LEONARDO DA VINCI

THOUGHTS ON ART AND LIFE

Leonardo da Vinci

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da Vinci L.

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Содержание

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INTRODUCTION

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The long obscurity of the Dark Ages lifted over Italy, awakening to a national though a divided consciousness. Already two distinct tendencies were apparent. The practical and rational, on the one hand, was soon to be outwardly reflected in the burgher-life of Florence and the Lombard cities, while at Rome it had even then created the civil organization of the curia. The novella was its literary triumph. In art it expressed itself simply, directly and with vigour. Opposed to this was the other great undercurrent in Italian life, mystical, religious and speculative, which had run through the nation from the earliest times, and received fresh volume from mediaeval Christianity, encouraging ecstatic mysticism to drive to frenzy the population of its mountain cities. Umbrian painting is inspired by it, and the glowing words of Jacopone da Todi expressed in poetry the same religious fervour which the life of Florence and Perugia bore witness to in action.

Italy developed out of the relation and conflict of these two forces the rational with the mystical. Their later union in the greater men was to form the art temperament of the Renaissance. The practical side gave it the firm foundation of rationalism and reality on which it rested; the mystical guided its endeavour to picture the unreal in terms of ideal beauty.

The first offspring of this union was Leonardo. Since the decay of ancient art no painter had been able to fully express the human form, for imperfect mastery of technique still proved the barrier. Leonardo was the first completely to disengage his personality from its constraint, and make line express thought as none before him could do. Nor was this his only triumph, but rather the foundation on which further achievement rested. Remarkable as a thinker alone, he preferred to enlist thought in the service of art, and make art the handmaid of beauty. Leonardo saw the world not as it is, but as he himself was. He viewed it through the atmosphere of beauty which filled his mind, and tinged its shadows with the mystery of his nature. To all this, his birthright as a painter, a different element was added. A keen desire for knowledge, guiding his action in life, spurred him onward. Conscious of this dominant impulse, he has fancifully described himself in a Platonic allegory. He had passed beneath overhanging cliffs on his way to a great cavern. On bended knees, peering through its darkness, fear and desire had overwhelmed him, – fear for the menacing darkness of the cavern; and desire to ascertain if there were wonders therein.

From his earliest years, the elements of greatness were present in Leonardo. But the maturity of his genius came unaffected from without. He barely noticed the great forces of the age which in life he encountered. After the first promise of his boyhood in the Tuscan hills, his youth at Florence had been spent under Verrocchio as a master, in company with those whose names were later to brighten the pages of Italian art. He must then have heard Savonarola's impassioned sermons, yet, unlike Botticelli, remained dumb to his entreaties. He must have seen Lorenzo the Magnificent. But there was little opening in the Medicean circle for the young painter, who had first to gain fame abroad. The splendour of Milan under Il Moro, then the most brilliant court in Europe, attracted

him. He went there, proclaiming his ability, in a remarkable letter, to accomplish much, but desiring chiefly to erect a great monument to the glory of the Sforza. He spent years at that court, taken up by his different ventures, – painting, sculpture, engineering, even arranging festivities – but his greater project was doomed to failure, enmeshed in the downfall of Ludovico. Even to this he remained impassive. "Visconti dragged to prison, his son dead, … the duke has lost his state, his possessions, his liberty, and has finished nothing he undertook," was his only comment on his patron's end, written on the margin of a manuscript. After the overthrow of the Duke of Milan, began his Italian wanderings. At one time he contemplated entering the service of an Oriental prince. Instead, he entered that of Caesar Borgia, as military engineer, and the greatest painter of the age became inspector of a despot's strongholds. But his restless nature did not leave him long at this. Returning to Florence he competed with Michelangelo; yet the service of even his native city could not retain him. His fame had attracted the attention of a new patron of the arts, prince of the state which had conquered his first master. In this his last venture, he forsook Italy, only to die three years later at Amboise, in the castle of the French king.

The inner nature of Leonardo remained as untouched by the men he encountered as by the events which were then stirring Europe. Alone, he influenced others, remaining the while a mystery to all. The most gifted of nations failed to understand the greatest of her sons. Isabella d'Este, the first lady of her time, seeking vainly to obtain some product of his brush, was told that his life was changeful and uncertain, that he lived for the day, intent only on his art. His own thoughts reveal him in another light. "I wish to work miracles," he wrote. And elsewhere he exclaimed, "Thou, O God, sellest us all benefits, at the cost of our toil… As a day well spent makes sleep seem pleasant, so a life well employed makes death pleasant. A life well spent is long."

Leonardo's views of aesthetic are all important in his philosophy of life and art. The worker's thoughts on his craft are always of interest. They are doubly so when there is in them no trace of literary self-consciousness to blemish their expression. He recorded these thoughts at the instant of their birth, for a constant habit of observation and analysis had early developed with him into a second nature. His ideas were penned in the same fragmentary way as they presented themselves to his mind, perhaps with no intention of publishing them to the world. But his ideal of art depended intimately, none the less, on the system he had thrown out seemingly in so haphazard a manner. His method gives to his writings their only unity. It was more than a method: it was a permanent expression of his own life, which aided him to construct a philosophy of beauty characteristic of the new age.

He had searched to find a scientific basis for art, and discovered it in the imitation of nature, based on rational experience. This idea was, in part, Aristotelian, imbibed with the spirit of the time; though in the ordinary acceptance of the word Leonardo was no scholar, least of all a humanist. His own innovation in aesthetic was in requiring a rational and critical experience as a necessary foundation, the acquisition of which was to result from the permanent condition of the mind. He had trained his own faculties to critically observe all natural phenomena: first try by experience, and then demonstrate why such experiment is forced to operate in the way it does, was his advice. The eye, he gave as an instance, had been defined as one thing; by experience, he had found it to be another.

