wisdom, however, we have no doubt that he would have started that restoration of all knowledge which was delayed by seventeen hundred years and more. At that time, with Galileo's potent help and that of other philosophical thinkers of the seventeenth century, the principles of method, the hidden seeds that we have seen surviving in the ancestral Italic school, finally sprouted. Of this we will say a little more because we find that until now no one has adequately defined and described this wondrous movement of human reasoning.

CHAPTER III: THE ITALIAN RESTORATION

1

To form an idea of the value of a task, one must take care to examine the obstacles that stand in the way of its completion. Those that the Italians encountered in the reconstruction of knowledge were the greatest ever recorded by history. Some impediments were external and had physical causes, while others were internal causes that damaged the exercise of the mental faculties. Causes of both types converged in the false teaching of scholasticism, which corrupted thinkers who were amenable to it, while afflicting those who were not amenable with prison, torture and the stake.

Petrarch is first person we meet who had the courage to laugh at the false philosophy of the schools and use his keen mind to reveal its defects and foolishness, [even though *avvegnachè* ???] the basis of his judgment was a noble and refined sensibility rather than deep critical inquiry.¹ From then on, new access to sources of Greek wisdom kindled the will to combat scholasticism everywhere, in two ways: by contrasting Aristotle's plain speech to the spurious and mystifying talk of the commentators; and by using the charms of Cicero and Xenophon [to lure thinkers away *disvezzando* ???] from the barbaric manner of speech used by the dialecticians.

2

Leaders of this effort were Ermolao Barbaro, Angelo Poliziano, Valla and Pomponazzi, the last two deserving special praise and admiration. With clear and polished eloquence, and with a frankness and independence of mind that was quite rare in those days, it was Pomponazzi more than the others who explained Aristotle in the purity of his text and opinions. Lorenzo Valla wrote works that were finer, in our judgment, for their courage, usefulness and insight.

Certainly before 1457, the year of his death, Valla wrote three books *On Dialectic* against the Aristotelians, thus pointing his lance not only at the scholastics but also at the master of them that know. To us, he appears to be the first who directly attacked a number of

¹*De vera sapientia.*

Aristotle's views with arguments and theories of his own, while others, protected by Plato's shield and all his weapons, hardly felt strong enough to combat Aristotle. In his three books, rich with elegant Latin, he began by ridiculing blind trust in Aristotle's words. He then went on to show how the highest categories and first predicables had been based on false assumptions, proving this by the correct meaning of terms, by the usage of [speakers *parlari* ???] and by arguments from common sense.

Valla overthrew the classifications of Porphyry in the same way. He shows how the basic rules of logic are simple and completely self-evident. He attaches great importance to the study of signs, and even though his treatment of the subject is too grammatical, he also eliminates several mistakes of the schools. He invites the youth to look in the greatest writers of prose and poetry for the correct understanding of language. With this wise counsel, in fact, he grasped one of the most effective ways to recover the principles of natural method and put them into practice.

Finally, we should not fail to mention that Valla's subtle mind devised [for his contemporaries *a' suoi* ???] a reduction of Aristotle's predicaments and categories like the reduction of Kant's forms and categories that some have made today. [The truth is *E valga il vero* ???], according to Valla's proposal and declaration, that only three predicaments are distinct, essential and more comprehensive than all the others: *thing* (both as substance and as cause), *quality* and *action*, so that *quality* belongs to *thing as substance*, while *action* belongs to *thing as cause*.² This is precisely what the modern spiritualists of France have thought and written.

In this way, the disgrace and destruction of scholasticism was completed in the second half of the fifteenth century. A few foreigners cooperated, to be sure, but they all worked at a later time. And it was on the peninsula that a great many of them – Rudolf Agricola, Jacques Lefèvre, Sepulveda, Scioppius and others, for example – had acquired their learning and their skill as writers.

3

With scholastic authority at its end, theological and Peripatetic authority remained. Against the first Pietro Pomponazzi bravely rebelled, distinguishing purely rational teachings from the revealed and making one the business of the pure philosopher, the other the work of the theologian. But from reason's dim and reflected light one should not reach conclusions like those that come from the splendor of an inspired science. Although reason must allow for the debility of all natural philosophy, there is still no substitute for it. Pomponazzi therefore taught that one must ascend from natural knowledge of things to knowledge of God, not the reverse, never deriving knowledge of natural things from prior knowledge of God, according to the standard practice of his era. This was the second step that Pomponazzi took, at the risk of his life, to move the human mind toward its independence.

²*De dialectica contra Aristotelem* (Venice, 1499), book 3.

In three ways Italians sought to shake Aristotle's authority, though it would ultimately survive, seeming to draw new strength from custom and from the times. First of all, the disciples of the Philosopher themselves opened a breach in their master's infallibility by changing some of his doctrines and adding new ones. Pomponazzi himself did this, along with Zabarella, Cesalpino and Cremonini, for example. Second, Aristotle's views were opposed – sometimes by arguing against them, at other times by restoring the diverse teachings of various ancient sects to a place of honor and using them against Aristotle. Finally, opposition to Aristotle came from inventing original and impressive systems, like those of Cardano, Vanini, Bruno and Patrizi.

In the fight against Aristotle and his commentators, Patrizi then displayed an eagerness, a knowledge and an immense erudition that was altogether uncommon. Nearly half a century later, as Gassendi was planning to continue his *Paradoxical Exercises Against Aristotle*, he saw that the Italians had been there before him and left him no fruit worth harvesting. What turned out to be most effective in stirring people to think, however, were refutations aimed at the works on cosmology and physics, which were rather often convicted of error by sense experience. Telesio entered this debate and caused a great outcry. Others, less famous than him, took a better route to reach better results, but they did not attack Aristotle because it was not their concern.

After that, one might have guessed that the Italians had finally liberated their genius from any external constraint, retaining only the internal authority of their own conviction. They were still incapable, [nonetheless, *Pur nondimeno ... per anco ???*] of exercising their faculties of knowledge freely and effectively because for a long time these faculties had been damaged by bad habits and had completely forgotten nature's precepts. Two philosophical practices became incredibly harmful. The first was to investigate the relations and consequences of what was already known rather than the obscure and hidden parts of what was unknown. The second, at the start of any kind of inquiry, was to begin with various generalities, usually not debated or demonstrated and often leading to apparent results that were abstractions and purely vacuous.

