is ever present in the material universe, acting in it with a preservative and a coöperative act; acting in it most intimately, but distinct from it; acting behind the ultimate atom of material substance, beneath the primal energy of material force; acting always and containing in Himself as Archetype, in all their fitness and beauty of perfection, the ideals of all good and beautiful things in this world. In this manner shall we avoid the evils of reverie.

4. No less pernicious and equally to be avoided is the opposite extreme of being too introspective. There is such an evil as thinking too much about one's thinking. It is a morbid disposition. It impedes all serious thought and all earnest action. That is pure dilettanteism which amuses itself with itself in its workings. To meddle with the springs of thought whilst thinking is like interfering with the process of digestion whilst eating, or measuring the strain and waste of nerve and muscle whilst acting. Earnest work is unconscious work; so is earnest thinking unconscious thinking. This will be all the more evident when we shall have pursued the subject of thought as a habit upon the fields of literature and of science.

CHAPTER V.

LITERARY AND SCIENTIFIC HABITS OF THOUGHT.

I.

1. THERE is a wide difference between the habits of thought engendered by literary pursuits and those begotten of scientific studies. The difference is as marked as are the diverse objects of thought. Literature we know to be personal in its nature, in its method, and to a great extent in its object. Science is impersonal, both in its subject-matter and in its treatment. Literature deals with persons and things so far as they affect our humanity; every piece of written composition that appeals to the emotional element in our nature may be regarded as literature. Science deals with persons and things as they are in themselves, or in coördinated relations. It examines, investigates, discusses from an impersonal point of view; utterly regardless of individual bias, it gropes its way through the entanglements and environments of a subject-matter, and cautiously passes from the known to the unknown. Science, in a word, is concerned with the true as true. Its object is truth. Literature, on the other hand, ranges over a wider field. It may be personal or impersonal, subjective or objective, as best suits its inclina-

tion. It accepts the true and the false, the good and the evil, the beautiful and the deformed, and moulds them all to its own purposes, ultimately with the view of acting upon man's feelings, — now arousing his curiosity, now exciting his wonder and admiration, again working upon his sympathies and stirring his soul. Its object is the ideal of all that is sublime and beautiful in nature.

2. Entering the interior of the thinking-subject, we may note the process the mind goes through in developing a definite course of thought upon some object. Is the object one of a scientific nature? See how cautiously the mind proceeds. It lays down its postulates; it runs over the principles that it holds within its grasp; it casts about among the laws and facts already demonstrated and recognized as certain; these it groups together into classes and sub-classes; it compares them with one another; it considers their various properties; it views the modes and properties and behavior of other facts, or groups of facts, in the light of those well-known and well-understood; it applies to them its demonstrated formula, and draws its conclusions. Throughout this process the scientific mind remains unimpassioned, and regards persons and things as labeled abstractions, rather than as concrete realities. It works within narrow and closely defined lines. It grows impatient of all that does not bear upon the question under consideration, and rejects it as a distraction. The habit of mind thus developed is rigid and exclusive, and unfits its possessor for grasping and treating with facility

other subjects than those upon which it has had life-long practice.[1] It lacks in extension what it gains in comprehension.

3. Is the object of thought one of a literary nature? Here the mind follows a process the reverse of that employed in a scientific pursuit. Its first effort is to grasp the conclusions and work backward to the starting principles. Nothing comes amiss to it. The thought apparently farthest removed from the main idea may throw upon it additional light. All that science, or art, or Nature can contribute, the literary mind makes its own, not for the sake of science, or art, or Nature, nor by way of determining some unknown truth, nor of reaching some scientific discovery, but as so many illustrations drawing out, exemplifying, clearing up more vividly the ideal which it has grasped, and which it labors to express. To every literary mind may be made, and made as little to the purpose, the reproach that the sophist Callicles addressed to Socrates: "By the gods, you never stop talking about shoemakers, fullers, cooks, and phy-

[1] There is a striking confirmation of the above remarks in the experience of Professor Tyndall. Speaking of his student-life in Germany, about the year 1851, he thus describes the state of his mind: "In those days I not unfrequently found it necessary to subject myself to a process which I called depolarization. My brain, intent on its subjects, used to acquire a set resembling the rigid polarity of a steel magnet. It lost the pliancy needful for free conversation, and to recover this I used to walk occasionally to Charlottenburg, or elsewhere. From my experiences at that time I derived the notion that hard-thinking and fleet-talking do not run together." — "My Schools and Schoolmasters," in the *Popular Science Monthly* for January, 1885.