But by imitation in art, Leonardo intended no slavish reproduction of nature. When he wrote that "the painter strives and competes with nature," he was on the track of a more Aristotelian idea. This he barely developed, using nature only partly in the Stagirite's sense, of inner force outwardly exemplified. The idea of imitation, in fad, as it presented itself to his mind, was two-fold. It was not merely the external reproduction of the image, which was easy enough to secure. The real difficulty of the artist lay in reflecting inner character and personality. It was Leonardo's firm conviction that each thought had some outward expression by which the trained observer was able to recognize it. Every man, he wrote, has as many movements of the body as of varieties of ideas. Thought, moreover, expressed itself outwardly in proportion to its power over the individual and his time of life. By thus employing bodily gesture to represent feeling and idea, the painter could affect the spectator whom

he placed in the presence of visible emotion. He maintained that art was of slight use unless able to show what its subject had in mind. Painting should aim, therefore, to reproduce the inner mental state by the attitude assumed. This was, in other words, a natural symbolism, in which the symbol was no mere convention, but the actual outward projection of the inner condition of the mind. Art here offered an equation of inward purpose and outward expression, neither complete without the other.

Further than this, influenced by Platonic thought, Leonardo's conception of painting was, as an intellectual state or condition, outwardly projected. The painter who practised his art without reasoning of its nature was like a mirror unconsciously reflecting what was before it. Although without a "manual act" painting could not be realized, its true problems – problems of light, of colour, pose and composition, of primitive and derivative shadow – had all to be grasped by the mind without bodily labour. Beyond this, the scientific foundation in art came through making it rest upon an accurate knowledge of nature. Even experience was only a step towards attaining this. "There is nothing in all nature without its reason," he wrote. "If you know the reason, you do not need the experience."

In the history of art, as well, he urged that nature had been the test of its excellence. A natural phenomenon had brought art into existence. The first picture in the world, he remarked in a happy epigram, had been "a line surrounding the shadow of a man, cast by the sun on the wall." He traced the history of painting in Italy during its stagnation after the decay of ancient art, when each painter copied only his predecessor, which lasted until Giotto, born among barren mountains, drew the movements of the goats he tended, and thus advanced farther than all the earlier masters. But his successors only copied him, and painting sank again until Masaccio once more took nature as his guide.

A quite different and combative side to Leonardo's aesthetic, which forced him to state the broad principles of art, appears in his attacks on poetry and music as inferior to painting. In that age of humanistic triumph, literature had lorded it over the other arts in a manner not free from arrogance. There was still another cause for his onslaught on poetry. Leonardo resented the fact that painters, who were rarely men of education, had not defended themselves against the slurs cast on their art. His counter attack may have been intended to hide his own small scholarship. It served another end as well. His conception of the universal principles of beauty was made clear by this defence. His first principle stated broadly that the most useful art was the one which could most easily be communicated. Painting was communicable to all since its appeal was made to the eye. While the painter proceeded at once to the imitation of nature, the poet's instruments were words which varied in every land. He took the Platonic view of poetry as a lying imitation, removed from truth. He called the poet a collector of other men's wares, who decked himself in their plumage. Where poetry presented only a shadow to the imagination, painting offered a real image to the eye; and the eye, as the window of the soul through which all earthly beauty was revealed, the sight, he exclaimed, which had discovered navigation, which had impelled men to seek the West, was the noblest of all the senses. Painting spoke only by what it accomplished, poetry ended in the very words with which it sang its own praises. If, then, poets called painting dumb poetry, he could retort by dubbing poetry blind painting. In common with his successors, Leonardo could not escape from this fallacy, which, in overlooking all save descriptive verse, was destined to burden aesthetic until demolished by Lessing.

It was the opinion of Leonardo that the temporary nature of music caused its inferiority to painting. Although durability was in itself no absolute test, – else the work of coppersmiths would be the highest art, – yet in any final scale, permanence could not altogether be disregarded. Music perished in the very act of its creation, while painting preserved the beautiful from the hand of time. "Helen of Troy, gazing in a mirror, in her old age, wondered how she had twice been ravished." Mortal beauty would thus vanish, if it were not rescued by art from destroying age and death.

Leonardo contrasted painting with sculpture, for he had practised both, and thought himself peculiarly qualified to judge their merit. He considered the former the nobler art of the two, for sculpture involved bodily toil and fatigue, while by its very nature it lacked perspective and atmosphere, colour, and the feeling of space. Painting, on the other hand, caused by an illusion,

was in itself the result of deeper thought. An even broader test served to convince him of its final superiority. That art was of highest excellence, he wrote, which possessed most elements of variety and universality. Painting contained and reproduced all forms of nature; it made its appeal by the harmonious balance of parts which gratified all the senses. By its very duality it fulfilled the highest purpose. The painter was able to visualize the beauty which enchanted him, to bring to reality the fancy of his dreams, and give outward expression to the ideal within.

The genius of Leonardo as a painter came through unfolding the mystery of life. Like Miranda, he had gazed with wonder at the beauty of the world. "Look at the grace and sweetness of men and women in the street," he wrote. The most ordinary functions of life and nature amazed him most. He observed of the eye how in it form and colour, and the entire universe it reflected, were reduced to a single point. "Wonderful law of nature, which forced all effects to participate with their cause in the mind of man. These are the true miracles!" Elsewhere he wrote again: "Nature is full of infinite reasons which have not yet passed into experience." He conceived it to be the painter's duty not only to comment on natural phenomena as restrained by law, but to merge his very mind into that of nature by interpreting its relation with art. Resting securely on the reality of experienced truth, he felt the deeper presence of the unreal on every side. In the same way that he visualized the inner workings of the mind, his keen imagination aided him to make outward trifles serve his desire to find mysterious beauty everywhere. Oftentimes, in gazing on some ancient, time-stained wall, he describes how he would trace thereon landscapes, with mountains, rivers and valleys. The whole world was full of a mystery to him, which his work reflected. The smile of consciousness, pregnant of that which is beyond, illumines the expression of Mona Lisa. So, too, in the strange glance of Ann, of John the Baptist, and of the Virgin of the Rocks, one realizes that their thoughts dwell in another world.

