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A DISCOURSE ON THE BIRTH & PILGRIMAGE
OF
THOUGHT.

BY

WALTER COOPER DENDY,

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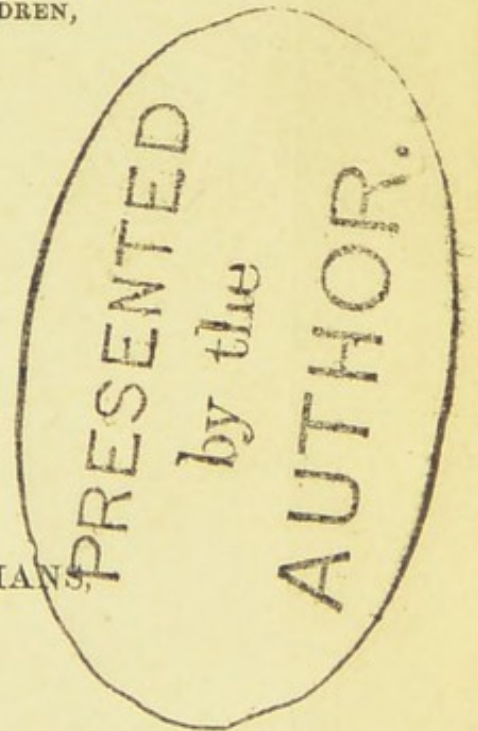
There's a divinity that shapes our ends,
ough-hew them how we will."—HAMLET.

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1853.



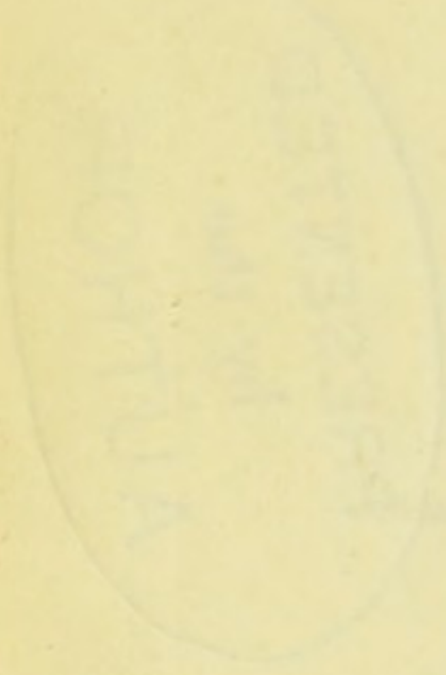
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TO

FORBES WINSLOW, M.D. D.C.L.

WHOSE THOUGHT IS SO SUCCESSFULLY DEVOTED TO THE

SCIENCE OF PSYCHOLOGY,

THIS DISCOURSE IS INSCRIBED,

BY HIS SINCERE FRIEND,

THE AUTHOR.

TO

JORRIS WINSLOW, M.D.

WHICH THOUGH IN AN UNUSUAL MANNER IN THE

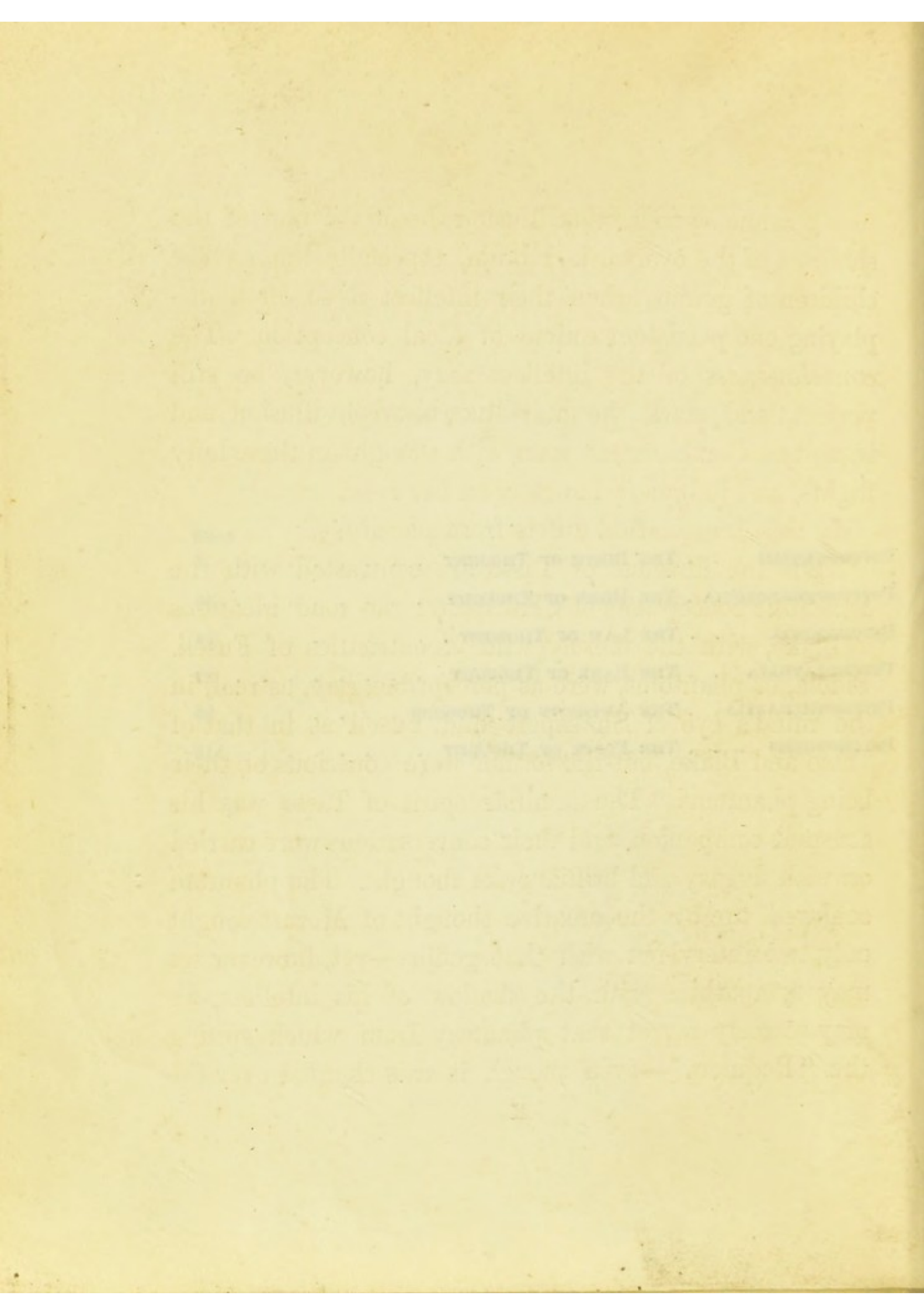
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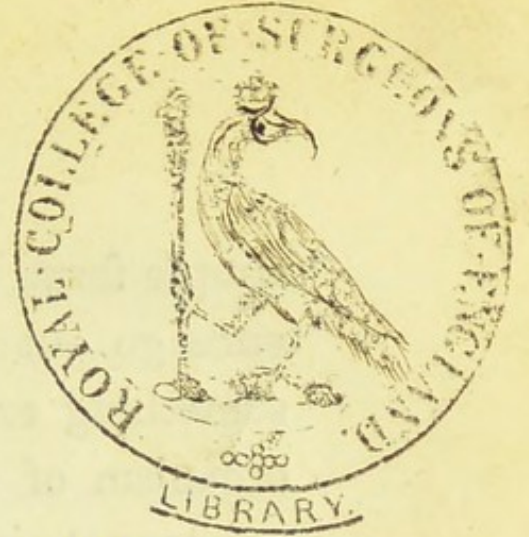
THIS DISCOVERY IS INVENTED

BY HIS EXCELLENCY

THE AUTHOR

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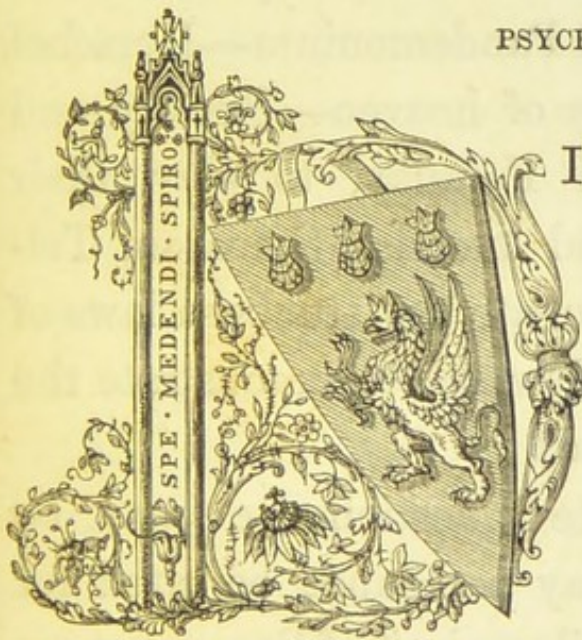




Ψ Υ Χ Η.

A DISCOURSE ON THE BIRTH AND PILGRIMAGE
OF
THOUGHT.

PSYCHOGENESIS.



DIFFICULT as it is to form a *definition* of man, we may yet look on him as that being in whom thought is developed: who himself can think upon that thought, and who can impart to others, by various modes, the expansion of thought in a perspicuous sentence.

In tracing this thought to its source, in reducing, as it were, the sum of intellect to its lowest, or its most

simple form, or denomination, we feel that we must at once go out of ourselves, and aim at the discovery of something exotic, yet mysteriously combined with the organism of man, ere we can discourse on its etiology; we cannot, indeed, in our researches stop short of the great first truth in nature, the Creation.

What, then, is the fountain of that thought? what that mysterious light that has so richly illumined the framework of human nature, that inspired Shakspeare to create new worlds of fancy—Milton to presume an earthly guest into Paradise and Pandemonium—Herschel to bring down to us the stars of heaven—Priestly and Davey, and Wollaston, and Faraday, to play their splendid tricks with gases and metals—Smeaton, Telford, and Stephenson, to subjugate the stubborn laws of mechanics to their will, and Newton to demonstrate the ruling principle of the universe?

In discussing this intricate question we may be deemed presumptuous, we may perchance be cited for leaning to the “Phantastic philosophy” of Bacon, yet we do not believe we are profanely gathering fruit from the tree of knowledge, while we discourse freely on the earthly pilgrimage of our immortal essence. There is

no region in the boundless fields of nature—even of his own nature—in which man is forbidden to glean or cull a flower by the way.

Yet it is not without the deepest veneration that we enter on the contemplation and study of that ethereal principle from which the mind draws its half celestial light, and without which the microcosm of man's life and works were a very chaos and a shame. This discourse is offered, therefore, rather as a series of propositions than as positive opinions. The poet may fashion in high relief his visionary rhapsodies of heaven and of the soul: the psychologist must be far more serious and thoughtful when he endeavours to illumine a mystery which he cannot fathom, although he feels an internal evidence of its truth. Humility, convinced that all things are possible with God, and conscious that *we* know nothing but that we little know, will ever curb the presumption of even a fleeting desire to analyse or expatiate on the nature of the Deity and his impletion of space and of eternity. All argument would at once be futile, and would be carried on like the myths of the heathen in loops or circles; the pages of revelation alone can unfold the mystery. Of the soul, however mys-

terious and hidden be its source and its ultimate destiny, even the mode of its blending with the organism of man, yet its influence, and the wondrous phenomena resulting from this incorporation, and, it may be, the point of its organic blending, constitutes the legitimate theme of the phrenopsychologist whose studies lead so beautifully through the proofs of design up to the glory of the Creator. It is while we are contemplating the wondrous results of divine influence on organism, that we are most prone to echo the apostrophe of Cicero in the *Tusculan Questions*,—

“ Vim divinam mentis agnoscito.”