From those two practices came others equally harmful. They transformed every type of inquiry into reasoning about ideas; the aptitude for real analysis was lost and also the trail of discovery. Detailed observation of psychological phenomena, as opposed to speculative problems, therefore fell into disdain when it was supposed that observation could not be a basis for teaching and when the maxim held that particulars do not make knowledge. It was also usual to attribute little value to bare experimental physics, a science whose metaphysical part was investigated, to be sure, but not the rest. Overthrowing a good many of Aristotle's opinions seemed insufficient to prove the emptiness of his ontology and his dialectic, which had become a daily tool for reasoning, almost second nature. This produced an insane presumption about the powers of our mind and a belief that everything could be known. Finally came an excess of fantasy, a

boundless love for the marvelous and superhuman, and then affectations of language and pedantic formulas, feigning scientific mystery with every word.

CHAPTER IV: A DOCTRINE OF METHOD

1

Thus it was recognized that partial corrections could not do much good, that the effective remedy lay in completely reorganizing the understanding and tearing out the diseased roots of harmful habits and unhealthy anxieties. People felt that the time had come for a doctrine of method and – much more important – that it was necessary to restore the natural method. To study in this way was entirely novel, without example in antiquity.

In Greek texts one read that Zeno had turned everything upside down with the strength of his dialectic; in the books of Proclus one saw a claim for the geometric method – or the dogmatic, as it should be called; and in Plato's dialogues one could point in many places to quite exquisite efforts either at the technique of elimination or at that of inference, and so on; but nowhere did one find an explicit doctrine that dealt with all these issues. It was a great thing if in Xenophon one encountered some fleeting hint about the Socratic method and in Galen some special instructions about the nature of the studies that he professed. In his dialectical books Aristotle never went farther than investigating the syllogism and fruitlessly enumerating the sources of invention....

2

Much praise, then, to the ancient Italians for having discovered the need for a broad and comprehensive doctrine of method, though the most ancient of them did not feel this need at all. They undertook a reform of all knowledge, but this discovery alone made it bear fruit.

Granted that the physical sciences, once they found their true path, prospered and grew without limit from that time on: our task now is to prove that the speculative sciences cannot in the least be outmatched by the physical in their certainty and, so to speak, infinite progress, as long as speculative philosophers apply to their subject a single, common method – the natural method – suitably adapted to the very special conditions of first philosophy.

Among rationalist philosophers, the first in Italy to speak extensively about the doctrine of method was Mario Nizolio, who in his *Antibarbaro* proclaimed the need to reorganize thought by endowing it with *true principles and the true way of philosophizing*.^d He refuted not just some propositions but all the dialectic and metaphysics of his day, declaring it *partly false, partly useless*. He had equal scorn for the *species* of Aristotle

^d*Marii Nizolii anti-barbaricus philosophicus sive philosophia scholasticorum impugnata libris IV de veris principiis et vera ratione philosophandi contra pseudo-philosophos* (Frankfurt: Hermannus a Sande, 1674).

and the ideas of Plato, finding both entirely out of tune with the facts. He adopted a style completely divorced from scholastic barbarisms, and his language was plain, clear and ordinary. Thus, even more than Valla, he anticipated and fulfilled the wish of Hobbes, the Port-Royal authors and others who were anxious to reduce technical language to common language.

This Nizolio certainly understood that the dialectic and metaphysics of the Peripatetics was a constant battle of words. Hence, by examining the strict sense of terms and hidden grammatical structure in light of ordinary usage and on the authority of the best writers, he was confident – and clearly he was not mistaken – that he would completely deconstruct the Peripatetic edifice. It is notable that he foresaw the position of the Scottish School, which taught that philosophical language must be determined by the simple guidance of common usage and of clear and obvious etymologies.

Nizolio's doctrine of method is quite incomplete, to be sure, and more literary than philosophical. Yet it agrees perfectly with the natural method. In fact, he trusted too much in the innate capacities of minds, and he meant to give them sufficient guidance with three precepts, as follows: first, thoroughly understand and consider the value of the signs and the language in which philosophers have written; second, conduct one's studies with the greatest freedom of mind and equanimity of spirit; third, study the writings and thoughts of all schools, excluding none, least of all those opposed to one's own views.

Nizolio's thought, inert for two centuries while all philosophers forgot it, cited only by grammarians for their studies of refined Ciceronianisms, was thought worthy by Leibniz of restoration to human memory in a new printing, which was honored by much praise.

3

Jacopo Aconzio, Nizolio's contemporary, dealt explicitly with method in a book that he called *On the Art of Research and On the Art of Teaching*. His principles do not stray from the natural method nor do they arise from any ambitious theory. On the contemplation of the subject, the ordering of means to the end, the observation and decomposition of parts down to the final elements, what Aconzio prescribes is wise and insightful.... He earns our special esteem for having thoroughly grasped the importance of method when he wrote that 'out of thirty years of study it is more useful to spend twenty on investigating method than to spend all thirty without the help of method.'^e

4

Sebastiano Erizzo, a person widely read and uncommonly informed, published an elegant and learned book *On the Instrument and the Method of Discovery of the Ancients* in 1554. Its topic, as one can see, is the problem of method, though Erizzo wanted not so much to teach new principles and new habits as to restore old ones.... 'There are four methods,'

^eM gives no source [*Jacobi Acontii tridentini de methodo, hoc est, de recta investigandarum tradendarumque scientiarum ratione* (Basel: Petrus Perna, 1558), p. 13].

he wrote, ‘definition, division, demonstration and resolution. The second, division, is the best – the only one, in fact, that yields truth – and it made the ancients excellent at discovery.’^f The method now called *analytic* corresponds precisely to this method celebrated by Erizzo, which is also the one proclaimed by Condillac as the unique source of all knowledge.... For all that, it must be said of Erizzo that he presents the true and good method while lacking the capacity to develop it; in any case, the ways and means that he proposes are better suited to analyzing ideas than facts.

5

Bruno’s boundless genius, though far advanced in matters of logic, still did not let him understand clearly enough what he thought about it, by reason of the great passion that he had for Lull’s old ideas, which he hoped to correct, expand and make productive. Others suppose (and to me it seems quite likely) that he paraded this admiration of his for the Lullian art in order to appeal to the masses, to gain easy access to teaching posts and to seize an opportunity to propagate his daring notions about first philosophy.