sicians, as though our discourse were of these."[1] All such illustrations are the material out of which the literary mind constructs a body for its conception. Literature is an art, and the process of literature is the process of all art. Note that process. The soul conceives a thought. The thought grows into a central idea, around which group other subordinate ones. It becomes for the soul an ideal. That ideal is nourished by reading, or reflection, or study, or experience, or all of these combined, and quickens into life, and waxes strong, and takes possession, not only of the intellect, but of the whole man, and gives him no rest till he finds for it an adequate expression according to the bent of his genius, be it that of a poem, a novel, an essay, or a historical study, a painting, a statue, or a musical composition.

4. In all this the literary mind experiences, with a thoughtful writer, "how hard it is to think one's self into a thing and to think its central thought out of it."[2] It is not the work of a few days or a few weeks. It is a slow and elaborate process. At the age of four Goethe first witnessed the puppet-show of "Faust." He was still a child when he read the legend.[3] From the start, the idea enters his soul, and takes possession of it, and grows into a thing of life; and forthwith it becomes the ruling idea of his existence, and he makes

[1] Plato, *Gorgias*, cap. xlv.

[2] Hare, *Guesses at Truth*, p. 275.

[3] In an abridgment of Widmann's *Faust-Book*. See Bayard Taylor's translation of Goethe's *Faust*, vol. i. appendix, pp. 397–403.

it the inspiration of his activity, and moulds upon it in many respects both thought and conduct, and picking up all the traits and characteristics of his age, he weaves them into this legend, not hastily, but slowly, studiously, in the spirit of true art, till, finally, in his eighty-second year he pens the last line of his great Faust-poem. The first impression in his fourth, the first line in his twenty-fourth, the last line in his eighty-second year; this is a lesson that who runs may read. The example of Goethe illustrates the spirit of artistic genius. It takes the old and remodels it into a new artistic whole. The scientific genius builds upon the foundations already laid. A Newton or a Descartes may add to the sum of mathematical knowledge; he may give new methods of demonstration and calculation; but he leaves untouched every principle and every proposition that science had previously established. Even when such a scientific genius grasps by anticipation a new law or a new truth, he coördinates it with other known laws, and thereby corrects his first impressions.

5. Not so the literary genius; for, though the man of letters and the man of science have this in common, that the terms they use possess a recognized value, still he of the literary habit makes not — nor does he seek to make — a connection or a continuity with aught of the past; having grasped the ideal, he labors to give it full and adequate expression independently of any other ideal, past or present. He lives and breathes in an atmosphere of opinion and assumption that permeates his think-

ing, and colors both thought and language; he takes it all for granted; he draws from it the material with which to shape and strengthen his own creation. Richter, in contemplating this literary habit of thought, is filled with admiration: "I fear and wonder," he says, "at the latent almightiness with which man orders, — that is, creates his range of ideas. I know no better symbol of creation." [1] It is, indeed, the process of moulding something entirely new and distinct out of material hitherto used for other purposes. It is a creation because it is a launching into existence of an artistic type that preëxisted only as an ideal in the author's mind. As such, it is an imitation — as indeed is all art — in a finite manner, and within the limits belonging to finiteness, of the creative act by which the Infinite First Cause drew all things from nothingness.[2]

6. But there are certain habits of thought in which literary and scientific methods interlace and overlap to the detriment of both letters and science. Scientific habits of thinking, for instance, lead the scientist to look upon persons and things no longer in their concrete nature, but rather as so many abstractions, or, at most, as concrete specimens of an abstract principle. His very feelings and emotions he learns to classify and, as far as possible, separate from himself. He measures the

[1] *Wit, Wisdom, and Philosophy of Jean Paul Friedrich Richter*, § xi. p. 129.