It is true that our deepest reflection must often terminate in mere conjecture, yet like the discourses on geology and on the physical cause of the death of Christ, we believe our studies may often afford, if not a proof, at least a devout illustration of the sacred record, while they confirm our own faith in redemption and the proofs of immortality.

Now we cannot read deeply or far without observing with what an excess of wariness the theologian, the metaphysician, and the physiologist, approach the very

confines of this mystery. The first is anxious to prove all from the pages of Holy Writ alone, to demonstrate and almost realise the immediate inspiration and even manifestation of an immortal spirit independently of an *intermediate* organ; the second, fearful of splitting on the Scylla of materialism, falls at once into the Charybdis of abstraction, and carefully spins out his intricate web in obedience to the sophistry of the schools: the third, contemplating the intimate association of intellect with cerebral development, is often satisfied with the clear and recognised laws of the animal economy, leaving to others the discovery of an ultimate element.

In presuming to reconcile this conflict of notions, we leave untouched the scepticism of Pyrrho, and Hobbes, and Spinoza, and Mirabeau; and without challenging Hume and Priestly on the one hand, and Berkeley and Coleridge on the other, we, *in limine*, express our confident belief in two propositions: that *matter cannot think or act by itself*, and that it is a law written on the face of nature that *the Deity ever interposes media between himself and the intellect of his creatures*.

There are some closet students of these three classes, even in our own day, who affirm that, because we cannot

define a thing, we have no right to reason on its nature: and finding that their own abstract metaphysics cannot unfold the mysteries of psychology, therefore give it up. They may learn from Liebig that abstract reasoning is based on laws evinced in science or physics.

The queen's learned counsel, Warren, thus shrinks back in despair: "What is intellect? and in merely asking the question we seem suddenly sinking into a sort of abyss."

There is the Benthamite spinster also, blinded by her self-creating law, and bewailing that we are "*hopelessly adrift* on the sea of conjecture about the truths of mental science." Well she may, after pondering over the reveries and illusions of mere metaphysical dreamers, from Pyrrho to Coleridge; and sailing about without rudder or compass on a wild sea of speculation, and never dreaming the while that God had fashioned a wondrous organism even in her own self, by the laws of which if she more wisely reflect, she might at once be enlightened.

When Dr. Abercrombie writes "the *mind* is that part of our being that thinks and wills, remembers and reasons," it is only implying that *man* does so. And it

was easy for Swan, the most elaborate neurologist of the age, to write thus of the mind :—“It was not intended that the mind should be altogether independent during life. It is so far independent that it thinks and reasons through its innate capacity and not through structure, although it is necessarily and appropriately contained in this.” But of what use then *is* structure, and why was fashioned the wondrous organism of the brain, if the cranium be a mere basket to nestle the soul in, while it forms, *independently*, its own innate conceptions, or receives visitors through the senses, and without any ceremony whispers their names and characters to mankind?

Now if we grant that the soul works the wonders of intellect *out* of the body, does this indicate a more noble quality, marked as the intellect is by *derangements* as well as *arrangements*? May not this imply almost an earthly separation, that the soul is indeed the mother of thought, and then merely comes into the body to display it? Insanity would thus be a quality of the spirit and not of organism.

This sophism would at once and again lead on to the obsolete fallacies of merely moral mania in its treatment,

or to the more positive and unholy notions of demoniac possession ; nay, it might even revive the inhuman cruelties of iron fetters and the lash. What then is the rationale of tuition or habit of the intellect? We cannot believe that *spirit* is changed or converted by discipline, but we see at once how thought may be influenced by the varied conditions of organism, and thus the force or faculty of intellect be at once strengthened or depressed. If the source of thought be *out* of organism, we must admit the *development* or *growth* of an immaterial spirit, unless we conclude that the soul is as rich in the endowment of intellect in infancy as in the zenith of life, but cannot display this power in consequence of the immaturity of its organism.

We cannot of course wonder at the phantasies of the heathens in discoursing on the doctrine of the soul, unenlightened as they were by physiology ; that Virgil should thus term it the *Anima mundi*, the common mind of the universe,

“ Spiritus intus alit totamque infusa per artus
Mens agitat molem :”

but rather that they thought so deeply.

Epictetus deemed the soul an emanation from the

Deity. Plutarch affirms that God created the soul *απ' αυτου και εξ αυτου*. Plato argued the very existence of the Deity from the nature of the soul, which, however, he terms *ουσια ασωματος και νοητη*.

We must, in our present study, mellow down the phantasy of these and other metaphysicians, or we shall fall into the transcendental dilemmas of the Pantheists Kant, and Fichte, and Fourier; and we must erase that unhappy term *immaterial* from our category, and, as much as we can, confine ourselves, as Göethe prescribes, "within the limits of the knowable." We affirm not that it is by the laws of physiology *alone* that our analytical propositions regarding spirit and matter can be based, but the visible influence of the one and the principles of the other can only thus be studied and discussed. If these were fairly weighed by the laws of inference and analogy, we might hope for the reconciliation of those polemical discrepancies between Christian advocates and physiologists, which have for so many years deluged with a war of words the intellectual world. And we may remember that the first and highest inductive philosopher deemed physiology "*volumen operum Dei et tanquam altera Scriptura;*" and in his "*Cogitata*

et Visa" he pointed to it as an antidote to superstition, and even as a prop for pure religion itself.

This primal essence of human nature, the soul, *was* a creation and a law, not a growth; it must now, however, wait on growth for its development, or rather its combinations; not that itself is changed, but the organism is changed through which alone it can meet the world. The record of this creation of Adam, although we know it a sublime truth, will ever of course be a mystery and a dilemma, and it is still more overshadowed and mystified by the whimsical adoption of the Greek synonymes in the translation of the Genesis, and the pages of the theologian. The Hebrew word for image (of God) is צלם, the literal meaning being, according to Gesenius, form, image, likeness. Nordheimer remarks that the two terms, both of similar import, "in our image, after our likeness," are employed to impart intensity of expression.

Even the priority of the creation of soul and body, ψυχη ζωσα, εικων θεου, must still remain an enigma, unless that most prominent preposition εις solve it in favour of the immortal essence.

The expression of St. Paul, εγενετο ο πρωτος ανθρωπος

Ἀδάμ εἰς ψυχὴν ζῶσαν, is from the Septuagint translation, εἰς representing the Hebrew ה, which is literally, he was, *for*, or became *to* a living soul. There is some dilemma in the Greek words ψυχικόν and πνευματικόν; the term for *natural* body should be σῶμα φυσικόν. In the next verse ψυχὴ ζῶσα is translated *living soul*, and πνεῦμα ζωοποιῶν *quickenning spirit*.

Plato, although so inconsistent in his notion of the soul's substance resembling that of the fixed stars, evidently believed the pre-existence of the soul; "our soul existed ere it was combined with our body, and hence is evident its immortality." And in the "Phædo" he affirms (and Socrates coincided with him), "We know nothing except as a memory of this pre-existence." In our own day another gatherer of honey from the wild flowers of nature, though of a very different flavour from that of the Attic bee, thus quaintly sings his creed—

"Our birth is but a sleep and a forgetting.

The soul that rises with us, our life's star,

Hath had elsewhere its setting,

And cometh from afar."

Aristotle was somewhat of a sceptic regarding immortality, since he alludes not to resurrection, and he

believed no soul could exist unattached to the body, if we sanction Warburton's translation of the Stagyrte's book; yet, although he eulogises the soul as the *εντελεχεια*, or perfection of the natural body, Aristotle seems not to know his own meaning on this point, with all his intuitive wisdom, for he also was without the light of anatomy. Pythagoras, after his wanderings in India, and probable contemplation and study of the Hindu theology, with the gymnosophists and Grecian sages, hinted at something like a conscience-stricken, shadowy reminiscence of crimes committed in a former state of our being, as the essence of our punishment, and our misery in our present existence; and Shelley and Coleridge, and other transcendentalists, have blended this creed in their elegant yet visionary pages.

Regarding the true definition of *πνευμα* and its synonyms, there is an equal obscurity: the terms breath, spirit, soul, shade, life, mind, evincing the confusion of elements by the antient sages, like the *υστερον προτερον* myths of Ovid, or the quarterings of the dead into corpse, ghost, shade, and spirit. The breath of life, *πνευμα του Θεου*, the Spirit of God that moved upon the waters, was the first inspiration of the Deity into his

creature, the "inner vitality," we suppose, of Stallo and Coleridge, whose definition of life, however, is very obscure. It is not by the visions and reveries of morphia that God's glorious work is to be analyzed and displayed.

It were more rational thus to limit this special influence of the Deity on man's organism, than to adopt the mystic pantheism of Oken, and Hegel, and Schelling the "modern Plato," in closely following the blind mysteries of the heathen, that the soul is universal, that the whole world is an offset—a sort of self-revealing of the omnipresent Deity; the notion of a unity in all nature might *seem* to sanction this, but it would lead us astray. We may as well be idolators, and Ghebirs, and children of the sun at once, and fall down and worship the unressembling models which this scholastic slavery has set up.

Πνευμα was, we believe, as the effluence and breath of the Deity, held to be the loftiest essence of the human genesis, and the result of its combination with the εἰκων θεου was the ψυχὴ ζῶσα. Now, the Hebrew words for living soul, or living breath, are נפש חיה. In Genesis i. 30, the same words are used, "everything that creepeth

on the earth, wherein is a living soul or breath." Our translation is merely "wherein is life;" a living soul is therefore a living being.

Thus began the ζων, or animal life of man; but it may be questioned if even now man had a real conscious soul, his life being a course of half instinctive innocence; for he had not, by sin, acquired knowledge, and incurred the penalty of responsibility.

Regarding the Hebrew words in Deut. iv. 9; Isa. lxiii. 10; Prov. xxix. 2:—in the first, the word is נפש, the same as in Genesis ii. 7. In the latter instances the word רוח, wind, exhalation, breath—the vital principle—then the mind, that which thinks and feels.

In Schleusner's "Lexicon to the New Testament" it is thus inferred—ψυχη, anima seu ipsa illa pars essentialis ut vulgo vocatur quâ vivit sentit ac monetur homo, æque ac cætera animantia: quæ inde nomen habent quæ a græcis scriptoribus æque diligenter a πνευμα distinguishingur. Ac Latine *animum* et *animam* certe in plerisque locis recte distinguere solent. We have recognised the term ψυχη, then, as expressive of the effluence of the Deity, when it was lodged in the organism of man, and became a part of his system, when he was in fact *finished* by his

Maker. Although, therefore, *πνευμα* may be deemed the highest word, pneumatology as well as ideology are set aside by us, and, as inspired historians and heathen philosophers, and poets, and painters have, from remote time, revelled in the allegory of the soul and the butterfly, which the ancients believed, when a being died, was seen flitting over its mouth, we have adopted the *ψυχη*, and retain for our science the popular term *psychological*.