Be that as it may, on the topic at hand what can be said of Bruno and declared confidently is this: As much as anyone else in his day, he was persuaded of the great need for a reformation of studies and a reorganization of understanding.³ He grasped the true and natural division of method in the art of investigating and finding facts, in the art of judging and putting them in order, and finally in the art of applying principles. He believed that philosophy must begin with doubt. Lastly, he thought that cognition of particulars and the inductions derived from them make up general truths, on which science is then firmly built....

Otherwise, overcome by his restless imagination and by the demands of his ontological inquiries, he certainly used *a priori* arguments more than was necessary. Nonetheless, he often turned away from them and, using a form of critical method, searched for the basis of his teachings in the facts of consciousness....

6

From many directions and by different paths, then, the Italians converged on the common idea of needing to reform the understanding and of holding themselves to the precepts of nature. At the end of this century, no serious work of philosophy saw the light without some discussion, short or long, of method. Mocenigo wished to treat it as an elementary operation of the intellect; in his various *Reflections* he does not forget to set down its laws, which still do not go much beyond the limits of the art of demonstration.⁴ Bernardino Telesio rebelled more forcefully against philosophy’s bad habits. In his nine books *On the Nature of Things* ... he resolved to look only at the facts and at nothing else, to recognize sensation, along with things made known by sensation or things exactly

^fM gives no source [*Trattato di Messer Sebastiano Erizzo dell’istrumento et via inventrice degli antichi* (Venice: Plinio Pietrasanta, 1554), pp. 49-51, 169-72.

identified with them, as the unique sources of all knowledge. He wanted to study the world and all its parts – the ultimate ingredients, operations and effects of each part – so

³*Jordanus Brunus Nolanus de umbris idearum, implicantibus artem quaerendi, inveniendi, iudicandi, ordinandi et applicandi* (Paris: Aegidius Gorbinus, 1582).

⁴*Tractationum philosophicarum tomus unus in quo continentur, I. Philippi Mocenigi veneti universalium institutionum ad hominum perfectionem quatenus industria parari potest contemplationes V ...* (Paris? Vignon, 1588).

that by themselves they would then reveal what they are and what they produce.⁵ These are great and noble promises, as anyone can see, and while Telesio did little to fulfill them, no one can deny him the merit of having conceived a physics that was purely inductive and not based on the abstractions of the ontologists, as contemporary systems were.

CHAPTER V: TOMMASO CAMPANELLA

1

Telesio had followers, and it added much to his honor to count Tommaso Campanella, a Dominican friar, among those who learned from him. From the age of fifteen, Campanella began to doubt the Peripatetic fairy tales that the friars taught him. As he read and compared those who wrote glosses on Aristotle, his doubts grew. Then he looked at the text of Aristotle himself, along with Plato, Galen, Pliny, the works of the Stoics and the Telesians, and – in his words – he ‘compared them with the great book of nature, where it was revealed how much the copies resembled the original.’ While still very young, he became aware of the appalling practices and methods introduced into philosophy, which is why he wrote his book on *investigation*, to criticize the methods of the schools....

2

... He claimed that there were two methods or, better, two applications of the natural method: one in the process of discovery, the other in that of reasoning, but the second method could more appropriately be called the *doctrinal method*....⁶ He called experience the beginning of our knowledge and the guide of the intellect. Once experience was abandoned, philosophers always fell into empty enthusiasms, relying on the power of imagination to create accidental likenesses of the truth.

3

And if Telesio conceived the reform of the natural disciplines,⁷ Campanella had the courage to extend that reform to every subject. He was the first to devise a new compilation and arrangement of the fields of knowledge, for he felt himself obliged to begin by gathering his information together and providing an account of intellectual resources. At the summit of learning he put metaphysics, as the most general of all the sciences. He then divided the fields into the rational and the real – those that have more to do with the knowing subject, and those that are objective and examine the nature of material beings. From these two lines of theory, he derived the operative and practical sciences, the disciplines and the arts. While some might find such an arrangement

⁵*Bernardini Telesii Consentini de natura iuxta propria principia liber primus et secundus* (Rome: Antonius Bladus, 1565), sigs. *ii-iv^r.

⁶*Thomae Campanellae de libris propriis et recta ratione studendi syntagma* (Paris: Guillaume Pele, 1642), pp. 51-6.

⁷*Prodromus philosophiae instaurandae, id est, dissertationis de natura rerum compendium secundum vera principia ex scriptis Thomae Campanellae praemisum cum praefatione ad philosophos Germaniae* (Frankfurt: Ioannes Bringerus, 1617), pp. 27-8.

unhelpful or defective, I would not hesitate to judge it better than the one developed by Bacon of Verulam....

4

But Campanella's greatest and **hardest** idea was to apply doctrines of method to rational philosophy. In fact, none of those maxims that are effective in governing science remained unknown to him. The ancients began by observing the world – indeed, the universe – and moved on as best they could to mankind. But not Campanella, who chose to reconsider the Eleatic doctrine of the subjective character of all cognitions and to locate in it the source of primal certainty and the natural beginning of any philosophical analysis. This led him to man, and from there he followed a path of criticism to the study of the world and the universe. And he arrived at this concept while looking for the cause of the unity of human knowledge. About this he pointed out that 'in any human inquiry certain notions and certain principles have recurred, such as those of being, the whole, necessity, cause, truth and the like, and there had to be a science of such things which would be precisely the most general of all and would assume nothing as certain or known, and thus it would have to leave the philosopher in doubt even about his own existence.'⁸

Accordingly, Campanella started with the method of universal doubt, and in fourteen well-organized chapters he set forth all the skeptical arguments with extraordinary perspicacity. Then he took up the refutation of each argument and concluded with the *possibility of knowledge*, based on the absolute reality of the sensation of one's own existence.... For Campanella the word *sensing* means something different than it does for modern sensists, for whom it goes only as far as that perception of an external object which is received by the activity of the organs. But in the broad Latin sense, *sensing* sometimes expresses any phenomenon within consciousness and any act noticed by our mind – a usage also employed more than once by our philosopher.

In this way, Campanella defined the object, purpose and possibility of knowledge, and he proclaimed the principle of method that prescribes the route that knowledge must take, and what kind of certainty it must maintain as the measure and assay of all other knowledge. To sound out the extent, legitimacy and origins of human knowledge, the object of first philosophy, he then felt obliged to consider carefully the validity and use of the cognitive powers....

5

... Campanella clearly understood the timeliness of that doctrine which the moderns call the *critical philosophy*, in keeping with Kant. And he wished to construct it only by means of psychological history and inductive observation, after which he hoped to move

on to deal with being and to clarify the nature and authority of the highest universals.