Leonardo had found a refuge in art from the pettiness of material environment. Like his own creations, he, too, had learned the secret of the inner life. The painter, he wrote, could create a world of his own, and take refuge in this new realm. But it must not be one of shadows only. The very mystery he felt so keenly had yet to rest on a real foundation; to treat it otherwise would be to plunge into mere vapouring. Although attempting to bridge the gulf which separated the real from the unreal, he refused to treat the latter supernaturally. That mystery which lesser minds found in the occult, he saw in nature all about him. He denied the existence of spirits, just as he urged the foolishness of the will-o'-the-wisps of former ages, – alchemy and the black art. In one sentence he destroyed the pretensions of palmistry. "You will see," he wrote, "great armies slaughtered in an hour's time, where in each individual the signs of the hands are different."

His art took, thus, its guidance in realism, its purpose in spirituality. The search for truth and the desire for beauty were the twin ideals he strove to attain. The keenness of this pursuit saved him from the blemish of egoism which aloofness from his surroundings would otherwise have forced upon him. For his character presented the anomaly, peculiar to the Renaissance, of a lofty idealism coupled in action with irresponsibility of duty. He stood on a higher plane, his attitude toward life recognizing no claims on the part of his fellowmen. In his desire to surpass himself, fostered by this isolation of spirit and spurred on by the eager wish to attain universal knowledge, he has been compared to Faust; but the likeness is only half correct. He was not blind to the limitations which encompassed him, his very genius making him realize their bounds. Of the ancients he said that in attempting to define the nature of the soul, they sought the impossible. He wrote elsewhere, "It is the infinite alone that cannot be attained, for if it could it would become finite."

In Leonardo's personality was reflected both the strength and weakness of Renaissance Italy. So, to know him, it is necessary to understand the Italy of that age. Its brilliancy, its universality, its desire for beauty, are but one side of the medal. On its reverse, Italy lacked the solid vigour of a national purpose. The discord of political disunion, reacting on art, laid bare great weakness in the want of any constructive direction, toward which the strength of the Renaissance could aim. The energy was there, whether finding an outlet in statecraft or in discovery, in art or in letters. But it

laboured for no common end; there was internal unity of force and method, but external divergence of purpose. The tyranny of petty despots could provide no adequate ideal toward which to aim. No ruler, and no city save Venice, could long symbolize the nation's patriotism. Venetian painters alone glorified the state in their work, and thus felt the living force of a national ambition which raised them above themselves. But elsewhere there was little to inspire that devotion for a common country necessary as a background to sustain the greatest work. Hence Italian art, so living within certain limits, remained stunted beyond these. The conviction that art existed in order to express ideal beauty, that its main purpose was to please the eye and the senses in spite of the result attained, proved inadequate compensation for all that had been withdrawn. The art ideal tended more and more to become a conscience and a purpose in itself, an inward impulse for action and an outward goal.

The artist's real greatness will depend at all times on his qualities as a representative. His true merit will arise from giving expression in ideal terms to his nation and to his age. In so far as he has been able to do this and the spirit of his country is reflected in his work, in so far as he has represented what is best therein and most enduring, he will have achieved greatness. Not that this is always, or even often, a conscious expression. It is unfair reading to search for deep thought in the work of either painter or poet. Neither art offers the best medium to convey the abstractions of the mind, since each has its own method of expression, independent of pure reason. But painter and poet, in the degree they attain greatness, express more than themselves. Ariosto, intent only to amuse, reflects with playful wit and skepticism the splendid luxury and joy of living in Renaissance court life. The care with which he chiselled each line proves that his real seriousness and conscience lay in his artistic purpose. Without Ariosto's wit, Paolo Veronese depicted a similar side in painting, though his Venetian birthright made him celebrate the glory of the Republic. Poet and painter alike expressed far more than either could know. If such a test be applied to the artists of the Renaissance, each in turn will respond to it, – just as the weakness of the later Bolognese as a school is that, beyond a certain technical merit, they meant and represented so little. But the noblest painters, – Michelangelo and Raphael, Titian and Leonardo, – in addition to possessing the solid grasp of technical mastery, reflected some aspect of their nation's life and civilization. In Michelangelo was realized the grandeur of Italy struggling vainly against crushing oppression. He expressed that which was highest in it, reflecting the loftiest side of its idealism mingled with deep pessimism in his survey over life; for, wrapped in austerity, he saw mankind in heroic terms of sadness. Raphael, on the other hand, found only beautiful sweetness everywhere. The tragedies of life failed to touch the young painter, who blotted from view all struggle and sorrow, and, in spite of the misery which had befallen his nation, could still rejoice in the sensuous beauty of the world. There was another side to the Renaissance, dependent neither on beauty nor heroic grandeur, yet sharing in both through qualities of its own. Titian, who painted the living man of action, the man of parts, susceptible alike to the appreciation of ideal beauty and heroic impulse, but guided withal by expediency, reflected this more practical aspect of life. In his portraiture he expressed the statecraft for which Italians found opportunity beyond the Alps, since in Italy it was denied them; and Titian found even Venice too narrow for the scope of his art.

But before Titian, before Raphael, before Michelangelo, Leonardo reflected the rationalism and the mystery, the subtlety and the philosophical speculation, of the age. To find in his work only the individual thought of genius would be to mistake, perhaps, its most important side; for the expression of his mind, both by its brilliancy and its limitations, is typical of the spirit of his time. The Italian Renaissance was reflected in him as rarely a period has been expressed in the life-work of a single man. He represented its union of practice and theory, of thought placed in the service of action. He summed up its different aspects in his own individuality. Intellectually, he represented its many-sidedness attained through penetration of thought, and a keenness of observation, profiting from experience, extended into every sphere. As an artist he possessed a vigour of imagination from which sprang his power of creating beauty. But, in spite of his practical nature, he remained a dreamer in an age which had in it more of stern reality than of golden dreams. His very limitations, his excess

of individualism, his want of long-continued concentration, his lack of patriotism, his feeling of the superiority of art to nationality, are all characteristic of Renaissance Italy.