Thus it would seem that life was the essence, thing, or principle, here imparted with a breath. For if there be a principle of life apart from the organism of life, this would seem to be the moment of its inspiration. And with this *πνευμα* may have been involved the oxygen, so all important to the blood, which has been termed the "life of the body." For we know that on the tissue, where most blood is distributed, the higher is the vitality displayed. We know, too, that a principle of life is the great animal chemist that prevents putridity. When life is in the body it preserves its heat, and has the power of motion; when it leaves it, the body is motionless, and its heat is gone, and then it decays. When we see electricity so wonderful in its palpable agency, and that it can raise and lower vital temperature, may we

not term it analogous at least, if not, with Hunter, identical with, this principle of life, and perhaps the basis of the exaggerated facts of mesmerism ?

Some of the modern theories of life affirm electricity to be a property of the blood ; others that life and mind are homologous ; that both are immaterial ; some that mind is the result of organization ; others that life *is* organization. Waving these discrepancies we may believe soul and life to be a principle, and mind or intellect the result of organization, since we see that a blow kills or suspends the mind at once, while life goes on unconsciously.

A principle of vitality can scarcely be doubted. We know that vitality is abstracted, during constant contact, by the old from the young ; therefore it is a principle, and can live by itself.

Now in assuming the identity of $\psi\upsilon\chi\eta$ and $\pi\nu\epsilon\upsilon\mu\alpha$, we should be enabled to confine our discussion to one element ; there would be no need of our believing with Abernethy, "that mind might be superadded to life, as life is to structure ;" because mind, we believe, is the *result* of endowed structure. As nature is highly prone to economy in her working, simplicity should ever be the motto and the rule of our philosophy ; and we cannot

believe there is profanation in simplifying and combining the notion of two elements, which the very words of Genesis seem to imply, and which would at once render *anima*, *vita*, and *spiritus* intelligible terms. The Greek terms both refer to the function of breathing. Some heathen psychologists believed that the soul was composed of all the elements. Lucretius thought life and soul—*vita* and *anima*—to be the same, and that they were composed of the *lightest* element, wind, their particles being globular, *seminal atoms*. It is, at least, curious to mark how near this wind and these globules come to the breath and the vesicles of the neurine or nerve matter. We must not, however, for a moment conceive that this principle is identical with vitality, or life itself, or the matter of life, or the function of life, living: they are distinct things, although relative as cause and effect, and all but the principle are mortal and decayable. If soul *be* thus breathed into man's body, there is still no reason, especially if it enjoyed a previous existence, why it should not again live on by itself on the decomposition of the body, in unfettered immortality.

Now for life itself, archæus or ζων, so intimately

associated with organism, indeed developed from it by a law, a principle external to it *must* be conceded. Of its nature we of course know no more than Paracelsus, Van Helmont, or Stahl knew before us. It is invisible—in-
tactable; yet this principle may differ in different bodies, even as the fibres of flesh differ from each other; nay, as much perchance as the life of the phytozoon, which multiplies by gemmation, or of the conferva, which endures a sort of parturition—or of the vegetable which is nourished by its colourless blood or sap, from that of man. As the Creator made a body so wondrous, so nearly divine as that of man, why may not his vital principle also differ from that of the brute in so much that there be a superaddition of soul, the basis of mind or intellect instilled with the breath into the element of his life?

The Creator fashioned one flesh of beasts, and another of birds; and why may he not have made one principle of life of man, and another of birds; have breathed with this *breath reason* into man and *instinct* into brutes? May not, indeed, this reconciliation tend to strengthen our belief in immortality? for the essence that animated, almost consecrated, a body so fraught with passions and

decay, must be a noble and a potent thing indeed. But the sophist, blinded by his illusion, will blink a fact so near nature. He goes darkling on, fashioning his metaphysical model, bewildering himself with the phantasy that the $\psi\upsilon\chi\eta$ is too pure to have aught to do with matter, while the materialist would annihilate it at once, by pointing to it as the *product*, and not the guiding star and spirit of the intellectual organism.

Mirabeau, if he really were the author of the "System of Nature," went hammering on blindly with his creed that mind is a mere negation of matter. Lord Brougham is aiming at the illumination of this darkness; but he is himself a scholastic metaphysician, and must ever fail of coming near the physical truth. It is only as we study organization and observe the possession, derangement, or loss of its functional phenomena, coincident with its changes, that we can even approach a demonstration. The question is to all replete with shadows, yet once regard the mind as a development from organism through the exotic influence of a higher nature, and the question is well nigh at rest without calling up a thrill of horror in the shallow spiritualist.

We should also approach nearer a solution of that

solemn question—the moment of the soul's flight, ere the body is given up to putrefaction and the worm. The mind is quiescent as soon as the blood is at rest and coagulable, and the lungs have ceased to breathe; but, as in the instances of merely suspended animation, the vital principle was merely in abeyance, and may recover all its faculties by a bath and pulmonary inflation. Even the stimulus of a thought will seem at times to reanimate, as it were, the dying organism. A lady (whom I had long been watching), endowed with a mind of the deepest devotion and energy, had summoned her friends to her bedside to receive her farewell and her parting blessing. On a sudden, when we deemed her at the very verge of death, a *thought* seemed to pass through her mind, from the flashing of her, even then, brilliant eyes, and she called to me, with intense energy, to explain to her the nature of death, gazing on my face as if anxiously listening for my answer. Although she was not quite satisfied with my explanation, the stimulus of intense curiosity, if there were no higher motive, called back her declining powers. The skin was still cold, and the respiration gasping; yet those peculiar diagnostics of dying, the flaccid cornea, and the cada-

verous odour were absent. The cornea, indeed, glistened more and more, and regained its wonted transparency. From that moment I expressed my belief that she would not yet die. Thought had thus rekindled with the vital principle, the life and the mind.

The veriest sceptic will, must, admit the truth of a creation, whether he term the creator God, Law, or Nature. Genesis is the record of this world-work; and as this book also displays glimpses of the unfolding of the intellect, we cannot blink the psychological bearing of its memoranda, although we may not discuss, or decide, or even question, *ex cathedrâ*, how much of the book of Genesis is to be received as simple allegory or parable, or whether the primal transgression was a physical or psychical delinquency. We do not know if the truths of the record, filtered through so many translations, are transmitted to us pure and faithful to the letter; but there *was* a being formed and endowed with a force of thought, and, therefore, our researches now carry us up to Eden. On the creation, when the chaos, the wreck of demolished existences, was fashioned into a bright and beautiful world, Adam, the man of red earth, is presented to us as a being of superior instincts,

his organism probably endowed with the germs of latent faculties of the highest degree, but *evincing* little more of the force of these faculties than the mere *anima brutorum*. He was isolated; there was no intellectual collision in the world, no communion or intercourse with beings of the same grade as himself, by which his thought might have been elicited. He possessed sensations, and perceptions, and motion; but the senses and the faculties came fresh from the Creator without an eccentric force from within him. He was thus fashioned for God's special purpose "to dress and keep the garden of Eden," and to be the lord of the brute. His primal life, his *anima*, was incited by sovereign instinct or intuition rather than by sovereign reason, *νους βασιλευς*, but that was clearly *superior*, for the battle of life was even then not to the strong. He was, therefore, an animal, a living being, passionless and reasonless. His life was then an innocent dream, and, absorbed as he was in the contemplation of his flocks and fields, was one of pure pastoral simplicity, like the fabled felicity of Arcadia or of Tempe. He was, indeed, as pure, and innocent, and buoyant, as a child to whom existence was in itself a blessing. Consciousness, the great principle

of the intellect, was in abeyance; its organism, though perfect, was quiescent: like the instrument of Paganini, its perfection was in supposition, and waited for a more potent force or cause to bring it out. Thus created in purity and animal perfection, existence was but the blissful and chastening shadow of that Paradise wherein he was placed; every organic function was pleasurable, and the Creator thus first ordained that every action in obedience to appetite should be associated with present happiness. This truth may cast a gloomy shade perchance over man's earthly existence; but, free from a spirit of complaint, we should ever confess that the blessings of the Deity far exceed his inflictions: the priceless gift of immortality were worth, at least, an age of penance. As to how long this state of thoughtless felicity lasted, the chronology of the Genesis is silent; and although he was a living soul or being, man's destiny would seem to have been remotely different from that of his second state, and of his race when the primal scheme of the creation may have been thwarted. Adam was, of course, yet ignorant of death (that had not then come into the world), and of immortality, for perfect innocence reigned throughout Eden. He was supremely blest, and

needed no other Paradise; for God walked and conversed with him, and what more could he desire or enjoy in heaven?

But how soon the temptation and fall of Eve wrought that wondrous change which revolutionised the world, and metamorphosed the life and the fate of man!

Intellect came with the transgression, and with them responsibility. That which we call consciousness or conscience, was superadded or developed in the organism of human nature alone. $\Psi\upsilon\chi\eta$ or soul, was thus the endowment of Eve—the principle of life in her brain was thus made conscious and responsible—she had become the slavish proselyte of the tempter, and her eyes were opened; on the forbidden fruit of knowledge she feasted, and she fell, and the pastoral life in Eden was in a moment at an end. Thus may the woeful penalties have been foreshadowed with the depth and comprehension of man's mighty mind, which to this day so specially mark the life of a child of high genius or endowment, as a set off against the knowledge that man thus filched from his Creator.

From this moment began the force of the true $\Psi\upsilon\chi\eta$ $\zeta\omega\sigma\alpha$ within the mother of our race, and on this feeling

came forth another attribute—mind, intellect, reason. This was the endowment of *vous* or *θυμος*, and as the zoonomic, animal or organic life *ζωη* was perfect at the creation, so now the bionomic, intellectual or psychical life, *βιος*, was developed, and consciousness, the spirit of the soul, ushered in another force, and thought was thus born within the organism of the brain of Eve.

Thought—the theme of this discourse—we must consider the epitome of the intellect, for faculty and passion are but a series of thoughts combined and worked out or expressed.

The lexicon of Schleusner may be quoted in definition of this expansion of mind.

“*Nous*, generatim, animus cum omni sensu, cogitatione et affectu, et omnibus suis facultatibus; speciatim intellectus, seu illa animi facultas quâ aliquid cognoscimus et intelligimus.”

Thus *πνευμα* or *ψυχη*, and *vous*, may be deemed distinct: the thing which influences, and the thing which manifests. The divine, however, will further distinguish them as two spiritual sources of thought, according to the subject of their thought or force, *ψυχη*, or the soul, the moral mind—*vous*, the intellectual mind. But, before we illus-

trate these attributes by associating them with organism, there would be peril in this assumption, lest we bring into our category a host of ministering spirits to preside over man's studies, one for mathematics, one for theology, one for poesy, and so on; a fantasy that would at once annihilate our philosophy.

Breath or life, soul and mind, were thus the progressive endowments of man. That which was then created and bestowed on Adam at once, must now, however, be evolved from the germ, and *grow* to maturity. The intra-uterine vitality of the child is not effected by the breathing of a lung.

The wondrous being was now completed, that is to breathe in sorrow, to die in agony, and yet live for ever. The young thought, which now was working in the brain of Eve, had no sinecure, for emotion was lighting up a train of new sensations; the echo of the anathema was in her ear, and thought was concentrated on the memory of the words, "Thou shalt surely die!" This was the dawn of the principle of consciousness before its purity was sullied by the taint, and it became conscience, the self-reproach of the soul. The awakening thought of Eve appealed at once to the Deity, and

the still small voice instantly whispered, as it always does, the truth. Then was inflicted the first and severest sting of human life, remorse; and Eve, with the dread of punishment before her, became a reasoning but a suffering creature. With this came not only the moral taint, but the taint of her blood, which was to affect future generations in the form of diathesis, constitution, or idiosyncrasy, and man became thus fraught with disease and decay; with a constant tendency to dissolution, he began indeed to die, as soon as he began to live.

