DISCOURS

DE LA METHODE

Pour bien conduire ſa raiſon,& chercher
la verité dans les ſciences.

PLUS

LA DIOPTRIQVE.

LES METEORES.

ET

LA GEOMETRIE.

Qui ſont des eſſais de cete METHODE.

A LEYDE
De l'Imprimerie de IAN MAIRE.
cIↃ IↃ C XXXVII.
Auec Priuilege.

DISCOURSE ON THE METHOD

OF RIGHTLY CONDUCTING THE REASON AND OF SEEKING FOR TRUTH IN THE SCIENCES [1]

If this discourse appears too lengthy to be read all at once, the reader may take note of its six parts. In the first he will find various considerations bearing on the sciences; in the second the chief rules of the method which the Author has devised; in the third some moral rules which he has derived from this method; in the fourth the reasoning [2] by which he proves the existence of God and of the human soul, the foundations of his metaphysics; in the fifth the order of the questions bearing on his physical investigations, and, in particular, the explanation of the heart's motion and of certain other difficulties pertaining to medicine, as also the difference between our soul and that of the brutes; and then, in the last part, the things which the Author believes to be required for further advance in the study of nature than has yet been achieved, with the reasons which have led him to write.

[1] Published in Leyden, 1637; and, as Descartes had long intended (cf. *A.T.* i, pp. 23, 85, 340), anonymously, that 'caché derrière le tableau' he might overhear what was said of it. (The Latin translation, published under his name in Amsterdam seven years later, has on its title-page: *Ex Gallico translata, et ab Auctore perlecta, variisque in locis emendata.*) The title as given on the title-page takes the place of the more elaborate title which in March 1636 (cf. *A.T.* i, p. 339) he still thought of using: *Le projet d'une Science universelle qui puisse élever nostre nature à son plus haut degré de perfection. Plus la Dioptrique, les Météores et la Géométrie; où les plus curieuses Matières que l'Auteur ait pu choisir pour rendre preuve de la Science universelle qu'il propose, sont expliquées en telle sorte, que ceux mêmes qui n'ont point étudié les peuvent entendre.* Descartes' reason for adopting the term *Discours* he has explained to Mersenne (March 1637, *A.T.* i, p. 349): "I do not entitle it *Traité de la Méthode* but *Discours de la Méthode*, which amounts to saying *Préface ou Advis touchant la Méthode*, in order to signify that my design is not to teach the method but only to converse about it. For as can be seen from what I have said of it, it consists much more in practice than in theory [cf. below, p. 117 ff.]. I name the treatises which follow upon it, *Essais de cette Méthode*, because I claim that the things they contain could not have been discovered without it, and it is by way of them we come to know its value. This, too, is why I have included in the introductory *Discours* some little metaphysics, physics and medicine, namely, in order to show that the method applies to every kind of topic." As Descartes himself revised the Latin translation of 1644, I have drawn freely on it. The textual variations and additions are, however, too numerous for special mention. I have separately noted only those changes and additions which seem to me to raise questions of interpretation.

[2] *Les raisons.*

PART I

GOOD sense is of all things in the world the most equitably distributed; for everyone thinks himself so amply provided with it, that even those most difficult to please in everything else do not commonly desire more of it than they already have. It is not likely that in this respect we are all of us deceived; it is rather to be taken as testifying that the power of judging well and of distinguishing between the true and the false, which, properly speaking, is what is called good sense, or reason, is by nature equal in all men; and that the diversity of our opinions is not due to some men being endowed with a larger share of reason [1] than others, but solely to this, that our thoughts proceed along different paths, and that we are, therefore, not attending to the same things. For to be possessed of good mental powers is not of itself enough; what is all-important is that we employ them rightly. The greatest minds, capable as they are of the greatest virtues, are also capable of the greatest vices; and those who proceed very slowly may make much greater progress, provided they keep to the straight road, than those who, while they run, digress from it.

For myself, I have never supposed my mind to be in any way more perfect than that of the average man; on the contrary, I have often wished I could think as quickly, image as accurately and distinctly, or remember as fully and readily as some others. Beyond these I know of no other qualities making for the perfection of the mind; for as to reason, or sense,[2] inasmuch as it is that alone which renders us men, and distinguishes us from the brutes, I am disposed to believe that it is complete in each one of us; and in this I am following the common opinion of those philosophers who say that differences of more and less hold in respect

[1] *plus raisonnables*; Lat. text, *majore rationis vi donati*.
[2] *la raison, ou le sens*; Lat. text, *rationem quod attinet*.

only of *accidents*, and not in respect of the *forms*, or natures, of the *individuals* of the same *species*.

I have, however, no hesitation in declaring that I have had the great good fortune of finding myself, already in early years, travelling by paths that have led to the reflections and maxims from which I have formed a method.[1] By this method, as it seems to me, I can by degrees increase my knowledge, raising it little by little to the highest point which my quite ordinary mental abilities and the shortness of my life may permit me to attain. Although in the judgment I form of myself I strive always rather to be self-questioning than to be over-bold, and although, when I review with a philosophical eye the diverse actions and enterprises of men, I find scarcely any which do not seem to me vain and useless, yet I am not thereby discouraged. For so abundant are the fruits I have already reaped by way of my method in the search after truth, so complete is my satisfaction in the progress I deem myself to have made, that I cannot but continue to entertain corresponding hopes for the future, thus venturing to believe that if there be any one of all the occupations proper to men, simply as men, which is reliably good and important, it is that which I have chosen.