The union in Leonardo of reality to mystery has often been shared by genius in other fields. His own peculiar greatness sprang from expressing in art the apparent contradiction of attaining the world of mystery through force of reality. Like Hamlet, it was the union of the real with the unreal which appealed to him, of the world as he saw it and the world as he imagined it to be. It was but another expression of the eternal ideal of truth and beauty.

L. E.
American Embassy London, 1906

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THOUGHTS ON LIFE

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Of the Works of Leonardo

Begun at Florence in the house of Piero di Braccio Martelli, on the 22d day of March, 1508; and this is to be a collection without order, taken from many papers which I have copied here, hoping to arrange them later, each in its place, according to the various subjects treated. And I think that before I shall have finished this work, it will be necessary for me to repeat the same thing many times over; so, O reader, blame me not, because the subjects are many, and memory cannot retain them and say: This I will not write because I have already written it; and if I did not wish to fall into this error it would be necessary, every time that I wished to copy something, in order not to repeat myself, to read over all the preceding matter, all the more so since the intervals are long between one time of writing and another.

His Thirst after Knowledge

2

Not louder does the tempestuous sea bellow when the north wind strikes its foaming waves between Scylla and Charybdis; nor Stromboli nor Mount Etna when the sulphurous flames, shattering and bursting open the great mountain with violence, hurl stones and earth through the air with the flame it vomits; nor when the fiery caverns of Mount Etna, spitting forth the element which it cannot restrain, hurl it back to the place whence it issued, driving furiously before it any obstacle in the way of its vehement fury … so I, urged by my great desire and longing to see the blending of strange and various shapes made by creating nature, wandered for some time among the dark rocks, and came to the entrance of a great cave, in front of which I long stood in astonishment and ignorance of such a thing. I bent my back into an arch and rested my left hand on my knee, and with my right hand shaded my downcast eyes and contracted eyebrows. I bent down first on one side and then on the other to see whether I could perceive anything, but the thick darkness rendered this impossible; and after having remained there some time, two things arose within me, fear and desire, – fear of the dark and threatening cave, desire to see whether there were anything marvellous within.

3

I discover for man the origin of the first and perhaps of the second cause of his being.

Leonardo's Studies

4

Recognizing as I do that I cannot make use of subject matter which is useful and delightful, since my predecessors have exhausted the useful and necessary themes, I shall do as the man who by

reason of his poverty arrives last at the fair, and cannot do otherwise than purchase what has already been seen by others and not accepted, but rejected by them as being of little value. I shall place this despised and rejected merchandise, which remains over after many have bought, on my poor pack, and I shall go and distribute it, not in the big cities, but in the poor towns, and take such reward as my goods deserve.

Vain Knowledge

5

All knowledge which ends in words will die as quickly as it came to life, with the exception of the written word: which is its mechanical part.

6

Avoid studies the result of which will die together with him who studied.

Value of Knowledge

7

The intellect will always profit by the acquisition of any knowledge whatsoever, for thus what is useless will be expelled from it, and what is fruitful will remain. It is impossible either to hate or to love a thing without first acquiring knowledge of it.

8

Men of worth naturally desire knowledge.

9

It is ordained that to the ambitious, who derive no satisfaction from the gifts of life and the beauty of the world, life shall be a cause of suffering, and they shall possess neither the profit nor the beauty of the world.

On his Contemners

10

I know that many will say that this work is useless, and these are they of whom Demetrius said recked no more of the breath which made the words proceed from their mouth, than of the wind which proceeded from their body, – men who seek solely after riches and bodily satisfaction, men entirely denuded of that wisdom which is the food and verily the wealth of the soul; because insomuch as the soul is of greater value than the body, so much greater are the riches of the soul than those of the body. And often when I see one of these take this work in his hand, I wonder whether, like a monkey, he will not smell it and ask me if it is something to eat.

On the Vulgar

11

Demetrius used to say that there was no difference between the words and the voice of the unskilled ignorant and the sounds and noises of a stomach full of superfluous wind. And it was not without reason that he said this, for he considered it to be indifferent whence the utterance of such men proceeded, whether from their mouth or their body; both being of the same substance and value.

12

I do not consider that men of coarse and boorish habits and of slender parts deserve so fine an instrument nor such a complicated mechanism as men of contemplation and high culture. They merely need a sack in which their food may be held and whence it may issue, since verily they cannot be considered otherwise than as vehicles for food, for they seem to me to have nothing in common with the human race save the shape and the voice; as far as the rest is concerned they are lower than the beasts.

13

Knowledge of the past and of the places of the earth is the ornament and food of the mind of man.

Knowledge the supreme Good

14

Cornelius Celsus: Knowledge is the supreme good, the supreme evil is physical pain. We are composed of two separate parts, the soul and the the body; the soul is the greater of these two, the body the lesser. Knowledge appertains to the greater part, the supreme evil belongs to the lesser and baser part. Knowledge is an excellent thing for the mind, and pain is the most grievous thing for the body. Just as the supreme evil is physical pain, so is wisdom the supreme good of the soul, that is to say of the wise man, and no other thing can be compared with it.

Life and Wisdom

15

In the days of thy youth seek to obtain that which shall compensate the losses of thy old age. And if thou understandest that old age is fed with wisdom, so conduct thyself in the days of thy youth that sustenance may not be lacking to thy old age.