⁸*Thomae Campanellae Stylen. ordinis praedicatorum universalis philosophiae seu metaphysicarum rerum iuxta propria dogmata partes tres, libri 18* (Paris, 1638), pp. 1-88; *Thomae Campanellae Styl. ordinis praedicatorum philosophiae rationalis partes quinque* (Paris: Du Bray, 1638), especially the logic.

Telesio had already begun to outline a detailed account of intellectual phenomena and the activity of the organs, but Campanella brought greater maturity of judgment to the task. He often pointed out the defects of views that claimed to explain the facts of the intellect by weak comparisons drawn from material phenomena, and he rejected the empty assumptions that ventured guesses about the first ideas and first judgments of the newborn.... Had Campanella always put his methodological views into practice in just this way, and, above all, had he avoided the labyrinths of ontology, he would have become the most important of the philosophers, in my judgment – though in his day this may have been far beyond the reach of possibility.

6

Even though Campanella defined most effectively – better than anyone in his time – the true idea of philosophical method, a number of other Italians followed paths much like his in the same field. We will make special mention of Patrizi, whose love of Platonic abstractions never prevented him from recognizing the value of definite rules of method.... Patrizi was the first to establish the rule of absolute certainty and of measuring every form of truth by it, as opposed to the practice of assuming general truths as premisses of a first science, and he put forward the observation of phenomena and inductive experience. In the end, with an eye to first philosophy in the highest sense, he condemned the method of all those who presume to explain the supreme principles of reason by purely empirical experience.

Using such wise and timeless maxims of method, those who wrote in this period often came to agreement; some of them I have mentioned above, and others will enter my discussion elsewhere.

CHAPTER VI

LEONARDO DA VINCI

1

Reviewing what has been shown up to this point about the views of our Italian ancestors on method, one notes that they were quite well aware of the need to move closer to the precepts of nature even though these had not all been recognized, **much less** all practiced with good judgment. They thought about the process of induction, but they did not know how to follow it clearly. A common defect, in fact, was to make inductions hastily from a few cases, and often with **a few** weak analogies. Not only did they spoil^g inductive observation in this way, they also lost the fruit of any future experience, inasmuch as they

^g*guastavano* for *gustavano*

bent and adapted it by force to general principles wrongly held. Universally established, nonetheless, was the maxim that facts must provide the basis of every investigation.

Peripatetic abstractions were also overthrown, but this did not keep thinkers free from the tangles of a new ontology, not much better than the old one. The custom of completing and extending theories with syllogisms did not stop, and they went on rehearsing their debates instead of experimenting. But the old conceit of knowing and explaining everything no longer ruled. On the contrary, philosophers willingly agreed to admit their ignorance and the weak powers of reason. Pomponazzi had already written about the temerity of the professors who had presumed to beat back objections of the greatest weight....⁷ Bruno called human cognitions *shadows of truth and elements in a report*, and we may read similar phrases elsewhere. Methodical doubt also seemed useful, indeed necessary, to more than one thinker besides Campanella – [including] Bruno himself, that audacious reasoner....

In this way, the Italians of the sixteenth century were only repeating, with stronger intent and better technique, an old dictum of their teachers. Centuries earlier, St. Thomas had written that ‘those who seek the truth without first considering the attendant doubts are like those who set out with no idea of where they are.’⁸ By providing an example of writing in the vernacular about technical points of learning, Bruno then made the theoretical more and more popular, and by refusing to express such issues in oracular terms, he forced theory to accommodate the common sense of the many.

2

But in the meantime a group of thinkers of enormous distinction was flourishing in Italy. While the philosophers dithered, they moved into the physical sciences, keeping point by point to the pure rules of natural method, a more expeditious way for them to prepare a great and enduring restoration. At their head was the brilliant Leonardo da Vinci.⁹ He was Valla’s contemporary, and he lived half-a-century or more before Nizolio, Aconzio and Telesio. Yet his knowledge of the natural art of method was so advanced that, given when he lived, one would have to hail him as the master and teacher of those others, had his writings been better known and had people been able to judge the qualifications of the sage as capably as the works of the artist.

The age in which Leonardo conceived such great things, however, was still impoverished in its mental habits.... Some of his contemporaries had occasional success in the practice of inductive observation and thereby contributed some worthwhile discovery, but this happened only because of the force of their talent, not from methodical effort. Their discoveries therefore lay lifeless, mixed with the most outrageous mistakes, like specks of gold in mud. Such was the case with Giambattista Porta, for example, and with Agrippa and Cardano. Cesalpino in botany and Fracastoro in some areas of physics turned out to be acute, careful and admirable observers. Maurolico and Tartaglia became eminent in

⁷*De fato, libero arbitrio*, etc. Basil. 1525, in the third book.

⁸*Metaph.* book 3.

⁹Jean-Baptiste Venturi, *Essai sur les ouvrages physico-mathématiques de Leonardo da Vinci* (Paris: Duprat, 1797), pp. 3-6.

mathematics, Eustachio and Fallopio in anatomy. But their **achievement** was in the special sciences, which sometimes had to involve either geometrical proof or empirical observation of phenomena, while Leonardo's **eventual achievement** was of great breadth.

In any event, he alone had a complete grasp of the gradations and rules of the art of discovery and used them all.... No one in the world observed more than this Leonardo, and he came across no object without contemplating it at length. With exquisite care and in good order, he thought as much about tiny things as about the large, ... and this precise analysis never obscured his view of great syntheses as he applied empirical procedures. On the contrary, he used induction and generalized as much as any other philosopher who used demonstrative methods. Starting with the invention of a thousand practical **machines** and amazing devices for use in war or for other civic needs, he gradually moved on to investigate the higher laws of hydraulics and mechanics. Broad conceptions of the most important truths of optics, geology and theoretical and experimental physics abound in his manuscripts, which thus anticipate many discoveries of Halley, Kepler, Copernicus and others of like genius.

CHAPTER VII

GALILEO

1

The great Galileo eventually followed the path that Leonardo opened, and it was his destiny to bring Italy's restoration to glorious fulfillment. People would have deceived themselves had they thought that Galileo did this by a fortunate instinct of nature and not by enlightenment gained from philosophy – by long and deliberate inquiry into the nature of human minds. We would prefer to answer them with Galileo's own works, where in a hundred passages one finds evidence of his long meditations on method. This is why he wanted to be called not only a mathematician but also a philosopher, making a special point of it, when he unfortunately agreed to return to Tuscany in the service of the Medici....