It may be that in this I am deluding myself, and that what I am taking for gold and diamonds is but a little copper and glass. I know how liable we are to be mistaken in what affects the self, and also how much the judgments of our friends ought to be distrusted when they are in our favour. Nevertheless in this discourse it will be my pleasure to show what the paths are which I have followed, delineating my life as in a picture, in such wise that each of my readers may be able to judge for himself, and also that I, too, on learning from current report the opinions formed in regard to these paths, may thereby have a new means of self-instruction, in supplement to those I have been in the habit of employing.

Thus my present design is not to teach a method which everyone ought to follow for the right conduct of his reason, but only to show in what manner I have endeavoured to conduct my own. Those who undertake to give precepts

[1] Cf. *Regulae*, above, p. 48.

ought to regard themselves as wiser than those for whom they prescribe; and if they prove to be in the least degree lacking, they have to bear the blame. But in putting forward this piece of writing merely as a history, or, if you prefer so to regard it, as a fable,[1] in which, among some examples worthy of imitation, there will also, perhaps, be found others we should be well advised not to follow, I hope that it will be of use to some without being harmful to anyone, and that all will welcome my plain-speaking.

From my childhood I have been familiar with letters; and as I was given to believe that by their means a clear and assured knowledge can be acquired of all that is useful in life, I was extremely eager for instruction in them. As soon, however, as I had completed the course of study, at the close of which it is customary to be admitted into the order of the learned, I entirely changed my opinion. For I found myself entangled in so many doubts and errors that, as it seemed to me, the endeavour to instruct myself had served only to disclose to me more and more of my ignorance. And yet the School in which I was studying was one of the most celebrated in Europe, where I thought there must be men of learning, if such were anywhere to be found. I was taught all that others learned there, and not content with the sciences taught us, I glanced over all the books which fell into my hands treating of those esteemed most curious and rare. Moreover I knew the judgments that others had formed of me, and although there were among my contemporaries some already quite evidently destined to replace our teachers, I did not feel that I was esteemed inferior to them. And finally, our age appearing to me to be no less flourishing, and no less rich in men of ability than any of the preceding, I felt free to judge of all men whatsoever by myself, and so to conclude that there was no body of knowledge[2] in the world of such worth as I had previously been led to expect.

I continued, however, to hold in esteem the exercises practised in the Schools. I knew that the languages they teach are required for the understanding of the writings of

[1] I.e. a story with a professedly profitable moral. Cf. Gilson, *Com.* p. 68.
[2] *aucune doctrine.*

the ancients; that fables charm and awaken the mind; that the histories of memorable deeds exalt it, and when read with discretion aid in forming the judgment; that such reading of good books is, as it were, to engage in talk with their authors, the finest minds of past ages, artfully contrived talk in which they give us none but the best and most select of their thoughts; that eloquence has incomparable power and beauty; that poetry has its ravishing graces and delights; that in mathematics there are highly subtle inventions which do much to gratify the inquisitive as well as to further the arts and to lessen man's manual labours; that the writings which treat of morals contain numerous precepts and many exhortations to virtue which are very helpful; that theology points out the path to heaven; that philosophy enables us to speak with an appearance of truth[1] on all matters, and secures to us the admiration of the less learned; that jurisprudence, medicine and the other sciences bring honours and riches to those who cultivate them; and, in short, that there is no one of them, even of those most abounding in superstition and falsity, the acquaintance with which is not of some utility, if only as enabling us to estimate it at its true value and to guard ourselves against being deceived by it.

As regards languages, I believed that I had already devoted sufficient time to them, and even also to the writings of the ancients, to their histories and mythical stories. To hold converse with those of other ages is almost, as it were, to travel abroad; and travel, by making us acquainted with the customs of other nations, enables us to judge more justly of our own, and not to regard as ridiculous and irrational whatever is at variance with them, as those ordinarily do who have never seen anything different. When, however, too much time is employed in travel, we become strangers in our own country; and when over-curious regarding what was practised in the past, we tend to be unduly ignorant of what is done here and now. Then, too, the mythical stories represent, as having happened, many things which are in no wise possible. Even the most trustworthy of the histories, if they do not change or exaggerate the import of things,

[1] *vraisemblablement.*

in order to make them seem more worthy of perusal, at least omit almost all the more commonplace and less striking of the background circumstances, and the account they give of them is to that extent misleading. Those who regulate their conduct by examples drawn from these sources are all too likely to be betrayed into romantic extravagances, forming projects that exceed their powers.

I esteemed eloquence highly, and was enamoured of poetry. Both, however, I regarded as being natural gifts,[1] rather than fruits of study. Those in whom the gift of reasoning is strongest and who are careful to render their thoughts clear and intelligible, are always the best able to convert others to what they propose, even if they speak Breton and are ignorant of rhetoric. Similarly those who are endowed with the most agreeable powers of fancy and who can express themselves with a wealth of enchantment, are still the best poets, even though they have made no study of the art of poetry.