[2] See Gioberti, *Del Bello*, cap. vi. Del Modo in cui la Fantasia Estetica si può dire Creatrice del Bello, p. 105.

worth of things accordingly. They possess value for him in proportion as they explain a difficult problem, or contribute a new truth to the sum of knowledge. It has been well remarked: "Even the feelings of speculative men become speculative. They care about the notions of things and their abstractions, and their relations, far more than about the realities." [1] So that, whilst the scientist may unwittingly bring literary habits to bear upon scientific issues, to the detriment of science, unwittingly also may he bring his scientific habits into affairs of every-day life, and measure persons and things by a false criterion. So, also, may the man of a literary way of thinking use false weights and measures in forming his estimates. "An author's blood," we are told, "will turn to ink. Words enter into him and take possession of him, and nothing can obtain admission except through the passport of words." [2] And, because words do not always represent the full measure of things, or are at times totally inadequate to express the relations of things, the mind living in words becomes guilty of blunders no less egregious than the mind living in abstractions. What, then, is the normal state of the mind?

II.

1. The normal function of the human intellect is to apprehend truth. Its activity feeds upon truth, and by truth is nourished. For truth it was created; by the light and warmth of truth it develops

[1] Hare, *Guesses at Truth*, p. 495.

[2] *Ibid.*

in strength and grasp; without the truth, it gropes in darkness, restless, yearning, in misery, hungering and thirsting for that which alone can satiate its desires. There may be barriers in the way; it may require enduring labor to remove the barriers; opposition only sharpens the eagerness with which the quest is pursued. In this life, subject to the present order of things, with body and sense standing between the soul and the apprehension of all knowledge, it is not easy to determine which is the true and which the false. The gratuitous and unquestioned notions acquired in early training; the habits of thought in which the intellect works; natural likes and dislikes; feeling, sentiment, inclination; prejudices of the age and the race; assumptions and opinions that are the outcome of one's environment, — are all so many hindrances in the way of the clear and simple apprehension of truth. But they are not insuperable barriers. The human intellect, acting in its normal state, and according to the laws of its nature, may with time and patience, and without deceiving itself in the process, attain to the knowledge of truth. It cannot accept error as error; and if error does, as error will, enter into its calculations, it first assumes the garb of truth, and as such alone is it admitted. Thoughtful study, comparison, careful reasoning upon evident principles, truths, and facts, furnish sufficient light to penetrate the mask and reveal the underlying falsity, if falsity there be.

2. It is within the province of the human mind not only to apprehend the truth, but also to recog-

nize it as truth. In this recognition consists the mind's certainty. We know and distinguish with absolute certainty that two and two make four, and not five or three. There is nothing relative either in our knowing this truth or in our being certain of it. The Hottentot and the Indian are equally certain. The agnostic who denies this absolute certainty is also equally certain. If you would inquire how we know that we are certain with an absolute certainty, we can give you no further reason than that, being constructed as we are, we cannot think differently. This certainty is an ultimate fact of consciousness. It is of the very essence of our reason so to think. We are what we are. We find ourselves to be what we are as thinking beings independently of ourselves. We take ourselves on trust. We take on trust all the faculties of our souls. We use them as we find them. What they report to our consciousness — our inner selves — as true, we accept as true. We cannot do otherwise. The attitude of our mind towards all knowledge is the same to this extent: that in all it seeks to discern the true from the false, to reject the false and to accept the true.

3. For this reason we cannot agree with Mr. Herbert Spencer when he tells us that "we are not permitted to know — nay, we are not even permitted to conceive — that Reality which is behind the veil of Appearance."[1] Why not? Where is the hindrance? Since we recognize this reality, do we not conceive it? It would seem as though

[1] *First Principles*, p. 110.

the knowing and thinking of Mr. Herbert Spencer were not the knowing and thinking of the normal intellect. If we are not permitted to know or conceive the reality back of appearance, how come we to know that it exists? And yet Mr. Spencer is sure of its existence and recognizes it as essential to our thinking. Elsewhere he explained himself more fully in these words: "Phenomenon without noumenon is unthinkable; and yet noumenon cannot be thought of in the true sense of thinking. We are at once obliged to be conscious of a reality behind appearance, and yet can neither bring this consciousness of reality into any shape, nor can bring into any shape its connection with appearance. The forms of our thought, moulded on experiences of phenomena, as well as the connotations of our words formed to express the relations of phenomena, involve us in contradictions when we try to think of that which is beyond phenomena; *and yet the existence of that which is beyond phenomena is a necessary datum alike of our thoughts and our words.*"[1] Plato clearly makes the distinction: "That which is apprehended by intelligence and reason always is, and is the same; but that which is conceived by opinion with the help of sensation and without reason, is always in a process of becoming and perishing and never really is."[2] Underlying the confusion of thought in Mr. Herbert Spencer's assertion is an important fact, not

[1] "Last Words about Agnosticism," *Nineteenth Century*, November, 1884.