With the germ of life the vital principle, was thus imparted from mother to offspring, the germs of all the attributes and qualities of the being. This, indeed, must still remain a mystery; the germ of the child is unfolded in the womb of the mother; at the moment of conception the germ lives, and although the being appears but a simple cell of homogeneous gelatine, yet doubtless it is as highly vitalised as when it quickens or is born.

The disobedience of Eve, now associated with the yielding of Adam, was followed by an inundation of emotions, and the depraved passions of the $\psi\upsilon\chi\eta$, remorse, shame, fear, followed in a moment. They now looked to themselves, and not to God, and this slavish egoism was

at once a proof of degradation. They had known sin—they now knew shame, and “hid themselves from the presence of the Lord God among the trees of the garden.” Then came dissimulation in the answer of Adam, and his treacherous and cowardly impeachment of that creature who had been fashioned to be the delight of his life, “*she* gave me of the tree.” The simplicity and purity of sexual love was tainted, and we may be sure that now the holy feeling of affection became the fire of sensuality and lust.

That the mind now came forth—a wondrous and an awful thing—all who regard the scope with which it conceives and accomplishes, its intimacy with the Deity, or with Demon, must admit: the beauty with which its God had once endowed it—the depravity to which the wiles of Satan have reduced it—the thrill of happiness—or the agony of remorse with which conscience, the essence of the soul, is blessed or agitated as piety or sin has swayed its actions, and above all, the everlasting state to which it will be welcomed or doomed, all mark the soul as a sacred theme, which even now we may almost tremble to have adopted for our discourse.

The emotional laws of vital organism were now brought

into action, and its wear and tear commenced, and from that moment man set out on his downward path to the grave. Thus were the natural laws of vitality and decomposition instituted as a judgment, as we must indeed have almost believed even from the pathology of our own day.

Thought now caused the heart first to throb ; erethism or irritation of brain, and congestion of the heart and lung ensued, and hence, from a moral or psychical source, disease was introduced into the body.

Thus we are taught, Adam by his own free will and act became an intellectual sinner against the will of God, in the scheme of the creation, and subtleties and falsehoods were exemplified in his life. This delinquency at once opens to us the earthly course and fate of man, and the origin of the term jealous, which has been ascribed to the Deity on man's arrogant intrusion ; and the Lord God said, "Behold, the man is become as one of us, to know good and evil : and now, lest he put forth his hand, and take also of the tree of life, and eat, and live for ever : therefore the Lord God sent him forth from the garden of Eden." The fruit of the tree of knowledge was intellect—that of the tree of life was probably an apotheosis—an undying immortality.

Thought soon began to play the passions in the first generation. Jealousy burned in the heart of Cain, the woman's first-born, and envy, hatred, and anger followed in its train; "he was wroth against Abel," and his *countenance fell*; and the climax was a brother's murder. Thus was first lighted up in the lines of the face emotional physiognomy, by which the eye is so often enabled to read the soul of another. Thus early in the Bible have we a record of the worst and most potent passions of the human heart, and thus early was the penalty of death realised before the eyes of the first delinquents. *Θανατος* was introduced into the world. In St. Paul's epistle, however, the Greek original is *αποθαινη*, and the following note of Oelshausen is especially interesting, as it points to the very mode of spiritual immortality.

"In reference to creatures in its biblical usage the term *θανατος* has a twofold sense; it commonly signifies the becoming separate of things belonging together, either of the soul and body in physical death, or of the spirit and the soul in the inward spiritual or eternal death. But *θανατος* also designates that which separates, the power that produces death (Rev. xx. 14). While, therefore, death is the unharmonizing force which checks

individual life in its development and destroys it, the ζων appears as the harmonious strengthening power which renders life all congenial."

Without presuming to analyze the intimate elements of soul and life, ψυχην and ζων, or its principle, we may believe that if they do not exist as one or together *in eternity*, they go out together; their transit and destination must rest on belief and revelation. The mind, however, dies, and thought is at rest, as to earthly manifestation; its pilgrimage is over here, because it has no *living* organism to work with; for that which endowed the body for this thought has carried this memory of earth with it in its flight. And is it not easier to allow that the essence which came direct from God, as an earthly medium between the Deity and his creature, can be separate and immortal, than the intellect, a bundle of faculties and passions, the result, indeed the mere playthings of that organism, which the spiritualist will require the soul to reanimate?

Now we must allow the soul to be something; immateriality is not entity, and trenches woefully on annihilation—so, doubtless feared Berkeley and Locke, who fled from the phantom of ideation that themselves

had raised, and left the web of materialism to be worked out by the speculations of Hume. As a something, soul cannot be lost, and it is indeed strange that even the sceptic, who argues for physical annihilation, should forget that the matter of the body, which *seems* to him to be utterly decomposed and destroyed, only enters into fresh combinations and still exists; even the spiritualist argues for no more. And indeed it is far more clear that an essence of the Deity should ascend and live for ever without a compound organism, than that a body should rise and be remodelled, when a purer, perhaps a pre-existent thing, is already endowed with the elements of immortality. And it is strange too on the opposite point, that those who argue against the materiality of the soul, a state quite consistent with immortality, should yet require this body, the atoms of which may be scattered over the globe, to be reanimated, ere the full rewards of paradise can be enjoyed, or the full penalties of hades be endured. If the identity of the soul with the vital principle be believed, the immortal essence will have been, during life, in intimate association with every atom of the organism, and will therefore become blended not only with its thoughts, but with its acts. When,

therefore, it has left the body, its consciousness of all this is perfect, and it thus represents the body as if it possessed the power of *isomorphism*, and *shelled* off from it like the image of Lucretius, or as if the body arose with its organism entire.

It is not clear that the analogy of St. Paul has not been misconstrued. The dead body and the wheat grain are in their nature most dissimilar; the wheat sown is analogous to the ovum in the body of the mother, not to the corpse. There is a germ in both which never dies. On conception the foetus is developed and grows; so if the seed be sown, the germ or vegetable ovum is unfolded and grows. So also the changes of the butterfly; the germ of the fly and of the wheat exists both in the ear of corn and in the chrysalis, but the dead body has no germ unless we deem the soul to be the germ, and then there is no need of resurrection. It is decomposed and gone into other things, and we must believe that the soul has then left it for ever—the dust has returned to earth from whence it came, and the spirit to God who gave it. When Abraham was seen in hades, we are taught to believe that his body was gone—it was his glorified soul. If then the soul can so separately exist

and is a conscious thing, where the need of an organism to be joined to it—a body that was unconscious without the soul—that must have committed sin, and been poisoned by disease, ere it can enjoy the perfection of celestial life?

Questionless there is not an atom of the body that is not destined to fulfil an earthly purpose. For this its organism is, like all God's works, admirable; but it must be as unlike the glorious body of the Creator as earth to heaven. If then there be a substantial resurrection it must be a perfect metamorphosis—indeed, a new creation.

The aspiration that the soul will be attended solely by its virtues is finely illustrated by the Hindu: "Continually let him collect virtue for the sake of continuing an inseparable companion with whom he may traverse a gloom how hard to be traversed." But there is so much taint and alloy in this life that few would wish not with Göethe to leave its thoughts and images behind them. "God forbid that I should carry with me the history of my sojourn here, in all its minutest details. I for my part should regard such a gift as the greatest torment and punishment."

So thought and wrote the spirit of philosophic devotion ; the spirit of error must be even more reluctant to leave the flesh in which it gloried, and take its thoughts with it, that are already brooding over the visions of its eternal destiny. Such was the spring perchance of this rhapsody :

“ A dreadful dream had I ;
 I dream'd that I was dead ;
 I saw my body lie
 By the soul untenanted.

And I shrank with terror and despair,
 For the form I once believed so fair,
 From the death damps gathering now
 On the strange unearthly face,
 From the pallid awful brow
 Where life has left no trace ;
 Yet my spirit hover'd near,
 Unwilling to depart.
 For it thought of Eternity with fear,
 And of time with a loving heart.”

We must believe, then, that such a reunion is inconsistent with the purity of heaven and immortality, and would, indeed, almost justify the words of Priestley—“ a second degradation ;” for the present condition of man is degraded by the fall, and would, indeed, need the

purgatory of the Catholic. He has an organism fitted for the enjoyment of worldly and sensual pleasures, and, enslaved by passion, his soul, therefore, is *imprisoned*, a state which we may believe, indeed, to be the main spring of its constant longing after immortality. The *untaint* of the soul is not inconsistent with the awful scheme of eternity. The *soul* of the guilty may remain pure as that of the innocent, although the one may rejoice and the other may bewail.

The consciousness of the soul in the memory of its devout obedience, and the feeling that it is, therefore, blessed with the smiles of its Creator, must be an all-sufficient heaven. And can we conceive a more intense agony, than that of a pure thing haunted by the memory of crimes, and conscious that its body has justly incurred the displeasure and the frown of the Almighty? The purer its essence the more intense may be the agony of remorse; and in this suffering may, indeed, be shadowed forth some remote similitude of the mystery of the crucifixion.

Thus the soul-consciousness of the devout may be far more ecstatic than any highly embellished and metaphorical picture of an architectural heaven; and the fire in the conscience of the unholy may burn with a more

intense agony than a body would suffer in the most suffocating flame of sulphureous combustion, fanned even by the refined malevolence of a material devil.

The aspect of a dead body, if I may be justified in a parenthesis, imparts a thrill of horror in the living, even among the brutes. A nurse will sit up alone until the vital spark of a patient be gone, and then terror will at once steal over her. Surely, if there be the slightest atom of immortality in the corpse, we should rather admire and love it, than gaze on it either with indifference, or with horror and disgust.

When Elias appeared in a glorified *body* it was then essential for the recognition of human optics. In another state we believe that the lenses will not be, so there will be another *mode* of recognition. True, Socrates, the heathen, ere he quaffed his poisoned cup, cheered his last hour with the thought of conversing with Orpheus and Homer; but the Christian has another notion of the Elysian fields. True, the Redeemer and Enoch both ascended from earth; but these truths are not *analogies*, they are miracles. Enoch did not *die*; and Christ, as he ascended, was transfigured, and his body had not endured the process of decomposition.

With the spirit that can with confidence carry its thought into a higher than an earthly court, the state of dying is often one of conscious emancipation. There is something sublime in the belief, that when the soul is about to leave the point of thought in the organism of its power, it still clings to its pure thoughts with that fervour and intensity so often displayed when the mortal is about to put on immortality. Madame Roland, even on the scaffold, regretted she could not write down the peculiar thoughts which hovered around her in her last moments. Herder said, "Everything now appears to me so clear that I regret not being able to communicate it." Of the bright thought of expiring devotion history is replete with illustrations.

We must remember that while the vital force has ceased in many, almost all other organisms, when *molecular* death is proceeding, the brain may be still alive and active, and thought will still play about it. We have elsewhere recorded cases in which there was a persistent, but waking, *incubus*, *catalepsy*, and *trance* in beings motionless and seemingly breathless: when even placed in their coffins, thought may still be perfect. In others speechless from exhaustion, consciousness may be perfect,

and they will point and endeavour to speak with the fingers.