Above all I delighted in mathematics because of the certainty and evidence of their reasonings. But I had not as yet discovered their true use; and believing that they contributed only to the mechanical arts, I was astonished that foundations so firm and solid should have nothing loftier erected upon them. On the other hand, in contrast to them, I pictured to myself the works of the ancient pagan moralists as being, as it were, palaces arrogantly magnificent, with no better foundations than sand and soft shifting ground. They place the virtues on a lofty pedestal, and exhibit them as being of value above all other things in the world, yet do not succeed in teaching how to know what they are. Often what they honour with that fine title is but insensibility, or pride, or despair, or parricide.[2]

I revered our theology, and would be as desirous as anyone to reach heaven, but being reliably given to understand that the way to it is not less open to the most ignorant than to the most learned, and that the revealed truths which afford us guidance are above our powers of understanding,

[1] *dons de l'esprit*; Lat. *naturae dona*.

[2] Parricide is here taken in its wider sense as covering Stoic eulogy of L. J. Brutus' execution of his children and M. J. Brutus' assassination of Caesar. Cf. Gilson, *Com.* p. 132.

I did not dare to test them by the feebleness of my reasonings. I recognised that to enter on an examination of them, and to succeed in so doing, I should require to have some special help from above, and to be more than man.

As to philosophy, I shall say only this: that when I noted that it has been cultivated for many centuries by men of the most outstanding ability, and that none the less there is not a single thing of which it treats which is not still in dispute, and nothing, therefore, which is free from doubt, I was not so presuming as to expect that I should succeed where they had failed. When, further, I considered how many diverse opinions regarding one and the same matter are upheld by learned men, and that only one of all these opinions can be true, I accounted as well-nigh false all that is only probable.[1]

As regards the other sciences, inasmuch as they borrow their principles from philosophy, I judged that nothing solid can have been built on foundations so unstable. Neither did the honours and riches[2] they promise incline me to cultivate them. For, thanks be to God, I was not so placed as to be obliged, for the improvement of my fortune, to adopt science as a profession; and though I might not pretend in the manner of the Cynics to despise all honours, I held in no great esteem honours which I could hope to acquire only on false pretences.[3] And finally, as to the sciences falsely so-called, my knowledge of them was, I thought, already sufficient to guard me from being any longer liable to be deceived by the professions of an alchemist, the predictions of an astrologer, the impostures of a magician, or by the artifices and boastings of those who profess to know what they do not know.

For these reasons, as soon as my age allowed of my passing from under the control of my teachers, I entirely abandoned the study of letters; and resolving to seek no other science than that which can be found in myself and

[1] *tout ce qui n'était que vraisemblable*, i.e. probable, in the sense of plausible or arguable.

[2] I.e. those obtained by the practice of jurisprudence, medicine and military engineering, referred to above, p. 119.

[3] *hoc est, ob scientiarum non verarum cognitionem*, added in Latin version.

in the great book of the world, I spent the remainder of my youth in travel, visiting courts and armies, in intercourse with men of diverse dispositions and callings, amassing varied experiences, testing myself in the various situations in which fortune landed me, and at all times making reflections on the things that came my way, and by which I could in any wise profit. For it seemed to me that I might find much more truth in the reasonings each makes regarding the matters in which he is immediately interested, and the outcome of which must very soon punish him if he judges wrongly, than in those made by a man of letters in his study in respect of speculations which are of no practical moment, having for him no further consequence, save perhaps as flattering his vanity, owing to his belief that his skill and artifice in giving them the semblance of truth [1] must have been proportionate to their remoteness from common sense. And throughout I was obsessed by the eager desire to learn to distinguish the true from the false, that I might see clearly what my actions ought to be, and so to have assurance as to the path to be followed in this life.

Yet, here again, so long as I gave thought only to the manners and customs of men, I met with nothing to reassure me, finding almost as much diversity in them as I had previously found in the opinions of the philosophers. The chief profit I derived from study of them was therefore this: observing that many things, however extravagant and ridiculous they may in our view appear to be, were yet very generally received and approved by other great nations, I learned not to be too confident in any belief to which I had been persuaded merely by example or custom; and thus little by little I delivered myself from many errors powerful enough to darken the natural light,[2] i.e. to incapacitate us from listening to reason. When, however, I had occupied myself some years [3] in thus studying in the book of the world and in striving to widen the range of my experience,[4] I one day resolved to take myself too as an object of

[1] *de les rendre vraisemblables.*
[2] *notre lumière naturelle.*
[3] *quelques années*; Lat. *sic aliquandiu.*
[4] *d'acquérir quelque expérience*; Lat. *nonnulla inde experimenta collegissem.*

study,[1] and to employ all the powers of my mind in choosing the paths I should follow; and in this I have succeeded, as it seems to me, far better than I could have done had I never quitted my country or put aside my books.