[2] *Timæus*, Jowett's *Plato*, vol. iii. p. 612.

sufficiently considered by the philosopher of evolution. It is the fact that thought is always more than its expression. But why quarrel on this account with either thought or expression, so long as each is evolved according to the law of our intelligence? That intelligence is limited in its operations; but it is not we who have defined the limits, or set the boundaries. We find ourselves with those limitations; we cannot change them. Our consciousness reports to us the phenomenon; our reason infers that there is no meaning in phenomenon without noumenon. The one connotes the other in our thinking. What substance is to accident, what the ideal is to the actual, what essence is to existence, the noumenon is to the phenomenon. We perceive the one in the other. We perceive it and we know it. We accept the vouchment of our intellect on the subject.

4. True, we cannot pass beyond this vouchment and give the noumenon a local habitation and a name. What then? At this point we discern the fallacy of Mr. Herbert Spencer's conclusions. He seems to forget that the ultimate analysis of any and every thought brings home to us the fact that the clearly defined image of the thought does not represent the whole thought; that that image is only a symbol; that the word in which that image is expressed is also a symbol; and that in this manner every expression is only a symbol symbolizing a symbol of the thing expressed. And it may happen, and it does happen, that we think correctly in terms of things of which we know nothing be-

yond their existence and their relations. Such is the case with space and time. The great intellect of an Augustin wrestled with the problems of these two ideas; the more he sought to fathom them, the greater was his awe. And his verdict on the problem of time is that in which all thinkers must rest. "If nobody questions me, I know; if I should attempt an explanation, I know not."[1] In other words, we know these things to use them rightly in our thinking; but we cannot grasp at a sufficiently clear image of them to explain them to others.

5. Plato, in another of those sublime passages that light up a whole world of thought, thus shows how our knowledge of things is not simply of the transient and the phenomenal, but of essences and eternal principles: "Essence," he says, "which really exists colorless, formless, and intangible," — which, therefore, let me remark, is above the conditions of time and space, — "is visible only to intelligence that guides the soul, and around this essence the family of true science take up their abode. And, as the Divine Mind is nourished by intelligence and pure science, so the mind of every soul that is about to receive what properly belongs to it, when it sees after a long time that which is, is delighted, and by contemplating the truth is nourished and thrives. . . . And it beholds Justice herself, and temperance, and science, not that to which creation is annexed, nor that which is different

[1] Quid est ergo tempus? Si nemo ex me quærat, scio; si quærenti explicare velim, nescio. *Conf.* lib. xi. cap. xiv.

in different things of those we call real,[1] *but that which is science in what really is.*"[2] Therefore, in opposition to Mr. Spencer, we may lay down the proposition that we not only think the noumenon, but we know it and conceive it behind the phenomenon, not indeed as an image distinct from the phenomenon, but as an element in the existence of the phenomenon without which the phenomenon would be unthinkable. Furthermore, we may affirm that although our thinking is circumscribed, words and images are not the measure of its limits.[3]

6. Nor can we agree with Pascal when he tells us: "It is a natural disease of man to believe that he possesses truth directly; whence it comes that he is always disposed to deny whatever he does not understand; whereas in reality he naturally knows only falsehood, and he should take for true only those things whose opposites seem false."[4] Why call that conviction of direct knowledge of the truth a malady? What would become of reasoning and inferring, of all indirect knowledge, if that which we hold directly is not valid? It is all based upon this very conviction. Man is born for the truth; how comes it that falsehood should be more accept-

[1] Or as Jowett more strongly translates it, "Not in the form of created things or of things relative, which men call existence, but knowledge absolute in existence absolute." *Plato*, vol. ii. p. 124, 2d ed.

[2] *Phædrus*, cap. xxvii. p. 713.

[3] Were this the place, it might be shown that this fallacy runs through much of Mr. Spencer's reasoning regarding personality and all the elements of Christian philosophy.