If *somatic* death is complete, of course both organic and intellectual function at once cease.

PSYCHOPHRENOLOGIA.

THESE glimpses of the inspiration and expiration of the organism of man refer chiefly to the never-dying soul. It may be seen, however, that during the whole course of its earthly state the intellect may have been a chaos or a blank. Thought might have been completely overshadowed, or have never been displayed by its diffusion and its combinations in the wondrous forces of man's reason.

The $\psi\upsilon\chi\eta$ may have been pure and perfect, but the organism, as we shall discover, being imperfect, could not be adapted to the full development of thought.

Our discourse will now revert to that mysterious combination by which thought is developed in our being. This may be termed the *matter* of thinking, and is taken up by us where logic, the science of its *laws*, leaves it.

It will be clear, that to elucidate our study of mind, the metaphysical and prophysical arguments of the heathen philosophers must be at once set aside, engulfed as they were in the dilemmas of abstraction, although Plato may have had his glimmerings of immortal life, and may even have paved the way for the dawning of Christianity.

The peripatetics of the Christian churches, subdued by the fear of intellectual materialism, made a sort of compromise, and by a strange coincidence, likened the soul to the lightest of the elements; but the psychology of their *πνευμα* was a vague and visionary hypothesis. The "*fabric* of the mind," as Reid has termed it, was not even dreamt of.

At length physiology began to disperse the clouds of heathen superstition. Parmenides, 800 years B.C., affirms that the highest degree of organization gave the most perfect thought. But still there were vague and fanciful notions prevalent regarding the locality or presence-chamber of the soul. Empedocles thought it was in the blood. Chrysippus and Diogenes in the heart. Van Helmont in the pylorus; till at length Galen, enlightened by the study of comparative anatomy, flung a new

light over psychology and adopted the brain, $\phi\rho\nu\nu$, as the "grand organ of the intellect." The intricate tissues of the brain as the seat of the soul, still puzzled the early anatomists, and perchance they will ever do so, with all our light of science. Lancisi fixed on the corpus callosum; Soemmering on the ventricular fluid; Descartes, the founder of the new school of psychology, on the pineal gland. Yet all these fancies were vain, as they refer of course to an intellectual *unity*, which only tended to hoodwink and fetter the courses of philosophy, until Gall and Spurzheim, regarding intellect not as a creation but a development, and its faculties so often coincident with degrees of size and form, "pencilled out this wondrous story" of the encephalon, and projected their ingenious alphabet of phrenology. This mapping of the cranium was, however, somewhat premature, its fallacies depending often on the variations in the extent of the diploë and the encroachments of the inner table of the skull. Yet, although craniology has too often been the subject of scepticism, and even ridicule, there is still enough known of form and development to point with confidence to a general rule for the study of psychophrenology, and to confirm the brain as the organ of intellect.

When we see so intricate and elaborate a tissue without any special or palpable product, we must at once conceive that it exerts some latent and occult function of the deepest importance.

The brain, fashioned with a multiplicity of most intricate tissues, is endowed with a special principle or quality, by which it is fitted for the elaboration of a thought and its expansion into intellect or mind, which we may now safely allow, with Priestley, "is never found except in combination with matter." The simplest proof of this union is the instant annihilation, by concussion, or mere pressure of the brain, of all that we term mind, its consciousness, its volition, its senses, its faculties, its passions. A state of coma may be at once induced, which, as surely as protracted asphyxia, will terminate in dissolution, mind and life then utterly ceasing in physical oblivion, and organic decomposition. The two handmaids of the soul *νοῦς* and *ζωή*, then go out together; the *ψυχή*, however, the principle of both, being, as we believe, still persistent.

The full solution of the grand psychological enigma to find the point, if such there be, at which soul is more intensely blended with and begins to act specially on intel-

lectual organism, will probably never be solved. In expressing even a conjecture on so sublime a point we cannot be without a fear of forgetting that devotion and not philosophy should be our guiding star in such a course. We will endeavour, however, to find what degree of light the anatomy of brain will afford us at the first step in our difficult course.

Although Meckel, and Tiedeman, and Gall have illustrated so much of the immediate organism of the brain, it was reserved for Mr. Solly to unfold it more clearly for the views of psychology.

The neurine or matter of the brain is seen in three varieties or forms: vesicular, tubular, and filamentary, each form displaying especial qualities of innervation or nerve function.

The grey cineritious or vesicular neurine, the hemispherical or intellectual ganglion, is composed of three layers, and enfolds the convolutions. Although it is insensible in itself, and as regards its self-feeling or consciousness, it is believed to be the source of all power. The tubular or medullary neurine is the conductor of force or power. It is the great commissure of the brain uniting the two cerebral lobes and conveying by afferent

and efferent nerves sensation *to* the brain, volition *from* it, or direct impression *to* the unconscious spinal medulla, and reflex action or force *from* the spinal marrow without the recognition of perception. The filamentary or sympathetic connects and associates with all, and may be the chief medium of eccentric sensations and actions. The wondrous quality with which the brain is endowed seems to be proportionate to the extent of convolution and of surface. Even in birds it is seen that this surface is coincident with the degree of their intelligence; and in the porpoise, which nurses its young, there is a high degree of development. In man we see lesions of this ganglion constantly associated with corresponding forms and degrees of mental derangements.

We may glance at the faculty of memory. The most prominent psychical lesion in Porson previous to his dissolution was a sort of paresis of the memory. It was observed that the grey neurine was especially pale and anæmiate.

If blood be effused from its very vascular rete of vessels into the vesicular neurine, even if consciousness and power of motion remain, there is no volition to direct it; this is a condition analogous to somnambulism. But if

the tubular neurine, that is, the central axis, be thus compressed, volition may be even in excess; but as it is not *transmitted*, action does not obey it, and this condition is the analogue of incubus or night-mare. On what the property or force of this neurine depends, the microscope has not yet informed us—whether the undulation or concussion of a nervous fluid, or blood circulation, or a special electric force in its fibres.

We cannot prove this nervous principle, although we know it to exist, any more than the electricity in a jar, or in any inorganic substance, as a stick of amber; it may there remain latent *ad infinitum*, until friction or a discharging rod demonstrates this existence. That there is indeed a close analogy between the nerve force and the electric force is certain. The organic shock of the torpedo may be as fatal as that of the “pile or the jar.” We know that electricity will kill the mind at once with the body, and that it will prevent the coagulation of the blood. To its excess or defect, therefore, we may be able to refer many yet occult psychical phenomena, when science becomes more perfect from experiment and analogical inference.

The brain, then, we may regard as an especial gland

endowed with a quality both to act and to be acted on, to effect a metamorphosis of that which is created to be its stimulus. The study of this intricate question must be tempered with deep humility; but we may be justified in our terms by the views which Vieussens, and Willis, and others have taken of the functions of the neurine.

Now this organism cannot act by itself, for we know that it may be substantially perfect, and yet evince no intellect; we must now endow it, not only with life and a special property, but also with something that may bring this property into action. We cannot define this *soul*. It is sufficient to grant its necessity, and to believe it, as an almost universal faith does believe it, a special inspiration at the creation pervading to this day the organism of man. The species of Aristotle, *οψις, ειδος*, the eidolon or imago of Lucretius, and even the spiritual body of St. Paul, projected from the ponderable body in a visible form, are all, of course, too visionary for this discourse. Without absolutely affirming the soul to be the vital principle, or denying that it does pervade every atom of the body, for the deeds of which it has been made responsible, our discussion must now be limited to that organism which is devoted to the birth of thought,

and which possesses the property of impressibility from or through the medium of a special sense.

The word *idea* was first adopted by Plato. The "Phædo" alludes to "the germ of ideas sown in the mind by the senses," and Kant affirms the senses to be feelers and conductors of knowledge.

This organism of the brain must be regulated by a law ere it can think, just as the law or principle of gravitation or of attraction must be inherent in matter ere that matter can *fall*.

Believing then in the combination of an immortal essence and an organism as the source of intellect, yet we must not forget that it is the organism that *modifies* this thought and *acts* on an impression, or an impulse from a sense, and not a soul. Were we to explain Insanity as a prominent, extreme condition of intellect, on metaphysical or abstract psychical principle, we are at once in a trilemma, as the mere spiritualist must be, who refers the malady "to *moral*, not *cerebral* delinquencies," to "a perverted spiritual principle." But who or what can impress the *immaterial* principle, as they believe it, with disease? or, indeed, can such a perversion be probable—nay, possible? Can even an evil thought

originate with an immaterial thing without the suggestion of a divine or demoniac power? It *may be so*—we believe not. We regard the impression of a sense as the spring of every thought—every emotion, good and evil. The evil thought is then excited by the sense. A spirit has no impulse to do wrong, or to suggest it; the thought, excited thus, stimulates the will through its special organism; and here the conscience imparts the *knowledge* of right and wrong. If these whisperings of the soul or conscience are obeyed we term it the triumph of virtue; if they are spurned by the more potent force of the stimulus of organism, as by the debasing passions, it is termed the victory of sin. At some point of the sensory or of the vesicular ganglion, is the psychosomatic axis, the soul there may specially *meet* the body, and perhaps on this point rests the sublime and deeply awful question—the analysis of sin. We believe the immortal soul to be stainless, even on its incorporation, and that, at this point, it may endure a conflict with the organism fraught with evil and impulsive passion. *If* thought really originate *in* the soul, *here*, if evil arise, must that thought be polluted by a sort of endosmose from the passion fraught and tainted organism.

For the healthy elaboration of thought, it is essential that healthy scarlet blood should circulate at the point of contact of a sense and its ganglion, probably at the loop of an artery and vein or a blood channel, where, from an impression which was made on the sensorium, the thought becomes a law. If there be anæmia, or congestion, or compression, there is no transmission more than if there be laceration of the central axis of a tube, the sense is barren, and no thought is born, just as the seed of a beautiful flower, sown in healthy soil, springs into a bright and joyous blossom, but if on poisoned or barren soil, a weed or an abortion. The vesicular neurine, although it is comparatively deficient in fat and albumen, is profusely supplied with blood, not so much for its organic nutrition as for the perfection of its function, just as an emulgent gland is supplied for its elaborate eliminations.

In this supply, however, *does* consist both development and the relative proportion of elements in the neurine. Thus, in the adolescent and the adult eras of life, when the circulation is energetic, albumen and phosphorus abound; whereas in the infant there is an excess of aqueous globules, and in the idiot, of water or of osmazome.

The very interesting results of the tuition of the cretin offer at once the most impressive analogies. The primary endeavour of the amiable possessor of Abendsberg, that beautiful and luxuriant plateau beneath the overtowering Alps, is to minister to the systemic health of the cretin. As the vital energy of these beings is increased, so also is the force of the intellectual organism; and not till then can be instilled into the brain the influence of precept and example; not till then are displayed the workings and expressions of that thought, which, in its course, so closely assimilates the progress of the earliest infantile development. There can be no doubt that the energy and force of the neurine is dependent on the improvement of the crasis of the blood, and the consequent unfolding of the true intellectual tissue, the arrest of serous exudation, and the deposition of more highly organised products, both in the nucleated vesicles and the semifluid pith of the tubes.

If the blood be depraved, or the medulla diseased, the nervous fluid is so too; the ganglion may be struck through a sense, and even an impression may be made; but as there is no sensation or perception, thought is in abeyance, like the germ in a preserved seed. Even

as, if there were mere arterial blood in the liver, or that organ were scirrhus, bile would not be secreted.