[1] *d'etudier aussi en moi-même*; Lat. *serio me ipsum examinare.*

PART II

I WAS then in Germany, drawn thither by the wars which are not yet ended; and on my return to the army, from the coronation of the Emperor, the setting in of winter detained me in a locality where, finding no congenial associates and being otherwise, as it fortunately happened, untroubled by cares or passions of any kind, I remained all day long secluded in a stove-heated room, undistractedly at leisure, communing with my own thoughts. Among the first that came to me was this, that often there is less perfection in works composed of several parts and the product of several different hands, than in those due to a single master-workman. Thus we see that buildings planned and executed by a single architect are usually much more beautiful and better proportioned than those which others have attempted to improve, adapting walls to serve purposes other than that for which they were originally designed. So, too, in the case of those ancient villages which have, in course of time, become great cities. How ill-designed they are compared with those which have been devised on a vacant plain by an engineer, free to plan as he pleases! Though some of the buildings, considered each apart from the others, may often, as works of art, surpass those in the newly devised city, yet how ill-arranged they are, large and small haphazardly, and the streets crooked and irregular! Their layout, it would seem, has been due more to chance than to any rationally controlled decisions of men. Even should we take account of the fact that all along there have been certain officials responsible for seeing that private buildings meet the requirements of public amenity, we cannot but recognise how difficult it is, while relying on the labours of others, to achieve what is truly perfect. I had similar thoughts in regard to those nations which, from being at first semi-barbarous, are civilised only gradually. Their laws have been determined for

them mainly by embarrassments due to the crimes and quarrels which have forced their adoption; and they cannot, therefore, be as well ordered as those societies which from the very start have held fast to institutions devised by some prudent legislator. So too the province of true religion, the ordinances for which have been made by God alone, is, as is indeed certain, incomparably better regulated than any other. Speaking again of human affairs, I believe that if Sparta did in its time enjoy great prosperity, that was not because of the goodness of each and every one of its laws (for many of them were very strange and even contrary to good morals), but because, having been devised by one single legislator, they one and all had in view the same end.

Thus I came to think that the sciences found in books, at least those whose reasonings are made up merely of plausible arguments [1] and yield no demonstrations, built up, as they are, little by little, from the opinions of many different contributors, do not get so near to the truth as the simple reasonings which a man of good sense, making use of his natural powers, can carry out respecting what happens to come before him. Then further, since we have all passed through the state of infancy before being men, and have therefore of necessity been long governed by our sensuous impulses [2] and by our teachers (teachers who were often at variance with one another, and none of whom, perhaps, counselled us always for the best), I also came to think that it is well-nigh impossible our judgments can be so correct and so reliable as they would have been, had we from the moment of our birth been in entire possession of our reason and been all along guided by it alone.

To be sure, we do not proceed to pull down all the houses of a town, simply for the purpose of rebuilding them differently, to make the streets more beautiful. Often, however, it does happen that this or that house is pulled down with a view to rebuilding; and sometimes this is due to their being in danger of themselves falling, their foundations being insecure. In analogy with this, I persuaded myself that it is not indeed

[1] *ne sont que probables*; Lat. *verisimilibus tantum argumentis*.
[2] *par nos appétits*; Lat. *cupiditatum*.

reasonable for a private individual to think of reforming a State by changing everything in it, overturning it in order to re-establish it; and that it is not likely that the whole body of the sciences, or the manner of teaching them, as established in the Schools, can be remodelled. In respect, however, of the opinions which I have hitherto been entertaining, I thought that I could not do better than decide on emptying my mind of them one and all, with a view to the replacing of them by others more tenable, or, it may be, to the re-admitting of them, on their being shown to be in conformity with reason. I was firmly of the belief that by this means I should succeed much better in the conduct of my life than if, building on the old foundations, I relied on principles of which in my youth I had allowed myself to be persuaded, and into the truth of which I had never inquired. Of the many difficulties involved I was very well aware. These are not, however, without remedy, nor are they comparable to those which face us in reforming, even in quite minor ways, what is of direct public concern. Great public institutions, if once overthrown, are excessively difficult to re-establish, or even to maintain erect if once seriously shaken; and their fall cannot but be very violent. As to their imperfections, if they have any — and their very diversity is sufficient to assure us that they do — usage has doubtless greatly mitigated them, eliminating, or at least insensibly correcting, many evils which could never have been so effectively countered in a deliberately reflective manner. Almost always the imperfections are more tolerable than the changes required for their removal. Do not highways that wind about among the mountains, by being much frequented, become gradually so smooth and convenient, that the following of them is vastly preferable to attempting the straighter route, scaling high rocks and clambering down precipices?

This is why I cannot at all approve of those reckless, quarrelsome spirits who, though not called by birth or fortune to take part in the management of public affairs, yet never fail to be always on the hunt for some new reform. If I thought that in this essay there were the least ground for supposing me to be guilty of any such folly, I should

never willingly consent to its publication. My design has all along been limited to the reform of my own thoughts, and to the basing of them on a foundation entirely my own. Although these labours have given me considerable satisfaction — this is what has led me to give you an account of them — I have no desire to counsel all others to engage in them. Those whom God has more amply endowed will perhaps entertain more exalted designs; but I fear that even what I am here proposing will for many be too hazardous. The resolve to strip oneself of all opinions hitherto believed is not one that everyone is called upon to take. There are among men two types of mind, to neither of which is it at all suited: first, those who, owing to undue confidence in their powers, are precipitate in their judgments and have not the patience required for the orderly arranging of their thoughts. Should men of this type assume themselves free to doubt received opinions and to deviate from the common highway, they will never be able to find, and to hold to, the one straight path that leads aright. Instead they will, throughout all the rest of their lives, find themselves hopelessly astray. Secondly, there are those who have reason or modesty enough to realise that they are less capable of distinguishing between the true and the false than others from whom they can gain instruction. They ought to be well content to follow the opinions of those others, and not to attempt to improve on them by efforts of their own.