[4] *Pensées*, t. i. première partie, art. ii. p. 154.

able? "If our intellect," says Mivart, "is to be trusted at all, it must be trusted in what it declares to be the most certain of all, namely, necessary truths."[1] But our intellect is to be trusted even as we trust the reality of our own existence; and necessary truths do not come to us by a process of indirection, but are directly and immediately self-evident. We have no other vouchment than that we take upon trust our whole nature, and with it the normal workings of our intellect. You may call it an assumption or any other name you choose to give, but it is none the less a fact the most primary of all facts, underlying all action, be it physical, moral, or intellectual. Universal skepticism is an absurdity; the very act of doubting all things is a positive mental act. Therefore the habit of confidingness is the healthier habit of mind. Speaking of these two habits, Cardinal Newman, with that keenness and practical grasp of his subject for which he is preëminent, says: "Of the two, I would rather have to maintain that we ought to begin with believing everything that is offered to our acceptance, than that it is our duty to doubt of everything. The former, indeed, seems the true way of learning. In that case, we soon discover and discard what is contradictory to itself; and error having always some portion of truth in it, and the truth having a reality which error has not, we may expect that when there is an honest purpose and fair talents, we shall somehow make our

[1] *A Philosophical Catechism for Beginners*, p. 25. This little book is a marvel of clearness and condensation.

way forward, the error falling off from the mind, and the truth developing and occupying it."[1]

7. When, therefore, we are told that "error is inextricably bound up with the spirit of man," we may interpret it in the sense that it is with difficulty, and after long search, man is enabled to discover truth, and disentangle it from the errors with which it not infrequently is bound up. But we must keep this fact distinct from the no less palpable fact that in itself and by the light of reason man's intellect recognizes at sight, and accepts with a certainty beyond cavil, all necessary, self-evident truths as truths necessary and self-evident. Be it remembered that it is the truth that is necessary, and not the error. Truth is of things. Truth is reality. Error is only accidental. And when the writer whom we have just quoted, making error necessary, adds the following remarks, we feel bound not only to dissent from him, but to disengage the truth from the sophism in which he has enveloped it. "This necessary error," von Hellwald tells us, "is the essence of religion, the phantasy, the ideal. Man has an innate tendency to form ideals. It would be blocking the way to every deeper insight into things did we hesitate to consider the first stirrings of religion in man as the first emergence of the ideal."[2] He thus insists that all religion is based upon error and illusion, and makes the ideal the outcome of necessary error.

[1] *Grammar of Assent*, 2d ed. p. 377.

[2] F. von Hellwald, *Culturgeschichte*, bd. i. p. 46. Tilmann Pesch, S. J., *Die Grossen Welträthsel*, bd. ii. p. 501.

Indeed, he considers it a profound saying of the poet, that error alone is life and knowledge is death.[1] This is the last word of the philosophy of negation.

8. Certainly it is a remarkable intellectual feat that bases that which represents whatever is perfect in man's conception and positive in the order of things as the outcome of mere negation. Art has its ideal; life has its ideal; religion has its ideal; civilization has its ideal. Are these ideals the outcome of error and illusion? Has it indeed come to this, that men gather grapes of thorns? that the seeds of error grow up and give forth the ripe and luscious fruit of truth? that deception may be sown and confidence reaped? No; error exists but as the excrescence cast off by truth. There could be no wrong if there were not first a right; there could be no error if truth did not have a prior existence; there could be no ideal if there were not a foundation of absolute truth, absolute goodness, and absolute beauty upon which to build up the ideal. Surely literature and art cannot be the outcome of error. Think you the ideals after which Shakespeare and Dante, Beethoven and Haydn, Rafael and Murillo and Michael Angelo, constructed their masterpieces, are the growth of error? Error and mistake may enter into every human expression of the ideal; but the

[1] Eben so wahr als tief ist des Dichter's Spruch: —

"Nur der Irrthum ist das Leben,
Und das Wissen ist der Tod."

Culturgeschichte, p. 49.

error and the mistake are not of the ideal. It is rather because human hands are unskilled, and human expression is stammering, and human judgment is feeble. Let us dwell a moment on the nature, the origin, and the functions of the ideal, and we shall be in better position to understand how it is that genius is not a living in error, nor art a groping after illusions.