Praise of Knowledge

16

The fame of the rich man dies with him; the fame of the treasure, and not of the man who possessed it, remains. Far greater is the glory of the virtue of mortals than that of their riches. How many emperors and how many princes have lived and died and no record of them remains, and they only sought to gain dominions and riches in order that their fame might be ever-lasting. How many were those who lived in scarcity of worldly goods in order to grow rich in virtue; and as far as virtue

exceeds wealth, even in the same degree the desire of the poor man proved more fruitful than that of the rich man. Dost thou not see that wealth in itself confers no honour on him who amasses it, which shall last when he is dead, as does knowledge? – knowledge which shall always bear witness like a clarion to its creator, since knowledge is the daughter of its creator, and not the stepdaughter, like wealth.

The World

17

Bountiful nature has provided that in all parts of the world you will find something to imitate.

18

The Beauty of Life

Consider in the streets at nightfall the faces of men and women when it is bad weather, what grace and sweetness they manifest!

19

Just as iron which is not used grows rusty, and water putrefies and freezes in the cold, so the mind of which no use is made is spoilt.

Fruitless Study

20

Just as food eaten without appetite is a tedious nourishment, so does study without zeal damage the memory by not assimilating what it absorbs.

21

Truth was the only daughter of time.

In Praise of Truth

22

So vile a thing is a lie that even if it spoke fairly of God it would take away somewhat from His divinity; and so excellent a thing is truth that if it praises the humblest things they are exalted. There is no doubt that truth is to falsehood as light is to darkness; and so excellent a thing is truth that even when it touches humble and lowly matters, it still incomparably exceeds the uncertainty and falsehood in which great and elevated discourses are clothed; because even if falsehood be the fifth element of our minds, notwithstanding this, truth is the supreme nourishment of the higher intellects, though not of disorderly minds. But thou who feedest on dreams dost prefer the sophistry and subterfuges in matters of importance and uncertainty to what is certain and natural, though of lesser magnitude.

23

Obstacles in the way of truth are finally punished.

Versus Humanists

24

I am well aware that not being a literary man the presumptuous will think that they have the right to blame me on the ground that I am not a man of letters. Vainglorious people! Know they not that I could make answer as Marius did to the Roman people, and say: They who make a display with the labours of others will not allow me mine? They will say that being unskilled in letters I cannot find true expression for the matters of which I desire to treat; they do not know that in my subjects experience is a truer guide than the words of others, for experience was the teacher of all great writers, and therefore I take her for guide, and I will cite her in all cases.

25

Although I may not be able to quote other authors, as they do, I can quote from a greater and more worthy source, namely, experience, – the teacher of their masters. They go about swelled with pride and pomposity, dressed up and bedight, not with their own labour, but with that of others; and they will not concede me mine. And if they despise me, who am a creator, far more are they, who do not create but trumpet abroad and exploit the works of other men, to be blamed.

Authority

26

He who in reasoning cites authority is making use of his memory rather than of his intellect.

On Commentators

27

Men who are creators and interpreters of nature to man, in comparison with boasters and exploiters of the works of others, must be judged and esteemed like the object before the mirror as compared with its image reflected in the mirror. – one being something in itself, and the other nothing. Little to nature do they owe, since it is merely by chance they wear the human form, and but for it I might include them with herds of cattle.

28

A well lettered man is so because he is well natured, and just as the cause is more admirable than the effect, so is a good disposition, unlettered, more praiseworthy than a well lettered man who is without natural disposition.

29

Against certain commentators who disparage the inventors of antiquity, the originators of science and grammar, and who attack the creators of antiquity; and because they through laziness and the convenience of books have not been able to create, they attack their masters with false reasoning.

30

It is better to imitate ancient than modern work.
Experience

31

Wisdom is the daughter of experience.
Experience never Errs

32

Wrongly men complain of experience, which with great railing they accuse of falsehood. Leave experience alone, and turn your lamentation to your ignorance, which leads you, with your vain and foolish desires, to promise yourselves those things which are not in her power to confer, and to accuse her of falsehood. Wrongly men complain of innocent experience, when they accuse her not seldom of false and lying demonstrations.

33

Experience never errs; it is only your judgements that err, ye who look to her for effects which our experiments cannot produce. Because given a principle, that which ensues from it is necessarily the true consequence of that principle, unless it be impeded. Should there, however, be any obstacle, the effect which should ensue from the aforesaid principle will participate in the impediment as much or as little as the impediment is operative in regard to the aforesaid principle.

34

Experience, the interpreter between creative nature and the human race, teaches the action of nature among mortals: how under the constraint of necessity she cannot act otherwise than as reason, who steers her helm, teaches her to act.

35

All our knowledge is the offspring of our perceptions.
Origin of Knowledge

36

The sense ministers to the soul, and not the soul sense; and where the sense which ministers ceases to serve the soul, all the functions of that sense are lacking in life, as is evident in those who are born dumb and blind.
Testimony of the Senses

37

And if thou sayest that sight impedes the security and subtlety of mental meditation, by reason of which we penetrate into divine knowledge, and that this impediment drove a philosopher to deprive himself of his sight, I answer that the eye, as lord of the senses, performs its duty in being an impediment to the confusion and lies of that which is not science but discourse, by which with much noise and gesticulation argument is constantly conducted; and hearing should do the same, feeling, as it does, the offence more keenly, because it seeks after harmony which devolves on all the senses. And if this philosopher deprived himself of his sight to get rid of the obstacle to his discourses, consider that his discourses and his brain were a party to the act, because the whole was madness. Now could he not have closed his eyes when this frenzy came upon him, and have kept them closed until the frenzy consumed itself? But the man was mad, the discourse insane, and egregious the folly of destroying his eye-sight.

Judgement prone to Error

38

There is nothing which deceives us as much as our own judgement.

39

The greatest deception which men incur proceeds from their opinions.

40

Avoid the precepts of those thinkers whose reasoning is not confirmed by experience.

Intelligence of Animals

41

Man discourseth greatly, and his discourse is for the greater part empty and false; the discourse of animals is small, but useful and true: slender certainty is better than portentous falsehood.

42

What is an element? It is not in man's power to define the quiddity of the elements, but a great many of their effects are known.

43

That which is divisible in fact is divisible in potentiality also; but not all quantities which are divisible in potentiality are divisible in fact.