As for myself, I should no doubt have belonged to the latter class, had I never had more than one instructor and had I never known how from time immemorial even the most learned of men have continued in disagreement one with another. Already in my college days I had been brought to recognise that there is no opinion, however strange, and however difficult of belief, which has not been upheld by one or other of the philosophers. Afterwards, too, in the course of my travels, I observed that those whose sentiments are very contrary to ours are not on this account barbarous and savage, and that many of them make as good or, it may be, better use of reason than we do ourselves. Bearing also in mind how the selfsame man, with the mental equipment proper to him, if nurtured from infancy among the

French or the Germans, would come to be different from what he would have been had he lived always among the Chinese or the cannibals; and how, in respect of fashions in dress, what pleased us ten years ago, and which will again please ten years hence, appears to us at the present moment extravagant and ridiculous. Thus I came to see that custom and example have a much more persuasive power than any certitude obtained by way of inquiry. In respect of truths which are not readily discoverable, plurality of supporting votes is of no value as proof; it is much more likely that the discovery will be made by one man than by all and sundry. I was, however, unable to decide on any one person whose opinions seemed worthy of preference, and so had no option save to look to myself for guidance.

But like those who walk alone and after nightfall, I resolved to proceed so slowly, and with such meticulous circumspection, that if my advance was but small, I should at least guard myself from falling. I had no intention of forthwith discarding any of the opinions which had established themselves in my mind unintroduced by reason. Like the dwellers in an outworn house, who do not start to pull it down until they have planned another in its place, I had first to allow myself time to think out the project on which I was entering, and to seek out and decide on the true method, a method that I could rely upon as guiding me to a knowledge of all the things my mind is capable of knowing.

Along with other philosophical disciplines I had, in my early youth, made some little study of logic, and, in the mathematical field, of geometrical analysis and of algebra — three arts or sciences, which, it seemed to me, ought to be in some way helpful towards what I had in view. But on looking into them I found that in the case of logic, its syllogisms and the greater part of its other precepts are serviceable more for the explaining to others the things we know (or even, as in the art of Lully,[1] for speaking without judgment of the things of which we are ignorant) than for the discovery of them; and that while it does indeed yield

[1] Raymond Lully's *Ars brevis*, composed in 1308, was printed for the first time in 1481, and repeatedly thereafter.

us many precepts which are very good and true, there are so many others, either harmful or superfluous, mingled with them, that to separate out what is good and true is almost as difficult as to extract a Diana or a Minerva from a rough unshaped marble block. As to the analysis of the ancients and the algebra of the moderns, besides extending only to what is highly abstract and seemingly of no real use, the former is so confined to the treatment of shapes that it cannot exercise the understanding without greatly fatiguing the imagination, and the latter is in such subjection to certain rules and other requirements that out of it they have made an obscure and difficult art, which encumbers the mind, not a science helpful in improving it. I was thus led to think that I must search for some other method which will comprise all that is advantageous in these three disciplines, while yet remaining exempt from their defects. A multiplicity of laws often furnishes the vicious with excuses for their evil-doing, and a community is much the better governed if, with only a very few laws, it insists on a quite strict observance of them.[1] So, in like manner, in place of the numerous precepts which have gone to constitute logic, I came to believe that the four following rules would be found sufficient, always provided I took the firm and unswerving resolve never in a single instance to fail in observing them.

The first was to accept nothing as true which I did not evidently know to be such, that is to say, scrupulously to avoid precipitance and prejudice, and in the judgments I passed to include nothing additional to what had presented itself to my mind so clearly and so distinctly that I could have no occasion for doubting it.

The second, to divide each of the difficulties I examined into as many parts as may be required for its adequate solution.

The third, to arrange my thoughts in order, beginning with things[2] the simplest and easiest to know, so that I may then ascend little by little, as it were step by step, to the knowledge of the more complex, and, in doing so, to

[1] Cf. *Regulae*, above, p. 106.

[2] *objets*, i.e. in the wide sense of the French term *choses*; Lat. *a rebus*.

assign an order of thought even to those objects which are not of themselves [1] in any such order of precedence.

And the last, in all cases to make enumerations [2] so complete, and reviews so general, that I should be assured of omitting nothing.