This scarlet blood is most healthy directly after the process of digestion. During that process the intellect is dull and heavy; but when the new blood is poured through the thoracic duct into the subclavian, both the feelings and ideas are lively and happy, and the heart, that

“Bosom’s lord, sits lightly on its throne.”

The oxygen and iron in the red blood are then, probably, untainted, as by the impregnation of carbonic acid in the capillaries.

We cannot lay too much stress on this blood pathology.

When dark blood is rolling in the brain the intellectual manifestations are of quite an opposite nature. Thought is a *disease*, and displays itself in the spectres of delirium and phantasy, and other forms of intellectual shadows. This *congestive* state may be the sequela of many exciting causes, not only from intense or protracted thought, but by the medium of malaria, or the gases or alcoholic excesses, or vegetable juices. It is all *intoxication*, the exact meaning of which term is, indeed, an *instilling of poison into the blood*.

As from the unhealthy blood there results a morbid reaction of a gland, so may disorder of intellect result from the *unhealth* of the blood circulating in the neurine, either immediately, or from taint or defect of its secretion.

In likening the sense of vision or sight, one of the letters of the alphabet of intellect, to thought, we may take light, the element as the analogue of the soul, the light of the mind. The impressions of Berkeley and Hume must have had a material source ere they touched the brain and *stamped* an idea. As the globe of the eye must be before sight can be, so the brain must be before there is intellect. Light is the source of impression or sight on the retina, soul is the source of impressibility of intellect in the brain; yet we know light exists without a globe, so soul may exist without a brain to be acted on; and this without a pythagorean transmigration. The *subjective* origin of idea is, we believe, fallacy; and, therefore, we adopt Locke and reject Kant. Fichte's qualification of the Kantian notion is more correct; for although he writes of *subjective* conceptions in his *ego* or *me*, he affirms the source of those conceptions to be in the non-ego, the out of me.

The source of thought, then, is an *object* of sense. A ray of light, an undulation of sound, an odour, a sapid body, or a touch impinge on a special organ, the retina, the labyrinth, the schneiderian membrane, the lingual, or cutaneous papillæ, and so pass to the sensory ganglia at the base of the brain; and here, probably, in this sensorium commune, may be the seat of that high principle on which the whole system of Des Cartes was built—*consciousness*—and of *volition*, the first *force* of thought.

This sensory impression of the yet almost thoughtless consciousness, and this force of volition, the brute possesses in common with man, although in an infinitely less degree; and here its progress is stopped.

Directly an impression, or presentation as it has been termed, is made on the ganglion, blood, we believe, is sent in increased current to this point, and the condition of the medullary molecules is instantly altered; the secretion of the nervous fluid may probably be increased, and perception is still in progress through the tubes of the neurine towards the periphery or the intellectual ganglion.

Whatever point may be the *sanctum* of these com-

bined elements, it is probable that the track of the sensory ganglion may minister mainly to the incitement of the emotions, and to the wilder and more impulsive forces of the intellect and the passions, ere the more noble and controlling force of the intellectual ganglion has begun to judge and act on a sensation transmitted to it from an organ of sense. It is here, too, that we may look for the source of the neuroses, especially those so prominent in the mimosæ of the human family, and of those irresistible impulses, weeping and laughter, so illustrative of a combined voluntary and involuntary force in human nature, and perhaps the uncontrollable impulse of blushing. The chimpanzee may secrete tears, and the hyæna may laugh; but the one does not weep from emotion, nor the other wait for a pun ere he sends forth his cachinnations; nor does a blush ever mantle on the cheek of the cretin.

In this ganglion also may arise many of the reflex phenomena, and of the potent forces of the will in carrying out the conception, if sensation be arrested in its course to the great ganglion, where it may be modelled and perfected, where an emotional force might find a safety valve, and where the perilous and often fatal

sequelæ of suppressed impulses may be obviated or softened down.

The *ultimate* mechanism of this ganglion may never be demonstrated; we may never solve the enigma whether thought itself may be more dependent on blood, as Treviranus, Vieussens, Silvius, and Willis have hinted, or on nervous fluid, as its pabulum; but it seems to be the track from the sensorium to the peripheral surface which we must especially regard in our researches into the nature of thought. Were the soul immaterial, could it be sensible of this material impression before or without touching the brain? and what is the use of a sense and a cerebral organism if the soul could impart to us our thoughts without it?

On the sensorium therefore the objective merges in the subjective, and the ideation or image is here formed: "the object of thought" of Reid, "the object of understanding" of Locke, "the copy of sensation" of Mill. This ideation, however, may here lie latent or quiescent for ever, the principles being in complete abeyance.

And there may be many occult causes of this arrest of transmission through the tubes. It may be non-vibration of fibre or want of undulation in the fluid, or a vari-

case state of the tube, or coagulation, or unhealth of the fluid, or even partial laceration of fibres, so as to constitute a barren vesicle, which lesion has indeed been demonstrated in the tube. If this proposition be correct we may hence, as we have hinted, trace the phenomena of somnambulism, and catalepsy, and incubus, according as fibres or fasciculi of the afferent or nerve of sensation, or of the efferent or nerve of reflex action or volition, be in a state of integrity or not.

The organism of an infant being impressible, is of course, directly on its birth, *predisposed* to thought; but it is in reality *thoughtless* until a sensory track has been opened. Its brain indeed is as effete regarding intellect as the filamentary cords of the ascaris, or a mere microscopic globule of neurine. Suckling is an instinctive or reflex action. The infant cries at its birth, the effect of sensation of cold, not conscious perception. It has not thought of the *reason* of its crying, nor does it *will* to cry. But soon, on a slight sensation of want, the *memory* of its mother's bosom steals through its little brain, and it conceives or revives a still subjective *idea* of the mode of its gratification—it is *conscious*—and thus springs the first thought, thus opens the dawn of intellect.

The impression has now reached the intellectual ganglion, the idea has resulted, and the force of the ganglion is now incited to work out the phenomena of intellect which is an expansion or combination of thoughts, as a word is a combination of letters, and a sentence that of words.

Thus, to use a vulgar simile, the sensory ganglion has transmitted its rough materials to the studio of the hemispherical ganglion, and its duty now is to work it, and return it as a finished thing to the market. Its two principles—the concentric consciousness and the eccentric volition, the feeler and the messenger of the brain, constantly being in action together, the one in the ascending or afferent, the other in the descending or efferent fibres.

We cannot, as we have said, prove the pabulum of a thought, but we may believe that as blood ceases to be blood at the loop of a gland artery, it is at the loop of the tube that an idea may cease to be a simple image and becomes a thought. It is most probable that there is some still occult relation between the vesicle and the loop, although they never inosculate. The intricate circumvolutions of the vesicle by the tube, the denudation

of its neurilema at these points of approximation indicate some deep and important design. It is the duty of humility however to curb its imagination here, and to work out the physiology with the utmost care ere it presume on more than a glance or a conjecture. It is, we confess, fanciful to imagine that even a remote analogy exists between a vesicle and an ovum. Yet the vesicle is beautifully constituted of an albuminous envelope, a nucleus, and a nucleolus, like the white, the yolk, and the cicatricula of an egg. Almost embracing these vesicles are the fibrous and gelatinous tubes, their central axes, before encased by the neurilema and isolated from injury, now lying almost in *naked* contact with the vesicles. We merely glance at this beautiful anatomy, rather than follow up the interesting speculations which must float before the mind's eye of the physiologist, as to any impregnation or development by endosmosis of this nucleated vesicle.

To affirm also that the ganglion *secreted* a thought at this loop would be of course too mechanical, and to express a belief that this was the point of the soul's contact, too speculative: even to discuss whether the blood, or the neurine fluid, or the cell, or the fibre played the

most important part in the birth of a thought, would be premature and as yet mere conjecture. The almost simultaneous celerity, however, with which an impression is perceived and acted on through consciousness and the will, seems to imply that as the sensory and motory fasciculi of a nerve, so the relative fibres of the neurine may be in apposition, inducing, perhaps, by their sympathetic or opposing forces many of the pleasures and the pains of life. Even a consciousness of failure in the force of volition may impart a sense of disappointment to the thought, and pain would be the result.

The *balance* between will and power may indeed be termed a grand source of earthly happiness, especially if man regards life not as a probation but an end, and fails to convert even pain into a blessing by his resignation.

To excite thought into a faculty, however, we must have more than a mere impression or a word; the perception of the objective being complete, a combination of ideas is formed, and they expand into a proposition or a sentence, and thus association of idea becomes the basis of reason or intellect.

If the nucleated cell may be termed the gland or source of a thought, the association of thoughts may be

referred to the anastomoses of the caudæ, which seem almost as commissures to some vesicles. Thus ideas *may be* blended.

Words may, of course, be employed instead of a sense or ideas, and they may be heard or may be *felt* on the leaves of the tangible typography, by the blind. Thus thought teaches us the principles of language, the thoughts of others; and for the analysis of its laws the science of logic has been instituted. In what we have written to this point we have coincided rather with Reid than Abercrombie, who in his elegant essay so timidly avoids the subject of organism, even dreading the term function or faculty as too material. He suggests the term "mental operation," as if that meant any thing *but* a function. Coleridge, because he repelled the notion that *life* was the result of organism, could not believe intellect to be so when soul and life had endowed it for that high function. But Coleridge was a slave to his *ego*. Brown preferred the term "suggestion" to that of "mental faculty." Be it so—let them all have their tether. *We* must still believe that intellect is a series of thoughts worked out by the influence of the Creator's essence—the soul—either in, or with, or by an organ specially

created. The metaphysical querist may still work his arguments threadbare within a circle, and, without so much as a glance at our wondrous organism, may continue, probably, to conclude his fine spun sophisms with this point blank and triumphant interrogatory—"what is mind?"

We offer him an answer; we are not confident of his acceptance.

We believe then that mind or intellect cannot be an abstraction; cannot be the unity of Brown, or the duality of Wigan and the Alexandrian sophists, or the mere irritability and sensibility of Darwin, which Hunter wisely confined to muscle and nerve, but a *plurality*, and for this reason.

We have a medullary organism composed of myriads of fibres, containing thousands of millions in the square inch, interlacing each other in apparently inextricable confusion, infinitely divisible indeed, as Empedocles even suggested long ago, and differing, *inter se*, as the lens displays, in every variety of tissue. We may indeed discern, even with the naked eye, that the optic differs from other nerves in its texture; the sensory or concentric tract is evidently smoother than the eccentric or motory. We

observe too most clearly the contrasted arrangement of the three great medullary tissues of the body—vesicular, tubular, and filamentary; and who will doubt that these tissues possess varied properties, though beyond the range of demonstration? So as there is an infinity of matter, why not an infinity of its manifestations,—the modes of intellect?

Each of these fibres, or vesicles, or monads, or cells, may be the seat of an idea or a thought, and these may be separate, or complicated, or multiplied into an infinity of representations, like the changes of the bell-peal, almost *ad infinitum*. The deeper the convolutions and the more convex the peripheral ganglion, the higher, *cæteris paribus*, will be the force of intellect.

Although the brain of some brutes may exceed in proportion to the body that of man, yet if we compare the several parts, the brain of man far exceeds others in comparison to the size of its medulla oblongata, and more still in the extent of its convolutions, by which its intellectual organism is so immensely extended and increased. The neurine fibres may be traced in radii from a centre or axis to the periphery, and here the phrenologist has already projected his chart of intellect, and has

decided that the *immoral*, the moral, and the intellectual qualities of mind especially refer to the occipital, the parietal, and the frontal regions of the skull.