Infinity incomprehensible

44

What is that thing which is not defined and would not exist if it were defined? It is infinity, which if it could be defined would be limited and finite, because that which can be defined ends with the limits of its circumference, and that which cannot be defined has no limits.

45

O contemplators of things, do not pride yourselves for knowing those things which nature by herself and her ordination naturally conduces; but rejoice in knowing the purposes of those things which are determined by your mind.

Insoluble Questions

46

Consider, O reader, how far we can lend credence to the ancients who strove to define the soul and life, – things which cannot be proved; while those things which can be clearly known and proved by experience remained during so many centuries ignored and misrepresented! The eye, which so clearly demonstrates its functions, has been up to my time defined in one manner by countless authorities; I by experience have discovered another definition.

Beauty of Nature's Inventions

47

Although human ingenuity may devise various inventions which, by the help of various instruments, answer to one and the same purpose, yet will it never discover any inventions more beautiful, more simple or more practical than those of nature, because in her inventions there is nothing lacking and nothing superfluous; and she makes use of no counterpoise when she constructs the limbs of animals in such a way as to correspond to the motion of their bodies, but she puts into them the soul of the body. This is not the proper place for this discourse, which belongs rather to the subject of the composition of animated bodies; and the rest of the definition of the soul I leave to the minds of the friars, the fathers of the people, who know all secrets by inspiration. I leave the sacred books alone, because they are the supreme truth.

Completeness in Knowledge

48

Those who seek to abbreviate studies do injury to knowledge and to love because the love of anything is the daughter of this knowledge. The fervency of the love increases in proportion to the certainty of the knowledge, and the certainty issues from a complete knowledge of all the parts, which united compose the totality of the thing which ought to be loved. Of what value, then, is he who abbreviates the details of those matters of which he professes to render a complete account, while he leaves behind the chief part of the things of which the whole is composed? It is true that impatience, the mother of stupidity, praises brevity, as if such persons had not life long enough to enable them to acquire a complete knowledge of one subject such as the human body! And then they seek to comprehend the mind of God, in which the universe is included, weighing it and splitting it into infinite particles, as if they had to dissect it!

O human folly! dost thou not perceive that thou hast been with thyself all thy life, and thou art not yet aware of the thing which more fully than any other thing thou dost possess, namely, thy own folly? And thou desirest with the multitude of sophists to deceive thyself and others, despising the mathematical sciences in which truth dwells and the knowledge of the things which they contain; and then thou dost busy thyself with miracles, and writest that thou hast attained to the knowledge of those things which the human mind cannot comprehend, which cannot be proved by any instance in nature, and thou deemest that thou hast wrought a miracle in spoiling the work of some speculative mind; and thou perceivest not that thy error is the same as that of a man who strips a plant of the ornament of its branches covered with leaves, mingled with fragrant flowers and fruits. Just as Justinius did when he abridged the stories written by Trogus Pompeius, who had written elaborately the noble deeds of his forefathers, which were full of wonderful beauties of style; and thus he composed a barren work, worthy only of the impatient spirits who deem that they are wasting the time which they might usefully employ in studying the works of nature and mortal affairs. But let such men remain in company with the beasts; let dogs and other animals full of rapine be their courtiers, and let them be accompanied with these running ever at their heels! and let the harmless animals follow, which in the season of the snows come to the houses begging alms as from their master.

Nature

49

Nature is full of infinite causes which are beyond the pale of experience.

50

Nature in creating first gives size to the abode of the intellect (the skull, the head), and then to the abode of the vital spirit (the chest).

Law of Necessity

51

Necessity is the mistress and guide of nature. Necessity is the theme and inventress of nature, her curb and her eternal law.

52

When anything is the cause of any other thing, and brings about by its movement any effect, the movement of the effect necessarily follows the movement of the cause.

Of Lightning in the Clouds

53

O mighty and once living instrument of creative nature, unable to avail thyself of thy great strength thou must needs abandon a life of tranquillity and obey the law which God and time gave to Nature the mother. Ah! how often the frighted shoals of dolphins and great tunny fish were seen fleeing before thy inhuman wrath; whilst thou, fulminating with swift beating of wings and twisted tail, raised in the sea a sudden storm with buffeting and sinking of ships and tossing of waves, filling the naked shores with terrified and distracted fishes.

The Human Eye

54

Since the eye is the window of the soul, the soul is always fearful of losing it, so much so that if a man is suddenly frightened by the motion or an object before him, he does not with his hands protect his heart, the source of all life; nor his head, where dwells the lord of the senses; nor the organs of hearing, smell and taste. But as soon as he feels fright it does not suffice him to close the lids of his eyes, keeping them shut with all his might, but he instantly turns in the opposite direction; and still not feeling secure he covers his eyes with one hand, stretching out the other to ward off the danger in the direction in which he suspects it to lie. Nature again has ordained that the eye of man shall close of itself, so that remaining during his sleep without protection it shall suffer no hurt.

Universal Law

55

Every object naturally seeks to maintain itself in itself.

56

The part always tends to reunite with its whole in order to escape from its imperfection; the soul desires to remain with its body, because without the organic instruments of that body it can neither act nor feel.

57

The lover is moved by the object he loves as the senses are by sensible things; and they unite and become one and the same. The work is the first thing which is born of this union; if the thing loved is base, the lover becomes base. When what is united is in harmony with that which receives it, delight, pleasure and satisfaction ensue. When the lover is united to the beloved he rests there; when the burden is laid down it finds rest there.

58

A natural action is accomplished in the briefest manner.

Nature Variable and Infinite.

59

To such an extent does nature delight and abound in variety that among her trees there is not one plant to be found which is exactly like another; and not only among the plants, but among the boughs, the leaves and the fruits, you will not find one which is exactly similar to another.