Those long chains of reasonings, each step simple and easy, which geometers are wont to employ in arriving even at the most difficult of their demonstrations, have led me to surmise that all the things we human beings are competent to know are interconnected in the same manner, and that none are so remote as to be beyond our reach or so hidden that we cannot discover them — that is, provided we abstain from accepting as true what is not thus related, i.e. keep always to the order required for their deduction one from another. And I had no great difficulty in determining what the objects are with which I should begin, for that I already knew, viz. that it was with the simplest and easiest. Bearing in mind, too, that of all those who in time past have sought for truth in the sciences, the mathematicians alone have been able to find any demonstrations, that is to say, any reasons which are certain and evident, I had no doubt that it must have been by a procedure of this kind that they had obtained them. In thus starting from what is simplest and easiest I did not as yet anticipate any other advantage than that of accustoming my mind to pasture itself on truths, and to cease from contenting itself with reasons that are false. Nor while doing so, had I any intention of endeavouring to master all the various sciences which are commonly entitled mathematical. Having observed that however different their objects,[3] all agree in considering only the diverse relations or proportions to be found as holding between them, I thought it best to treat only of these proportions, taking them in a quite general manner, and without ascribing to them any other objects [4] than those which might

[1] *naturellement*. As Gilson has pointed out (*Com*. p. 209), Descartes is here referring to those artificial tasks, set us not by nature but by human ingenuity: the deciphering of a secret code, the solving of the riddle of the Sphinx (cf. Rule XIII, above, p. 82 ff., and *Principles*, pt. iv, § 205).

[2] The Latin version is more explicit, distinguishing two types of enumeration: *tum in quaerendis mediis, tum in difficultatum partibus percurrendis*.

[3] *objets*. [4] *sujets*.

serve to facilitate the knowing of them (though without in any way restricting them to these objects), so that afterwards I might be the better able to transfer them to all the other things to which they may apply. Then, noting that to obtain knowledge of these proportions I should sometimes have to consider them one by one, and sometimes to retain them in memory, or to embrace several together, I decided that for the better apprehending of each singly, I should view it as holding between lines, there being nothing simpler and nothing that I can represent more distinctly by way of my imagination and senses; and that for the retaining of several in the memory, or for embracing several things simultaneously, I should express them by certain symbols [1] [i.e. numbers or letters] as briefly as possible. In this way, I should be borrowing all that is best in geometry and algebra, and should be correcting all the defects of the one by help of the other.

This, I venture to assert, is what I have in fact achieved. The exact observance of these few precepts has given me such facility in unravelling all the questions dealt with by these two sciences, that in the two or three months I devoted to their examination — commencing with the simplest, the most general, each truth so discovered being a directive [2] that helped me in the discovery of others — not only did I find the answer to many questions I had formerly judged very difficult, I was also in due course able, as it seemed to me, to determine, in respect even of those which I could not thus answer, by what means and to what extent an answer was yet possible. That in making this claim I am not being vainglorious will perhaps become evident to you if you reflect that on each particular issue there is but one true solution, and that whoever finds it knows all that can be known regarding it. The child, for example, who has been taught [the method prescribed in] arithmetic, and has made an addition in accordance with its rules, can rest assured that he has found, in respect of the sum of the numbers about which he was inquiring, all that the human mind can know regarding it. For the method which teaches us to follow the true order, and to enumerate exactly one and all of the items

[1] *chiffres*; Lat. *characteribus*. [2] *étant une règle*.

constitutive of what is being inquired into, comprises all that gives certitude to the rules of arithmetic.

But what pleased me most in this method I had discovered was that it afforded me assurance that in all matters I should be employing my reason, if not perfectly, at least as well as it was in my power to do. Besides I felt that in practising it, I was accustoming my mind little by little to apprehend its objects more precisely [1] and more distinctly; and that as I have not limited it to any particular subject-matter, I might encourage myself in the hope of being able to apply it in coping with the difficulties of the other sciences no less serviceably than I had succeeded in doing in the case of algebra.[2] I had no thought, however, of forthwith tackling all the various questions that might then come up for answer. That would, indeed, have been contrary to the order which the method prescribes. And having come to recognise that the principles of the sciences which deal with these further questions have all to be borrowed from philosophy, and that in philosophy I had hitherto found nothing certain, I considered that before proceeding to treat of them, I must first endeavour to establish what those principles are. And since there can be no task of greater moment than this, and none in which there is greater need to guard against preconceptions and prejudices, I also recognised that I had no right to venture upon it till I had reached a more mature age than that of three and twenty (my age at that time), and that I must spend some considerable time in preparing myself for it, not only by eradicating from my mind all the mistaken opinions I had hitherto been holding, but also by laying up a store of experiences to serve as matter for my reasonings, and by constant practice of my self-prescribed method to strengthen myself ever more in the effective use of it.

[1] *nettement.*
[2] Latin text: *in Geometricis vel Algebraicis.*

PART III

AND finally, it is not enough, before starting to rebuild the house in which we live, that it be pulled down, and materials and builders provided, or that we engage on the work ourselves on a plan we have carefully prepared We have also to provide ourselves with some other house in which we can be conveniently enough lodged during the rebuilding. Accordingly, lest I should remain irresolute in my actions in the interval during which reason obliges me to be so in my judgments, and that I might not in the meantime be prevented from living as happily as I could, I drew up for myself a provisional code of morals, consisting of some three or four maxims which I propose to enumerate as follows.