In the *Assayer*, he lets us know how he discovered that the secondary qualities of bodies reside only in the sensing subject, and that with regard to the external object^h they are nothing but mere names. Once the soulⁱ has been removed, all these qualities are taken away and annihilated. In discussions that follow on forces, the vacuum, space, causes and other great problems, he displays an insight as amazing and an approach as confident as any advanced study of those topics – especially on regulatory principles, having tested each of them against the facts and his penetrating judgment.

^hoggetto for *soggetto*

ⁱl'anima for *l'animale*

But his great idea was a complete reform of method, without which he thought no field of knowledge could prosper.... Up to now we have been able to count four or five errors of method which in Galileo's time continued to trouble the learned and their studies, such as a certain tendency to trust authority.... [To this] he angrily objected ... and against another habit – discussing and debating the known while inquiring no further into the unknown – his rejoinder was just as angry: namely, that pride as much as laziness made people in his day incapable of seeking new and accurate results and unable to derive new proofs from them, and that it was easier for them to search for books and compare passages. Perceiving, on the other hand, that the teachings of Aconzio, Valla, Nizolio, Telesio and Campanella were not enough to detach people's minds from their bad and outworn habits, he was convinced that the same thing would have happened to him had he limited his work to promulgating and discussing his views on the good and true method, without extending them by new examples. That he was very wise to do so was shown a little later by Descartes who, contesting many recent teachings of the rationalist philosophers, published new proofs *a priori*, abstractions taken for reality, hypotheses treated as theories and returned to use.

Galileo also saw that there can be no certain science of method until a science of the intellect has been established, and that in the meantime people have no effective recourse but to return tamely to the dogmas of common sense. His aim, therefore, was to restore the love of the natural method and its practices, drawing clear attention to its rules and, in the end, making it the people's heritage once again, perpetuating its rule with the resolute assistance of the many....

He not only wrote in the vernacular but did so with elegance and eloquence, using his writing to lead young people to a natural and perfect sense of the beautiful and the true. At that time, no type of research proved more fit than the natural sciences to correct their thinking and [tor] their ills since no sophisms or veiled words could stand against factual evidence.... In this way, Galileo forced his enemies, the Peripatetics themselves, to stoop to observation and conduct experiments....

The natural sciences thus provided the occasion and the hope of wonderful discoveries capable of wakening human curiosity – ordinary people included – and this was how it happened: the invention of the telescope, the new theory of the heavens and new experiments on motion stirred many people and made them want to know more. Another advantage arising from the things described by Galileo was to persuade everyone that nature's wonders belong to one and all, and that for those who use their eyes and hands there is no shortage of things to ponder.

That most pernicious axiom of the philosophers – that small details do not produce science – was thus made obsolete. Galileo often noted how he had directed his research toward problems falsely regarded as commonplace and frivolous, and he added that on this point his enemies were not behaving like their master Aristotle.... From the love of natural sciences that he labored to propagate, this benefit inevitably arose: that in these sciences the facts themselves replace our assumptions and become the mind's best guide.... What he wanted above all was to plant in each person's mind the caution, deliberation and maturity of the art of induction. He called doubt the *father of discoveries and the highway of truth*....

While his contemporaries looked in physics for metaphysics, he refrained altogether from attempts at explanation in areas where the senses were incompetent and reasoning was insufficient. In discussions of the infinite, the continuous, the indivisible, the one or other such features of metaphysical being, he actually found express proof that we deceive ourselves in thinking that we can understand them. And yet he did not, on that account, call it foolhardy to derive quite plausible conjectures from the general concept of the system of the heavens that he had established. The result was that modern science, despite having made enormous progress, has never caught him in a mistake, except perhaps on one or two purely conjectural points.

4

Galileo left no part of method without giving an example or a rule. In his treatise on comets he added a way to eliminate false interpretations, evaluate conjectures and allow for helpful hypotheses.¹⁰ In more than one work, especially the polemical writings, he showed how analogies are gathered together and weighed and how to obtain the criterion of certainty from their aggregation or, better, their approximation to identity. He taught how to divide fields of study and set their boundaries, avoiding the error of his age, which chased after encyclopedias and fantastic explanations of all creation.

Galileo did not, because of this, fail to rise to the investigation of universal truths and the final synthesis of his astounding theories. By carefully connecting experience with reason, he always strove to put his findings into scientific form.... He did not refrain from sharp criticisms when the speculators egregiously abused the principle of final causes, and he noted how risky it is to define them. To him it seemed an especially strange and laughable ambition for humans to impose on the universe their peculiar notions of what is beautiful, good, perfect and so on.¹¹ Only a careless reader of his works could not easily be convinced of his enormous depth in the demonstrative method, his great skill in deriving conclusions from arguments so that they correspond precisely to the import of the premisses.... It would have been much more just and reasonable, then, if Galileo had been able to offer that famous observation of Bacon's – that if the empirical method were finally married to the rational, human minds would agree in peace.¹²

¹⁰*Istoria e dimostrazioni intorno alle macchie solari e loro accidenti comprese in tre lettere scritte ... dal Signor Galileo Galilei Linceo* (Rome: Mascardi, 1613), pp. 100-5, 111-15; *Discorso delle comete di Mario Guiducci fatto da lui nell'accademia fiorentina* (Florence: Ceconcelli, 1619); and elsewhere.

¹¹*Sidereus nuncius magna longeque admirabilia spectacula ... quae a Galileo Galilei ... mathematico perspicilli nuper a se reperti beneficio sunt observata ...* (Frankfurt, 1610).

¹²*De augmentis scientiarum*, praefatio.

5

Under these rules Galileo set forth the natural method, whose foundations he believed to be no longer in dispute.... He taught an application of the rules of method that was already so complete that no one in any period has ever used a better one. And in the art of coordinating observation, experience and reason, what his school showed it could do – whether in analytic insight and accuracy or in breadth and depth of synthetic outlook – we find unequalled by any modern researcher.... Galileo thought it a maxim [*saviezza*] required by his times not to go beyond [*escire*] the physical phenomena, seeing that intellectual conditions were not yet [*per anco*] favorable enough to risk the thickets of debate on rationalist teachings. He had long discussions about this with Hobbes, however, who came to Florence specifically to hear what the venerable old sage had to say. And although he advised Hobbes on the method that he should follow in order to bring speculative theory close to geometric proof, Hobbes then mixed hypotheses with inductions and made inquiries into the natural history of the mind that were too simple.