60

If nature had made one rule for the quality of limbs, the faces of men would resemble each other to such a degree that it would not be possible to distinguish one from the other; but she has varied the five features of the face in such a way that, although she has made an almost universal

rule with regard to their size, she has not done so with regard to their quality, so that each one can be clearly distinguished from the other.

61

It is an easy matter for him who knows man to arrive at universal knowledge, since all terrestrial animals are similar in regard to their structure, that is to say, in regard to the muscles and bones, and they do not vary save in height and thickness; then there are the aquatic animals, and I will not persuade the painter that any rule can be made with regard to these because they are of infinite variety – so are the insects.

62

The body of anything which is fed is continually dying and being reborn, since nourishment cannot enter save where the past nourishment is exhausted; and if it is exhausted, it no longer has life, and if you do not furnish it with nourishment equal to that which has been before, you will impair the health of the organism, and if you deprive it of this nourishment, life will be altogether destroyed. But if you supply it with so much as can be consumed in a day, then as much life will be restored as was consumed, like the light of the candle which is furnished to it by the fuel provided by the moisture of the candle, and this light with most speedy succour restores beneath what is consumed above as it dies in dusky smoke; and this death is continuous, likewise the continuity of the smoke is equal to the continuity of the fuel; and in the same moment the light dies and is born again together with the movement of its fuel.

63

Man and animals are in reality vehicles and conduits of food, tombs of animals, hostels of Death, coverings that consume, deriving life by the death of others.

Light

64

Look on light and consider its beauty. Shut your eyes, and look again: that which you see was not there before, and that which was, no longer is. Who is he who remakes it if the producer is continually dying?

65

Anaxagoras: Everything proceeds from everything, and everything becomes everything, because that which exists in the elements is composed of those elements.

Nature

66

Nature appears to have been the cruel stepmother rather than the mother of many animals, and in some cases not the stepmother, but the pitying mother.

67

Why did nature not ordain that one animal should not live by the death of the other? Nature, being inconstant and taking pleasure in continually creating and making lives and forms, because she knows that her earthly materials are thereby augmented, is more willing and swift to create than time is to destroy; and so she has ordained that many animals shall feed on each other. And as even thus her desire is not satisfied, she frequently sends forth certain poisonous and pestilential vapours upon the increasing multitude and congregation of animals, and especially upon men who increase to a great extent, because other animals do not feed on them; and since there is no cause, there would follow no effect. This earth, therefore, seeks to lose its [animal] life, desiring only continual reproduction, and as, by the logical demonstration you adduce, effects often resemble their causes, animals are the image of the life of the world.

Life's Philosophy

68

Now you see that the hope and the desire of returning home to one's former state is like the desire of the moth for the light, and the man who, with constant yearning and joyful expectancy, awaits the new spring and the new summer, and every new month and the new year, and thinks that what he longs for is ever too late in coming, and does not perceive that he is longing for his own destruction. But this desire is the quintessence, the spirit, of the elements, which, finding itself captive in the soul of the human body, desires always to return to its giver. And I would have you know that this same desire is the quintessence which is inseparable from nature, and that man is the model of the world. And such is the supreme folly of man that he labours so as to labour no more, and life flies from him while he forever hopes to enjoy the goods which he has acquired at the price of great labour.

The Senses and the Soul

69

The soul seems to dwell in the intellect, and the intellect appears to dwell in that part where all the senses meet which is called the brain, and the brain does not pervade the whole body, as many have thought; on the contrary, it dwells entirely in one part, because if it were all in all and the same in every part, it would not have been necessary for the instruments of the senses to combine among themselves in one single spot; but rather, it would have been sufficient for the eye to fulfil the function of its sensation on the surface without transmitting, by means of the optic nerves, the likeness of its vision to the brain, so that the soul, for the reason given above, might perceive it in the surface of the eye. Likewise, with regard to the sense of hearing, it would have been sufficient if the voice had sounded only in the porous cavity of the indurated bone which lies within the ear, without making any further transit from this bone to the brain, which is its destination and where it discourses with common judgement. The sense of smell, too, is likewise compelled by necessity to proceed to the intellect; the sense of touch passes through the nerves and is conveyed to the brain, and these nerves diverge with infinite ramification in the skin, which encloses the limbs of the body and the entrails. The nerves convey volition and sensation to the muscles, and these nerves and the tendons which lie between the muscles and the sinews give movement to them; the muscles and sinews obey, and this obedience takes effect by the decrease of their thickness, for in swelling their length is reduced, and the tendons which are interwoven among the particles of the limbs shrink, and as they extend to the tips of the fingers they transmit to the brain the cause of the sense of touch which they feel. The

tendons with their muscles obey the nerves as soldiers obey their officers, and the nerves obey the brain as the officers obey their captain; thus the joint of the bones obeys the tendon, and the tendons obey the muscles, and the muscles obey the nerves, and the nerves obey the brain, and the brain is the dwelling of the soul, and the memory is its ammunition and the perception is its refundary.

Of Sensation

70

The brain is that which perceives what is transmitted to it by the other senses. The brain moves by means of that which is transmitted to it by the five senses. Motion is transmitted to the senses by objects, and these objects, transmitting their images to the five senses, are transferred by them to the perception, and by the perception to the brain; and there they are comprehended and committed to the memory, in which, according to their intensity, they are more or less firmly retained.

The thinkers of ancient times concluded that the part of man which constitutes his intellect is caused by an instrument to which the other five senses refer everything by means of the perception, and this instrument they have named the "common sense" or brain, and they say that this sense is situated in the centre of the head. And they have given it this name "common sense" solely because it is the common judge of the five other senses, that is to say, sight, hearing, touch, taste and smell. The "common sense" is stirred by means of the perception which is placed between it and the senses. The perception is stirred by means of the images of things conveyed to it by the external instruments to the senses, and these are placed in the centre between the external things and the perception, and the senses likewise are stirred by objects. Surrounding objects transmit their images to the senses, and the senses transfer them to the perception, and the perception transfers them to the "common sense" (brain), and by it they are stamped upon the memory, and are there retained in a greater or lesser degree according to the importance and intensity of the impression. The sense which is most closely connected with the perception is the most rapid in action, and this sense is the eye, the highest and chief of the others; of this sense alone we will treat, and we will leave the others in order not to unduly lengthen our matter.