The first was to obey the laws and customs of my country, adhering unwaveringly to the religion in which, by God's grace, I had been educated from my childhood, and in all other matters regulating my conduct in conformity with the most moderate opinions, those furthest removed from extremes, as commonly exemplified in the practice of the most judicious of those among whom I might be living. For since I was proposing, from then on, to place no reliance on my own opinions, my intention being to submit them one and all to examination, I was convinced that the best I could do was to adopt in their place those held by the most reliable people; and though there may be, among the Persians and Chinese as among ourselves, persons of this trustworthy kind, it seemed to me more expedient to regulate my conduct on the pattern of those with whom I should have to live. Also it appeared to me that in determining what their opinions really are, I ought to give heed more to what they practised than to what they said. For owing to the corruption of our minds, not only are few disposed to say all they believe, many are not indeed aware what it is they believe; the act of thought

by which we believe a thing is different from that by which we apprehend that we are believing it, and the one is often found without the other. When several opinions were of equally good repute I chose always the most moderate; not only because they are the most auspicious for action, and likely to be the best (all excess tending to be harmful), but also because, in case I have been misled, I shall have been straying less far from the truth path than if, on my choosing one of the extremes, it was the other that I should have followed. I especially reckoned among the excesses all those engagements by which we in any respect limit our freedom. Not that I disapprove the laws which, to provide against the inconstancy of the weak-minded, permit (when it is something good that is intended, or even, it may be, the securing of commercial dealings where the question of good intention does not arise) the taking of vows and the making of contracts, binding the parties to their fulfilment. But finding in the world nothing that is not subject to change, and counting myself as under engagement to perfect my judgments ever more and more, and never to permit of their worsening, I thought that I should be sinning against good sense if, just because I approved something at a given time, I therefore bound myself to reckon it as good at a subsequent time when it may have ceased to be so, or when I have ceased to esteem it such.

My second maxim was to be as unwavering and as resolute in my actions as possible, and having once adopted opinions to adhere to them, however in themselves open to doubt, no less steadfastly than if they had been amply confirmed. In this I am following the example of travellers who, on finding themselves astray in some forest, realise that they ought not to vacillate, turning now in one direction and now in another, and still less to stop moving, but to keep always in as straight a line as possible, never for any minor reason changing direction, even though at the start it may have been chance alone which determined them in their choice of direction. If, in thus proceeding, they do not advance in the direction they expected, they will at least, in the final outcome, find themselves better located than in mid-forest. In the same way, since often, in actual living,

the requirements of action allow of no delay, it is very certain that when it is not in our power to determine which opinions are truest, we ought to follow those seemingly most likely;[1] and that in those cases in which we fail to observe any greater likelihood in some than in others, we should nevertheless give our adherence to certain of them, and thereafter (since this was our motive for adhering to them) consider them, in their bearing on action, as no longer doubtful, but very true and certain. This decision was sufficient to deliver me from all the repentings and feelings of remorse which are wont to disturb the consciences of those weak, unstable beings who in a vacillating manner abandon themselves to the acting out, as if it were good, what the next moment they are prepared to recognise as being evil.

My third maxim was to endeavour always to conquer myself rather than fortune, and to change my desires rather than the order of the world, and in general to habituate myself in the belief that save our thoughts there is nothing completely in our power, and so to recognise, in respect of the things which are external to us, that when we have done our best, whatever is still lacking to us is, so far as we are concerned, absolutely impossible of achievement. This, it seemed to me, is sufficient to prevent me from desiring for the future anything which I knew myself incapable of having, and so to render me content. For since our will does not of itself[2] lead us to desire anything save what our understanding exhibits as being in some fashion possible of attainment, it is evident that if we consider external goods as being all alike beyond our power, we shall no more regret the absence of goods that seem due to our station, should we through no fault of our own be deprived of them, than we do in not possessing the kingdom of China or Mexico. Making thus, so to speak, a virtue of necessity, we shall no more desire health when ill, or freedom when in prison, than we now do bodies made of a matter as little corruptible as diamonds, or to have wings to fly like birds. There is, however, I confess, need of a prolonged discipline, and of meditation frequently renewed, if we are to hold firmly to this attitude in all circumstances; and this, I believe,

[1] *les plus probables.* [2] *naturellement.*

was the main secret of those philosophers who in former times were able to free themselves from subservience to fortune, and in spite of sufferings and poverty to rival in felicity the happiness of their gods. Ceaselessly occupied, as they were, in attending to the limits set them by nature, they were so completely convinced that there was nothing in their power save their thoughts, that this of itself sufficed to preclude them from any attachment to other things; and so absolute was the control they thus exercised over their thoughts, that in this they had indeed some ground for esteeming themselves richer and more powerful, freer and happier than other men. However favoured others may be by nature and by fortune, having no such philosophy at their disposal, they can never succeed in bringing events into line with their desires.