It has been observed that on the assumption that the brain may expand the bones of the cranium, the periphery of this grey ganglion has indicated a sort of growth or development in some deep thinkers, as exalted inner-
vation will swell the gastrocnemii of the opera dancer. Analogy, indeed, might at once teach us this, that development may be increased by exercise. Of this assumption an illustration occurred in the cranium of William Godwin, which almost seemed to have changed its capacity and shape, its animal and intellectual indications, coincident with the nature of his study and his thought.

Now we perceive that two things, the constituent parts of which are *seemingly* dissimilar, may be composed of the self-same elements in different proportions, a mere homœopathic difference in quality, distribution, or arrangement; and we may readily believe that minute and occult molecular changes in the neurine may occur as cause or sequela in the excitement of an idea or eidolon, that is, the image that has been impressed on that point: for that this image is *persistent* the memory

of former sensations in an amputated limb fully proves ; the limb is gone but the patient *feels* it. At the point of the alburnum the dew of heaven, the sap, will change to poison in the laurel ; the blood of the porta to bile within a lobule of the liver. So may atoms of nervous fluid either become an idea, or induce a minute change in a fibre to that effect. The quality of the nervous fluid or semi-fluid is of high importance. We see that its condition is altered by death, and the inspiration or coagulation which then ensues may be a pathological state during life ; the result even of a depraved condition of the blood from which it is secreted, or even of heat, as we know a high degree of temperature will coagulate the albumen of the egg, and alcohol will break up the pulp of the central axis into globules resembling oil. This humoral pathology of the neurine may therefore possess high importance in our endeavour to analyze the source of a single thought, or of the combined intellect.

Thoughts on these ideas may be homogeneous or rational, or they may become so intermingled, perhaps by endosmose, as to be the source of anomalies or derangements. If this complication of thought be slight

or transient, visions and fantasy merely may spring up ; if more intense, persistent, or permanent or fixed, then we shall have confirmed insanity. Thus, the ultimate atoms of the neurine may be the handmaids or the slaves of intellect, according to the integrity or disorder of this important tract, in which this proximate combination of soul and organism may constitute the *nidus* of a thought.

It may perchance be the truth that in the degree of symmetry or *harmonics* of these fibres, the temperament, as equanimity, good nature, and their contrasts, may be determined ; that the integral texture of these tissues may constitute quality, or strength, or force of mind, by which dominion is gained over instinct and passion, and a second nature wrought by education or by habit. And when we contemplate the infinity of these molecular myriads, we cannot wonder at the illimitable varieties and power of taste and feeling, of good and evil thought, which mark the race of mankind. In this harmony—strength and multiformity of organism—might have consisted the wondrous powers of that intellectual giant James Crichton, whom Apollo, and the Muses, and the Graces, seem to have adorned for the admiration and wonder of the world.

And we believe that here the *plurality* of intellectual organism is proved by the very synchronism of deep and complicated thoughts. If the intellect were a unity how could Julius Cæsar have compassed the subjects of five letters at once, dictating four to his amanuenses and writing the fifth with his own pen? or how could Phillidor at once fight and conquer in three chess battles with three antagonists? or how could Walter Scott dictate a history to young Hogg while his own pen was tracing the labyrinths of a romance? There must not only be a firm and enduring texture of the neurine to *accomplish*, as a rigid muscle will labour without fatigue, but a plurality of organism to *arrange and work* so long on an idea or a thought. This plurality of intellect is so clear that the spiritual sophist moves at once our wonder and regret. If mind were a unity, and worked without tissue, the whole series of its manifestations must live and die *together*, but the persistence of one and the loss or abeyance of another of its faculties is at once a confutation of the fallacy.

Herein also consists the secret of the greenness or freshness of senile intellect, but these are but exceptions to a rule of decadence. Age is a mere relative term,

and ought not to be employed by us *quoad* time, but *quoad* condition. A thousand disturbing causes may confer apathy or imbecility on the opening intellect of youth; and repose, or management, or habits of devotion may render senile thought and intellect perennial and energetic to the very close of life.

When we contemplate the vigour of senile intellect and thought, as in the instance of Wellington, we believe the organism to have been firm, endowed with highly organised *elements*, and well preserved and disciplined. Yet myriads of pages have been written to *prove from this* and other instances the immortality of the soul, as if it required or admitted of a causation so limited to exceptions, and which revelation alone *can prove*.

But if we observe, there is ever, even in this senile juvenescence of thought, a sort of acme or meridian of intellect. If soul constituted the independent mind, why should it decline and fade from this point; why not culminate even to the very verge of earthly existence? My Lord Brougham, to prove the immateriality of mind, adduces its rapid improvement from thirty to fifty, while the body was declining; but if matter was so immaterial to intellect why should mind *halt at all*? why not re-

main unclouded and unimpaired until organism is decomposing—until death? If the soul carry the mind, or if it *be* the mind, and carry its faculties into eternity, these should at least not dwindle, but progress toward perfection the nearer they approach a higher state of existence.

It is probable that extreme rapidity of force in these neurine fibres may occasion that confusion of thought which constitutes the state of vertigo, (so analogous to the phenomena of stammering in regard to volition,) or the permanent disorder of idiocy—a colourless or thoughtless mind—as we see the intermingling of the colours of the prism produce white by the rapidity of the whirling machine.

One source of the low intellect of the savage may perhaps depend on the want of subjection and culture of the harmonies of these molecules: there is little speech, and the powers of numeration are extremely limited in many varieties.

And it may be on the tuition and adjustment of these molecules that lofty thought is engendered, and great actions accomplished, where volition transmits the wish of this thought to the acting forces of the organism;

hence arise the giant revolutions in art, science, and the polity of nations. It is by concentration of thought on one point, as Newton was wont to do, that science soars so high, and yet seems from this very fixation to be so long passive. A point of principle may long remain in *embryo*, until, in a moment when the organism of the intellect is brought up to one harmonious pitch, an idea, a scheme, or an invention, bursts at once on the intellect and becomes an established law.

Thought may prove, too, a cruel tyrant, even in this irresistibility. It is probable that when there is a rush of blood or hyperæmia in the vessels of the neurine, molecular oscillation may ensue, and the consequent thought rush on in a desperate wildness and celerity. Such an erethysm at once banishes sleep—it is

“The curse of the burning brain,
And the curse of the sleepless eye.”

Herein perhaps we may discover the rationale of the anodyne of monotony, for even in this turmoil and whirlwind of thought, the violent action of the neurine fibre seems to be controlled, and a state of quiescence or even of harmonious movement induced.

The influence of the rookery and the waterfall, and the noise of the rolling carriage wheel, may induce sleep, just as well as the passes of the hypnologist may by adjustment and repose of the disquieted fibres of the neurine.

This is, we believe, the secret too, of electrobiology, that is allowed to become an imposture merely from the apathy or scepticism of the profession. We might at once, by a noble concession of its truth, snatch from the hands of unblushing empiricism a potent psychical remedy. It is a folly to doubt the force of such impressions, even on our own senses. While attending a young lady, a notorious mesmeriser was introduced to the physician, during one of his visits, to aid him, as it was delicately hinted, in the treatment if he wished it. While he was reasoning with the enlightened family, he saw the Professor was playing a deep game with him. In profound silence and abstraction he fixed on him his hawk's eye, (putting himself as he would say, *en rapport*), and the physician confessed that a sense of heat and something like vertigo caused him no slight fear that he might even be practically floored by his antagonist.

If we have made this intricate subject anywise more

clear we may presume on this proposition. The soul may be the vital principle, as it is the immortal essence, and produce intellect, not *immediately* by its own unity, but *mediately* by the varied and minute organism of the encephalon, through which it imparts its special influence ; for being itself pure and immortal, if it were *absolute* over organism, disease and death were impossible. But there are laws of matter instituted at the creation, which even the soul cannot abrogate or alter, with all its wondrous influence. And if it were mind itself, why not inspire the child or man at once, without waiting for development or culture,—why is the savage still sunk in the abyss of unintellectuality,—and why do we witness such variety of faculties and passions, such contrasts of action in the same being, of intellectual and vital phenomena, which make man almost in a breath a hero and a coward, a philosopher and an idiot, a philanthropist and a fiend? Although we may never demonstrate this influence of soul on organism, and those results which it yet cannot compass by itself, yet we daily observe the effect of its thought so elaborated. This is of course through the medium of minute organism. So health is ever thus at the mercy of a thought, although

its dominion may be partial or transient: yet, if it be protracted or persistent, it may, as it were, react on tissue and induce confirmed and permanent disease of structure.

PSYCHONOMIA.

THOUGHT, then, is inevitable in a conscious being, and we see the high importance of its being led in a right direction from its budding, else it may be an idle waste, or by its continuous sympathies, bring out in high relief the traits of an evil life.

We may now conclude that the workings of thought in its earthly pilgrimage, are the result of a combination of neurine, *specially endowed* with the blood, the varieties of intellectual manifestations being intimately associated with the conditions of both.

We may conclude that when an *impression* is made by or from a sense, and is perceived, the principle of consciousness at once ensues: this may be termed the *direct* or concentric principle of the intellect. When this consciousness is acted on by thought, desire or will arises, and this is transmitted by the thought to some continuous or remote spot, and *action* is the result: this may be termed the *reflex* or eccentric principle of the intellect—volition.

From the active display of thought two important classes of manifestations now result; the emotional or *Passion*; and the intellectual, or *Faculty*; which comprehend the whole psychical and ethical range of the intellect.

Phrenology has not yet so exalted her science as to make this subject a demonstration. It may perchance be discovered that the medullary, the soft vesicular tissue of the ganglia, may receive the impression, and constitute the passive organism of a sensation, or an emotion, and here they may rest unproductive, and in abeyance for ever; and that when the perception excites a faculty or a passion, thought, the active thought, opens on the working of a faculty, or the impulsive play of a passion, in the course of the fibrous or tubular tissue of the neurine, as light is received on the passive organism of the globe, and transmitted onwards through the optic nerve. Dr. Marshall Hall is far nearer the mark regarding the *seat* of emotion and appetite than the elder pathologists, who referred them to the ganglia of the sympathetic. It is true, effects are seen and felt in organs which *they* influence, but an emotion is a *pathetic* thought, and thought is an intellectual force, and therefore must be referred to the cerebrum.

Between the passions and the faculties there is a constant mutual reaction on organism, and we shall soon see how important a part the circulation of the blood will play.

To illustrate this reciprocity we may now trace the course of a thought, the subject of which is potent enough to cause a *sensible* or evident effect. We may term it *emotion*, and we shall see how instantly thought reacts on tissue, and the forces of that central organ, the heart, are brought into play. Even the sensations which thought thus induces are often those which, if more potent or persistent, would be the very symptoms or indications of disorder.

What is a chill? a rigor, the shivering fit of an ague; its cause, cardiac congestion. What is a throb? that exalted effect of innervation, which, if long protracted, might induce cardiac hypertrophy. What is a flush? that hyperæmal condition, which, if not quickly subsiding, may terminate in inflammation. As constant thought will disorganize cerebral tissue, so cerebral disease may gradually derange or instantly annihilate the manifestation of mind.