6

In this way our Italian ancestors brought the reorganization of human thought to an end. Campanella, Leonardo, Galileo and others mentioned above really came upon a field quite well prepared to nourish the seed that was cast there. Actually, it is no small wonder to observe that a positive philosophy and a clear experimental method have always been suited to the Italian character. This circumstance alone prevented Platonic ideas from being able to root deeply and firmly in the peninsula, for if the gentle and elevated nature of the Italians brought them near to the prince of rationalists, the very strict nature of their judgment drew them away from him....

On the other hand, two things especially have worked among us to keep Aristotle's authority so lively and persistent: one was to locate the original source of all knowledge in the facts of experience; the other was to state that universals are all formed by induction. Patrizi, desirous of seducing Italy with Platonic rationalism, therefore hastened to announce that he intended to ascend to the region of *ideas* by induction and experiment. And we have seen Giordano Bruno, that rash dogmatizer, often yielding to laws of induction and looking among facts of inner sense for the experimental data of his ontological propositions. This is why no one in this first revival of every sector^j of knowledge planned to restore the logic of Zeno and Proclus, as the Cartesians did, and to proclaim it the only true path of science. Everyone kept more or less strictly to the art of experiment and induction, which, while being debated by rationalist philosophers and practiced in Leonardo's physics and by others mentioned above [*summentovati*], was also

^j*regione* for *ragione*

introduced into political and historical topics with subtle and insuperable genius by Nicolò Machiavelli.

CHAPTER VIII

FROM BACON TO DESCARTES

1

In what we have been saying up to this point, we have no desire to diminish the glory of René Descartes and Bacon of Verulam, recognizing that our country's honor must not increase by larceny nor by any invidious craft. In the histories of all nations, one finds few people as great as Bacon and Descartes. Our only contention is that in their teachings on method they did not anticipate or instruct the Italians, and that in this regard the Italian doctrine, promoted by Valla, Nizolio, Aconzio, Erizzo and Campanella and then perfected by Leonardo and Galileo, also surpasses the teachings of Bacon and René Descartes in completeness and utility. In fact, as far as priority in time is concerned, one need only compare the dates and the publications of their books, and one will see, for example, that Descartes issued his work *On method* when Galileo was nearly worn out and that Bacon published the *New Organon* many years after Galileo's writings were widespread, after his discoveries had been made public and his following was long since established in many places. And while the whole world talked about Galileo, Bacon's works and reputation did not reach beyond the shores of his island for a long time.¹³

The *New Organon* and the book *On the Value of the Sciences* obviously contain new, important and productive ideas on the workings of minds and especially on the art of induction. The other parts of method lay idle, either not discussed or not organized. But the tables that Bacon proposed, from which facts are to be well observed and collated, become so perplexing that no scientist has thought them worth using, and ... the excessive abstraction and uncertainty of his principles greatly reduce their effectiveness....

2

Once Bacon got down to dealing with a universal method, it was up [*perteneva*] to him to follow the trail of psychological experience. And on the other hand, how could he believe that a first philosophy was not necessary once he set out to collect and organize human knowledge and to investigate the highest unity? For the doctrine that he mentions in the third book of *De augmentis*, and intends to name a first science, has nothing to do with the highest universals nor with the common basis of all cognitions.... Bacon is regarded either as a practical person or as theoretical. If he is practical, who could rank him ahead of Galileo or even as his equal? If he is theoretical, we would say that he understood neither the nature nor the importance of certain principles that must have been

[*quanto pur bisogna*] known to Italian philosophers before him and subordinated to the laws of natural method.

¹³Cousin, *Cours de l'histoire de la philosophie*, in vol. 2.

As for Descartes, and as far as the direction of the mind is concerned, it is quite right to praise him for recounting the detailed story of his thoughts and for the four rules in which he wants to collect and enclose the whole art of method. Because of their excessive abstraction, however, **and because they have the potential of including too much**, none of them is defined as it should be. In fact, he and his school adapted these rules to geometrical method, whereas others might adapt them just as well to experimental induction.

When he made his next move, Descartes quickly abandoned inquiry into facts **and could never get back to it again**. This was the reason why the schools reinvented many vices of the old philosophy, as when they disdained research into particular phenomena and asked metaphysical questions about their apparent acquaintance with what transcends [*trasale*] every path of science.... Some credit Descartes with the high honor of abolishing the tyrannical rule of authority; putting methodical doubt on guard against every mental bias; beginning philosophy where it must and can begin – namely, from the certainty of inner sense; destroying the illicit principle of final causes; and finally discovering the subjective nature of the secondary qualities of matter. But we have found that all these things were discovered first by our Italian ancestors.

Campanella's maxims, both on method and on rational philosophy, lay scattered throughout his voluminous works, expressed in a dry and excessively professorial style, encumbered with endless discussions of Peripatetic dogmas and scholastic subtleties – two things that he would rather refute than omit. Descartes, on the other hand, coming after the Italians, found readers ready to applaud his wish to learn nothing from the ancients or the moderns (more pretence than actuality) but to derive all knowledge from his own thought. It also delighted everyone to hear him speaking about the deepest problems in plain and pleasant language, without scholastic pettiness and as if he were involved in social conversation.

His arguments were mostly quite successful; his principles were few, clear and simple; all the gears in his machine were intricately connected and very well balanced. It was especially delightful to have – or to think one had – the key to all knowledge, all difficulty and all mystery in a single book, and to hear it said that studying the Latins and Greeks was of no value, statements that gratified human curiosity and human laziness at the same time. Delightful to the fantasy, finally, was a fine new system of the created cosmos, written with a geometer's pen and so elegantly organized that it seemed truly to master the universe. All this makes it easy to understand how Descartes maintained so grand a reputation and lined the whole family of philosophers up behind his opinions.

In England and France, Descartes and Bacon initiated new and profound theoretical inquiries which were dying out in Italy during the same period. Bruno, Ruggeri and Vanini died at the stake; Pomponazzi escaped the executioner with difficulty; Campanella spent twenty-seven years in prison and was tortured seven times; others were persecuted and **perished**. Thus the noble course of Italian philosophy fell into decline, first the rational, then the natural, since very few of Galileo's disciples escaped the poverty, worry and mistreatment to which their master was subjected.