Lastly, to complete this moral code, I thought it advisable to review the various occupations of men in this life, in order that I might make choice of the best. Without wishing to pass judgment on other men's occupations, I thought that, for myself, I could not do better than continue in that in which I found myself engaged, that is to say, in devoting my whole life to the cultivation of my reason, and in making such progress as I could in the knowledge of truth, in accordance with the method I had prescribed to myself. I cannot believe that any more delightful or more innocent satisfactions can be enjoyed in this life than those which I have experienced since I began to make use of this method. Discovering by its means, day by day, truths which have seemed to me not unimportant, and with which other men are unacquainted, the contentment it has brought me has so filled my mind that in comparison nothing else has seemed to count. Further, the three preceding maxims have their ground solely in the intention I had of continuing to instruct myself. Since God has given each of us a light [1] for the distinguishing of the true from the false, I could not believe that I ought to remain content for a single moment with the opinions of others, unless indeed I was minded to employ my own judgment in examining them at some more fitting

[1] *quelque lumière*, i.e. the natural light of reason; in the Latin version, *aliquod rationis lumen*.

future time. Nor could I have kept myself free of scruple had I supposed that in so accepting them I should be losing the opportunity of finding better opinions, should such exist. In short, I could not have been able to set limits to my desires, and to be content, were it not that I have taken a path by following which I can hope to be assured of acquiring all the knowledge of which I am capable — all the more so that by this same path I should, I expected, acquire all the true goods I could ever hope to secure. For since our will does not incline us to seek or to shun any object save in so far as our understanding represents it as good or harmful, all that is required for right action is right judgment, and for the doing of our best the judging as best we can. This, I say, is sufficient for the acquiring of all the virtues, with all the other goods that are worth acquiring and within our power. When assured of this we cannot fail to be contented.

Having thus assured myself of the trustworthiness of these maxims, and having placed them on one side along with the truths of our Faith, I judged, in respect of all the rest of my opinions, that I might freely set about ridding myself of them. Hoping, as I did, to be in a better position to do so through intercourse with my fellow-men than by remaining any longer shut up in the stove-heated room where I had had these thoughts, I resumed my travels while the winter was still not over; and throughout all the nine following years I did nothing but roam about the world, seeking to be a spectator rather than an actor in all life's dramas. In all circumstances I especially endeavoured to reflect on whatever might seem doubtful and might be a source of deception, and thereby I rooted out from my mind all the errors which had previously gained footing in it. Not that in this I imitated the sceptics who doubt only for doubting's sake and profess to be always non-committal; on the contrary, my purpose was solely to find ground of assurance, casting aside the loose earth and sand, that I might get down to rock or clay. In this, as it seems to me, I succeeded fairly well. Endeavouring as I was to discover the falsity or uncertainty of the propositions I examined, doing so not by way of mere conjectures but by clear and reliable reasonings, I met with nothing so doubtful as not to yield some conclusion of

sufficient certainty, even though, as might be, merely the conclusion that the proposition in question was lacking in certainty. Just as in pulling down an old house the fragments are usually of service in the building of some new house, so likewise, in the process of overthrowing all those of my opinions that I judged to be ill-founded, I made a variety of observations and experiments [1] which have helped me in establishing conclusions of greater certainty. In this way I continued to exercise myself in my self-prescribed method. For besides taking care, in a general manner, to be all the time conducting my thoughts in conformity with its rules, I reserved certain hours which I expressly devoted to practising myself in the solution of mathematical difficulties, as also in the solution of difficulties in other sciences, difficulties that I was able to make almost mathematical, detaching them from all such principles as in those sciences I found to be insufficiently secure. And thus without appearing to be living otherwise than those who have no occupation save that of passing their lives quietly and innocently (scrupulously separating pleasure from vice, and that their leisure be not spoilt by boredom, allowing themselves all irreproachable amusements), I was all the time engaged in carrying out my design, gaining an ever better understanding of truth and progressing in the knowledge of it — more effectively, perhaps, than I should have done, had I, instead, spent all my days in the reading of books and in the company of men of letters.

It was not, however, until those nine years had elapsed that I came to any determinate decision regarding the difficulties currently discussed among the learned, or had so much as begun to attempt to establish any philosophy more certain than the vulgar. The example set by so many outstanding men who in former times had made the attempt, with, as it seemed to me, no success, led me to imagine it to be a task so beset with difficulty that I would not, even yet perhaps, have ventured to undertake it, had I not learned of a widespread rumour that I had already carried it through to completion. I am unaware what grounds were given in support of this rumour; and if anything I have myself said

[1] *expériences*; Lat. *experimenta*. Cf. Gilson, *Com.* pp. 269, 451, 456.

has played any part in starting it, that must have been owing to my confessing my ignorance more candidly than those who make claim to learning are wont to do, and perhaps also through my having given voice to the reasons I had for doubting many of the things which others regard as certain; it could not have been through my having boasted of any positive doctrinal teaching.[1] But being honest enough not to wish to appear different from what I really am, I thought that I must by every means in my power strive to render myself worthy of the reputation in which I was being held; and it is now exactly eight years since this resolve led me to settle myself at a distance from all the places where I might be in the way of meeting acquaintances, and to retire to this country.[2] The long duration of the war has here conduced to the establishment of such well-ordered discipline that the sole use of the standing armies would appear to be that of enabling the inhabitants to enjoy the fruits of peace with so much the more security. Here, in the crowded throng of a great nation, ever active and more concerned with their own affairs than curious about those of others, I have been able to be no less solitary and retired than in deserts the most remote.

[1] *d'aucune doctrine*. Here, it may be, Descartes is referring to his public encounter with Chandoux. Cf. *New Studies*, p. 40 ff.

[2] Descartes departed for Holland in September 1628; the eight years bring us to September 1636.