Automatic Movements

71

Nature has ordained for man the ministering muscles which exercise the sinews, and by means of which the limbs can be moved according to the will and desire of the brain, like to officers distributed by a ruler over many provinces and towns, who represent their ruler in these places, and obey his will. And this officer, who will in a single instance have most faithfully obeyed the orders he received from his master by word of mouth, will afterwards, in a similar way, of his own accord fulfil the wishes of his master.

An example of this can be frequently seen in the fingers, which learn to perform on an instrument the things which the intellect commands, and the lesson once learnt they will perform it without the aid of the intellect. And do not the muscles which cause the legs to move perform their duty without man being conscious of it?

72

You will see palsied and shivering persons move, and their trembling limbs, such as their head and hands, quiver, without the permission of the soul, and the soul, though it expend all its might,

cannot prevent these limbs from trembling. The same thing occurs in epilepsy or when limbs are partially truncated, as in the case of tails of lizards.

Intellect

73

It happens that our intellect is that which prompts the hand to create the features of figures in divine aspects until it finds satisfaction; and since the intellect is one of the tones of our soul, by means of the soul it composes the form of the body where it dwells, according to its volition. And when it has to reproduce a human body, it takes pleasure in repeating the body which it originally created; whence it follows that they who fall in love are prone to become enamoured of what resembles them.

Of the Senses

74

There are the four powers: memory, intellect, sensuality and lust. The first two are intellectual, the others sensual. Of the five senses, sight, hearing, smell are with difficulty prevented; touch and taste not at all. Taste follows smell in the case of dogs and other greedy animals.

75

Why does the eye perceive things more clearly in dreams than with the imagination when one is awake?

Time

76

Although time is included among continuous quantities, being indivisible and immaterial it does not altogether fall into the scope of geometry, – by which it is divided into figures and bodies of infinite variety, which are seen to be continuous inasmuch as they are visible and material, – but it agrees only with its first principles, i. e. with the point and the line; the point in time may be compared to an instant, and the line to the length of a certain quantity of time. Just as the point is the beginning and end of a line, so is an instant the beginning and end of any given space of time; and just as a line is infinitely divisible, so can a given space of time be likewise divided, and as the divisions of the line are in proportion to each other, so likewise are the divisions of time.

77

In twelve whole figures the cosmography of the miniature world will be shown to you in the same manner as Ptolemy in his cosmography. And so I will divide it afterwards into limbs as he divided the world into provinces; then I will explain the function of the parts in every direction, and put before your eyes a description of the whole figure and substance of man as regards his movements by means of his limbs. And thus if it please our great author I will demonstrate the nature of man and his habits in the way I describe his form.

On the Human Body

78

And thou, O man, who wilt gaze in this work of mine on the marvellous works of nature, if thou thinkest it would be an act of wickedness to destroy it, think how much more wicked it is to take the life of a man; and if this his structure appears to thee a miraculous work of art, remember that it is nothing in comparison with the soul which inhabits this structure; for verily, whatever it may be, it is divine. Let it, then, dwell in His work and at His good will, and let not thy rage or malice destroy so great a thing as life, for he who does not value it does not deserve it.

The Experimental Method

79

By these rules thou wilt be able to distinguish falsehood from truth by means of which knowledge men aim at possible things with greater moderation; and do not veil thyself in ignorance, for the result of this would be that thou wouldst be ineffectual and fall into melancholy and despair.

Of Navigation below the Waters

80

How by the aid of a machine many may remain for some time under water. And how and why I do not describe my method of remaining under water and of living long without food; and I do not publish nor divulge these things by reason of the evil nature of man, who would use them for assassinations at the bottom of the sea and to destroy and sink ships, together with the men on board of them; and notwithstanding I will teach other things which are not dangerous…

Of Physiognomy

81

I will not dwell on false physiognomy and chiromancy because there is no truth in them, and this is manifest because chimeras of this kind have no scientific foundation. It is true that the lineaments of the face partly reveal the character of men, their vices and temperaments; but in the face: (a) the features which separate the cheeks from the lips, and the nostrils and cavities of the eyes, are strongly marked if they belong to cheerful and good-humoured men, and if they are slightly marked it denotes that the men to whom they belong are given to meditation, (b) Those whose features stand out in great relief and depth are brutal and bad-tempered, and reason little, (c) Those who have strongly marked lines between the eyebrows are bad-tempered, (d) Those who have strongly marked lines on the forehead are men full of concealed or unconcealed bewailing.

And we can reason thus about many features. But the hand? You will find that whole armies perished in the same hour by the sword in which no two men had similar marks in their hands, and the same argument applies to a shipwreck.

Of Pain

82

Nature has placed in the front part of man, as he moves, all those parts which when struck cause him to feel pain; and this is felt in the joints of the legs, the forehead and the nose, and has

been so devised for the preservation of man, because if such pain were not felt in these limbs they would be destroyed by the many blows they receive.

Why Plants do not feel Pain

83

While nature has ordained that animals should feel pain in order that the instruments which might be liable to be maimed or marred by motion may be preserved, plants do not come into collision with the objects which are before them; whence pain is not a necessity for them, and therefore when they are broken they do not feel pain, as animals do.

84

Lust is the cause of generation.
Appetite is the support of life.
Fear or timidity is the prolongation of life.
Pain is the preserver of the instrument (of the human frame).

Fear

85

Just as courage is the danger of life, so is fear its safeguard.

Body and Soul

86

Let him who wishes to see how the soul inhabits its body observe what use the body makes of its daily habitation; that is to say, if the soul is full of confusion and disorder the body will be kept in disorder and confusion by the soul.

Конец ознакомительного фрагмента.