CHAPTER IX

A NEW ITALIAN SCHOOL

1

As we thus examine the histories of variation in knowledge, it seems quite obvious to us that the Italians set about reorganizing what is known by civilized nations; completely restored the natural method; and carefully laid the foundations of philosophical knowledge. [*Se non che il primo*] **Although this first effort** eventually spread and strengthened its maxims through the work of the new Italian academies and the cooperation of foreign societies, [*all'incontro*]^k **things went badly for** good philosophical method, which had hardly seemed to emerge when it was blocked by the mass of persecutions and then contradicted again by the bad habits of Cartesian philosophy.

When we think carefully about these events and make frequent comparisons with modern times, we reach the following conclusion: namely, that the utility produced in every domain^l of theoretical inquiry would be quick, extensive and admirable if a new Italian school could be established, and if its central task were to pick up the thread of the old abstract teachings, along with those whose main intent and primary work was to establish the best philosophical method by carefully adapting the natural method to the conditions proper to the nature of those teachings – **maxims for the concerns of first philosophy**. For such an enterprise, given what we have already written, this seems the sole and unique *propaedeutic* capable of easing the endless discord among systems and bringing philosophy into any definite and positive state as a science.

We would say that a school must be created because, in our view, only the collective activity of many thinkers can work to maintain the authority of secure principles and practices, even when their value can be measured quickly and confidently from the abundance and variety of their results. The Italians also believed this when they set the first example and taught how to unite the strengths of individual minds and multiply them by mutual influence and by setting definite goals and definite standards in common.

^k*all'incontrario* for *all'incontro*

^l*regione* for *ragione*

Thus arose Telesio's academy and the one that Porta founded in Naples; Leonardo's in Milan and the Platonic group at the Medici court; also Pomponazzi's, larger but more secretive; and then the Lincei in Rome and the Cimento in Florence – and everyone knows what the civilized world owes these last two for having reconstructed experimental research.

In this framework, therefore, let us eagerly desire and appeal for a *renewal of the ancestral Italian philosophy*, not because we believe there is no philosophy in our fair land today or that it never follows the footsteps of our ancestors. Indeed, it greatly delights our hearts to see it flourish again – noble, chaste, judicious and very careful – especially in the hands of the distinguished Pasquale Galuppi, who deserves to inherit all the fame of the thinkers of Cosenza and to propagate the wisdom of Vico and Genovesi. But what would make us think it impossible today to renew all the glory of the ancestral Italian school and retake the leadership in theoretical inquiry that we held through the whole sixteenth century, without contest and beyond dispute – even in the judgment of foreigners? If from one perspective we see a long era of misfortune and humiliation, from another we recall that nature's laws are immutable and that nature has made Italy the happy fatherland of the wisest of nations.

CHAPTER XVII

ON VARIOUS CONTEMPORARY PHILOSOPHIES IN OTHER COUNTRIES

1

... If what we said in opening this book was true, that all the errors of modern philosophy come entirely [*onninamente*] from errors of method, we should, after examining the systems most celebrated in our day, find them more or less out of line with the rules described above. And this seems to be the case. In keeping with our customary brevity, we shall confirm this finding with a few selected examples....

2

If we begin to examine our topic in light of the tendencies of modern theoretical studies, we will see that some philosophers set aside philosophy's right and proper purpose, which is to complete the knowledge natural to our being. They then proceed straight to inquiring about primal knowledge, having begun with abstractions and keeping them ceaselessly in play. If we turn our attention in the other direction and look at the school that takes its name from Locke, we will notice that it seems to increase philosophy's heritage abundantly, as far as the mind's empirical history is concerned. While putting ordinary experience to use, however, like any other inquiry into nature, this school all but ignores any effort at investigating first truths. It thus falls unaware into a vicious circle of argument as it strives to explain many higher truths by other basic and apodictic principles of common sense for which it supplies no proof.

Both sects, then, Lockians and rationalists, have made the same mistake, preferring to dogmatize and not waiting for research on the mind to be completed. Thus we may hear the rationalists announcing with axiomatic confidence that some ideas and some judgments are naturally innate. And on the other hand we hear the sensists countering with an axiom of their own, which is that there is no idea or judgment inside the mind that does not come from the senses. Amidst opposing claims this remains certain, that neither of the two sects has properly grasped the empirical history of the understanding. Barely inside the doorway of psychology, they have claimed to reach a synthetic principle that would describe the essence and origin of all thought.

But there is worse to come: the two sects, infatuated with their dogmatic principle, often lose the results of subsequent experience, wishing to force the phenomena to fit the principle, not the principle to fit the phenomena. The Lockians, for example, once they have found nothing in a sequence of phenomena to show an apodictic causal connection among them, immediately announce – in keeping with pre-established dogma – that the causal principle is the child of habit and of the constant association of particular ideas. The rationalists, on the contrary, having barely noted the same fact, rush straight to their favorite rule, their belief that the highest principles of reason are all transcendent and innate.

Because of a related concern, neither sect bothers much about carefully distinguishing the positive part of their work from the conjectural part, which asks about the hidden origins of thought and the mental history of the newborn. Lockians start with the assumption of the *tabula rasa*. Kant's only starting point is pre-existing formative powers, but they are also semi-hypothetical. For [*avvegnache*] nothing proves that there are not notions and concepts accompanying the formative powers, even in advance of all experience. And even if this seems improbable, it is certainly not impossible.

True, the philosophers make up for their patchy analysis with a certain subtlety of argument and elevate their theoretical machinery into absolutes and universals. Yet [*tuttavolta*] we still recognize that Kant's arguments are incapable of proving the need for his categories. Locke's are just as defective: they work magnificently against Descartes but not against any any assumption of ideas and judgements *a priori*.

3

Reid's way is better. Like Locke and the old Italian school, he held that the history of the mind – when deep, careful and complete – is the sum and substance [*materia e scorta*] of all speculative philosophy, which must neither begin with dogmas nor pursue them. Consequently, given his astute sense of method, Reid thought it useful to cast doubt on many opinions that were thought to be unassailable and to add substantially to the sum of psychological facts. But he was less successful at sticking to experimental research on the mind and not making premature synthetic assumptions. He erred by proposing that the basis of every demonstration is human consensus – good, solid evidence in itself as long as it depends on other, prior evidence, but meaningless when it becomes the beginning and end of every proof, since it is the very thing that requires proof. Reid thus

mistook the means for the end: common sense is a wonderful tool for philosophy and an excellent place to start, but philosophy's goal is to produce an account, whenever there may be one, of the reasons behind the axioms of common sense.

Other, less patient spirits think they can begin philosophy on a moment's notice, leaving aside the natural history of the mind and clinging to some ontological axiom. The result being what it is, impoverished and unproductive, they keep padding it with broad and rash hypotheses. And then there are others who have recognized the poverty of the rationalist and sensist systems. But instead of indicting those systems for their feeble analyses and returning to more diligent research on the history of the thought-process, they have put the blame on the poverty of the human faculties and have gone on to cultivate skepticism in some cases, mysticism in others.

4

Defects of method cloaked [*palliati*] in these doctrines and assumptions introduced with a great sense of certainty allowed their falsity to be made evident only by the final consequences. The result was that all the particular opinions of the aforementioned philosophers decayed over time into other views that were more and more vulnerable to the power of logical analysis, thus better exposing the root malignancy. Kant undertook to determine *a priori* the possibility, principles and limits of all cognitions. He nonetheless accepted as primitive truths, and not explainable, the faculties of the mind, the formative powers, sensible matter and consciousness.

His disciples soon realized that a doctrine established and proved *a priori* did not have to lead to many propositions which were revealed by experience and thus shared nature's limitations and contingency. This is why Fichte started from a loftier position and set out to prove (so he thought) the actual origin of the faculties of the mind, of consciousness and of sensible matter. And that was not all. If the mind itself is not the origin of things but is contingent and limited, it cannot provide a basis for a theory that is the highest and truly necessary. Therefore, Schelling and others with him took the leap of contemplating the absolute, with a great deal of profitless fantasizing about what and where it was.

Locke, by contrast, had written that the origin of all our thinking is from the senses and from reflection. His disciples excluded reflection, proving, in keeping with Lockian dogmas, that while it collected, separated [*sgiungeva*] and distributed ideas, it by no means produced them. Locke had also stated that bodies give rise to ideas in us by means of certain impulses. From this his disciples derived a kind of mental dynamics and explained psychology by means of actions and reactions inside the head. They identified thought as a secretion in the brain and correlated the power of the faculties with the structure of the organs. Finding no noticeable difference between human and orangutan except in tissues of the trachea, they proposed that the delicacy of those tissues was the cause of inventing language and hence of the whole perfectibility of the species.

Reid had classified certain judgments and instincts, which in humans he claimed to be simultaneous, as instilled [*infusi*] but not acquired, and as secure teachers of the truth,

according to the perennial testimony of all mankind. Beattie and Oswald, students of Reid's teaching, enlarged the number of such instincts and judgments by showing that the great majority of people, if not all, believed in them very firmly, and they added that nature grants common sense not to all people, but rather to most. Common sense must therefore be distinguished from common opinion, the latter being quite uncertain, the former infallible.

5

This has been the subject of our thinking and writing from the day when we began to look for the shameful reason why the field of philosophy should be so savagely contested by opposing systems while, for more than three centuries, the populous family of physical and natural scientists of every stripe lives happily with its harmonious principles and thrives by seeking the truth as its vigor increases. Not many years ago, that noble thinker, Victor Cousin, was proclaiming in France that method was a topic of great urgency in the theoretical sciences, and that he had noticed, corresponding to every basic transformation that occurred in the sciences, a simultaneous change in method as well. With this statement we emphatically agree, and we regard it as perhaps the most useful and productive to have come from France since Condillac.

We have no hesitation in wanting this statement to get the attention that it deserves and to be discussed by a great many different people, which was the reason for writing and dedicating the first part of this book. We believe, in fact, that we have shown modern philosophy to be so remarkably contentious for two reasons: first, not being able to supply all knowledge with a first philosophy which is open and clear in its rules and arguments; second, not being able to stop the production of opposed and contradictory positions, contrary to the example of all current fields of human learning, so that scepticism again takes charge [*tiene ancor testa*] and the fruit of long theoretical study is lost.

Now, as far as first philosophy is concerned, the continuing inability to build on bases contested by no one could have its cause in the weakness of the cognitive faculties. As for the ever-recurring division of opinions, however, this is purely and simply the result of a discrepancy in methods – inasmuch as we proved this at the start. For this reason, then, the doctrine of method not only has great weight in issues of theory but is, in a sense, their form and essence.

Cousin thought that he had found a good way [*d'aver trovato buon termine*] to bring peace to all the different conflicting systems by proposing his eclecticism, in which each of those systems gets part of the glory and keeps part of the authority. To us, however, it seems that this procedure amounts to forcing oneself to harmonize results by preserving discord among causes – the causes being different ways of constructing theories so absolute and so exclusive that to hope for agreement among them is to allow oneself to believe that there is some middle term between 'yes' and 'no.'

We have therefore held to the only possible and effective device for quieting the turmoil and wrangling in the realm of philosophy: namely, we have proclaimed that nature has taught just one method for the production of all the sciences, and we have done so by the showing the following: that truth is one, and hence there is one sure and best way to achieve it; that truth can be theoretical or practical, and so method must be able to take either form; that empirical truth is always prior to the reflective or theoretical, and therefore the empirical method must come before the theoretical and doctrinal; and finally, since nature herself teaches us the original truth, that it is the same with method. This, then, is how one must undertake any speculative study, just as the natural philosophers have undertaken theirs, with wonderfully successful results.

Next, we have affirmed that such a reorganization and application of the natural method to any kind of abstract study rightly belongs to our very dear country. For she it was that restored this method to health in the schools of Leonardo and Galileo, having begun to apply it most skilfully to abstract philosophy through the efforts of Nizolio, Aconzio, Erizzo, Campanella and other eminent figures.

Finally, we have proposed our own views on these topics, but we have derived them from ancestral Italian sources, and in doing so we have taken our start anew from maxims of the current French school. For the French have declared that ‘philosophical method consists entirely in the complete observation of facts of consciousness,’^m a truth that we believe no sensible thinker will wish to contradict. The problem for the French school, however, is to find the right and proper way suited to that type of observation. For by natural necessity everyone makes observations with the help and illumination of the highest principles of common sense; but philosophy’s task is to give an account of those principles, or at least to show that doing so is completely impossible; and neither can be done with broad practical methods of observation. Hence, there can be little or no comprehension of philosophical method as long as the type of observation specific to speculation goes undefined. And to this task we have given our special attention by seeking to solve the basic problem with which we opened this book, expressing it in these words: to derive from deep inquiry into philosophy’s content and purpose the correct changes and practices that must govern the general teaching of the natural method.ⁿ

^mno source

ⁿabove, p. 3