Wardrop enumerates twenty different disorders of

brain and heart that result from this mutual reaction. The influence may be special or common. If thought be *concentrated* on one organ, it may there at once induce a special disorder; or, if it affect the heart itself, primarily, it may soon derange the condition of the whole vascular system. It is true, the innervation of the heart is chiefly ganglionic; but its intimate association with the brain, and the power of volition over reflex as well as direct innervation, is proved by its *obedience*, as in the cases of Coma, Fontana, Colonel Townsend, Wilhelm Krause of Jena, and his pupil Count Von Eberstein.

The emotions of the thought are the sources of the psychical pleasures and pains of human life; and although their evidences may be modified by varied states of the organs in which lies their proximate cause, yet their source of excitement is in the senses alone. They are thus the offspring of thought out of feeling; and as desire or will is checked, or resisted, or gratified, so shall we breathe in purgatory or paradise—so shall we look on the dark side or the bright side of existence. Well for us if the dark side ended there! The victory or slavery of the passions, in respect of man, will in the end decide to what haven our passport is made out.

Παθος, therefore, has a double meaning—morbus, and affectus.

The idiot is, of course, as he is without thought, without passion; for the term implies the reflex action of thought on a sense or on itself. Instinctive appetite may therefore be the only passion of a mindless being, the only excitements—hunger and lust; but they are, in all, of great potency; for without indulgence one must kill, the other might madden.

Passion is the child of a conflict, a thing of feeling and of acting, sensation and volition. As the faculty is the peace, so the passion is the war of thought.

An emotion is either sthenic or asthenic; the first is a stimulant, and *excites* the thought and the organism; the other is sedative and *depresses* it. It is then the *arrangement* or *derangement* of thought, which constitutes the light and shadow of emotion: it is the index of the *real* man, for that a *spirit* should think evil without a motive or a cause, were a sophism and a paradox.

The organism of the *faculty*, that force which modifies our thoughts, is born with us ; its germ is therefore antenatal. We possess often hereditary intellect as we have hereditary temperament or diathesis,—peculiar constitution of mind as of body. This intellectual endowment is conventionally termed *capacity*, or understanding, its degrees depending on the nervous and vascular energy of the ganglia.

We take thought, then, as fixed on a *subject* for its contemplation. The objective having previously passed through the sense to its ganglion, and there become subjective, or *ideation*, is worked into a *cluster* of ideas, which, when expressed in words, become a *sentence*.

And here the force of *attention*, now elicited, may be heightened into intense *concentration* of thoughts ; and we may illustrate this *reverie* by two prominent anecdotes :—A young artist had, while at Rome, been gazing on the “Descent from the Cross” in a state of rapture, and heeded not at first the verger’s warning that it was time to depart. On a sudden he exclaimed, “I only

wait till those holy men have lowered the body from the cross." Roubiliac, while he was engaged on the Nightingale monument in Westminster Abbey, stood some time in speechless gaze on that of Sir Francis Vere. When the mason Gayface accosted him, he put him back and whispered, "Hush! he will speak anon."

When the subject of thought is *present*, or *first impression*, it is presented, at once, by inherent consciousness; when the subject of thought is an *eidolon* of a former impression, it is *memory* which presents it. This may be an almost passive or quiescent revival of ideas, *remembrance*—a faculty common to the infant and the brute, (for "beasts and babies remember, man alone recollects,") or *recognition*, the slight *effort* of thought to revive an image, or recollection, or recalling the full and active force of the faculty. We may prove the uniformity of this faculty by its partial abeyance:—On cerebral lesion we often observe the memory at one moment *French*, at another *English*. When thought suggests synchronously or successively two or more ideas, we term it *association*. When the thought *wanders* from the objective to the subjective, or recombines a group of scattered *eidola*—memory in successive com-

binations, we term it *imagination*. When the thought carefully compares and combines ideas, reflects on experience, and analyzes the subject, and forms conclusions or deductions which harmonize with the evidence of truth, we term it judgment. It is *the* faculty, *par excellence*, the reason, which especially distinguishes man, and enables him to resist and overcome the incitements of instinct. It is this which distinguishes the learned in the law and medicine, the pillars of the Church, the victor of the field, and the illustrious in science and in art; it is the great link, indeed, in the chain of reason, which pre-eminently characterizes the human race.

Judgment, as we have hinted, is dependent on the pure quality of neurine, and on the due supply of the pure blood of life. When this is extreme, it is displayed in strength of mind and a power of *fixing* the attention, which was once termed a faculty. This power is termed *abstraction*, or *concentration*,—the reverie of intellect in contrast with the loosening or separating tendency of thought in phantasy, or the vacant reverie of idiocy. Imagination and judgment are therefore the contrasted distribution or modelling of the subjective, which direct perception or memory has lighted up in the intellectual organism.

Intellect, therefore, may be thus composed—

Of three prominent *qualities* or *properties* of neurine, inherent and closely allied, manifested often almost without an apparent interval.

Impressibility—(Reception).—The property of *receiving* and *retaining* sensorial impression.

Sensibility—(Sensation).—The property of *feeling* sensorial impression.

Perceptibility—(Intelligence, Perception).—The property of understanding sensorial impression.

This perception or intelligence seems to be the mere dawn or gleam of thought, which is now progressively developed, with the two *principles* of the intellect—

Consciousness,

Volition,

The concentric principle.

The eccentric principle.

The *feeling* of a thought.

The *transmission* of a
thought.

The first, *intuitive*, make us feel that we must *be*.

The second, *impulsive*, makes us feel that we must *do*.

This is displayed variously in desire, will, wish, intention, purpose, aim, trial, endeavour.

In the expansion of thought, as it transfers onwards this consciousness, consist the faculties constituting, as it were, an active trinity of the intellect:—

MEMORY.

The Remembering Faculty.

The revival of ideas or eidola of sensorial impression depending on re-excitability of neurine.

Passive.—Memory—the revival of *recent* impression.

[Here the faculty seems to be checked in the brute. It is the only intellectual force superadded to its instinct, to which it bears no resemblance, but still excites volition.]

Remembrance—the revival of *long ago* impression.

Active.—Reminiscence—*recal* of an idea.

Recognition—comparing, *identifying* of an idea.

Recollection—Reconstruction of a train of ideas.

The remodelling of many relative eidola *constitutes association.*

The organisms of impression and memory are probably in juxtaposition.

IMAGINATION.

The Conceiving Faculty.

The fanciful combination of ideas, depending on quantity or diffusive arrangement of neurine, displayed in *conception*, recreation, or diversion of thought with ideation.

Unreason.—Dilemma, sophistry, false prophecy, trope, hyperbole, castle-building, wool-gathering.

Art and Literature.—Poesy, romance, fiction, figure, allegory, metaphor, fancy.

Pathology.—Fantasy, dream, reverie, hallucination, delirium, mania.

JUDGMENT.

The Reasoning Faculty.

The just or logical combination of ideas depending on quality or harmonious arrangement of neurine.

Logic, mathematics, analysis, synthesis, comparison, induction, problem, syllogism or ratiocination, truth.

The action of the faculty is on intellectual pabulum, or food, direct from the senses, or reflex from the eidolon, or idea.

If this be true it confirms the belief of Aristotle, that there is no such thing as pure intellection dissociated from organism.

The senses, then, are the fountain of ideas, and the faculties the forces which mould ideas into shape. The key, however, which unlocks them all is the faculty of memory, and it is to the power and energy of memory that lofty and comprehensive intellect is mainly indebted. The faculty of imagination was resplendent, it is true, in Shakspeare and in Scott; but this was deeply indebted to their wondrous force of memory, by which they brought to the mart of their thought the costliest rough materials that could be selected from the treasury of history, and with which the senses had endowed the brain.

In science, also, memory is the paramount force; for if the constructive or mathematical thought that had been conceived was lost ere it could be employed or combined, or a succession of thoughts were too rapid for arrangement, invention, and discovery, the offspring of true and logical deduction would not be developed, and judgment would be a blank in the tablets of the intellect.

The two pre-eminent illustrations of degrees of this faculty, Porson and Coleridge, would be perfect psychical mysteries to us were we not to believe that varieties in

the texture, *arrangement* and *derangement*, of the tissue of the neurine existed in these deep scholars. Porson's memory was retentive, Coleridge's defective to an extreme; and we should find ourselves in a dilemma if we desired to prove or affirm that alcohol imparted a mnemonic force to one pure spirit, or morphia clouded the reminiscent faculty in the immaterial mind of the other.

The intellect of Porson was concentrative; that of Coleridge, eccentricative; and this unhappy wight so far resembled the angel of holy writ, who covered the light with his wings. Coleridge, therefore, was an auto-maniac in his subjectivity. All was within himself—his ego; and his infancy would prognosticate this, for he confesses he never thought as a child: he was “driven from life in motion to life in thought. The child was the father of the man.”

We have elsewhere recorded our own notes of abeyance of memory from injury to the brain; and in most of these cases, sensations, more or less acute, were *perceived in the brain* before the perfect rearrangement of thought.

PSYCHOPATHEIA :

THE LIGHT AND SHADOW OF THOUGHT IN EMOTIONAL LIFE.

EVERY thought, every sentiment, must be, in infinite degrees, either pleasurable or painful; yet so fine a line may divide the sensations that pleasure may become pain in an instant. The smile of the tickled child will change to the convulsive sob; so the delicate *emotion* of young affection may end in the even fatal *passion* of love.

Fear and hope are especially associated often in the same sentiment. Milton has written—

“So farewell hope, and with it farewell fear.”

This is a psychical truth. When hope flies, fear constantly follows in her wake; and thought, no longer in dilemma between the two, assumes and wills the resolution of despair. There are tears of joy as well as sorrow. The sources of these emotions are antipodean;

but the proximate cause of the flow from the lachrymal gland is the same, the relief of congestion from a psychical conflict.

Emotion is individual or centric; passion, relative or eccentric.

There must be a mingling of good and evil thought in the human intellect, which, indeed, constitutes emotion. To analyze these has been the aim of psychologists, from Pythagoras to Charles Fourier. The ancients, from Plato and St. Augustin to Bacon, adopted the *spiritual* hypothesis. We now regard the question physiologically, and may refer to the organism of the sensory ganglion as the pivot on which the workings of emotional thought revolve.

The essentially depressing emotions, sorrow, grief, anguish, are often tending to soften the heart if devotion temper them. Melancholy, chagrin, despair, remorse, are passions of a darker hue, and prove a canker-worm to the heart; but they are all retrospective.

It is written, in other words, that anxiety was the first emotion in the bosom of Eve. It is clearly the first that influences the thought of a child directly it begins to have wishes and hopes, and a consciousness that these

hopes may be futile. It is a dread, indeed, of something worse than the present.

Vanity, the pride of woman, is an anxiety to surpass others in attraction ; and the eccentricity of the puritan and the beggar is another and its lightest form. " I see your vanity," said Socrates to Diogenes, " in the holes of your coat and your rags."

Emulation is the anxiety to excel by noble effort ; ambition, to be installed in the seat of honour, no matter how. " Celle-ci est crime, l'autre est vertu."

At the shrine of this ambition man sacrifices all those holy thoughts that might have ensured his celestial passport ; but the pride of success soon wearies ; and even when all earthly grandeur and power *are* attained, the proud and anxious possessor stalks through his painted halls, fumbles his jewels and his crosses, and looks out on his broad lands and frowning forests, and then deplures that his heart is not capacious enough to enjoy them according to the degree of their splendour or their magnitude.

Anxiety is one persistent heartache ; its usual result venous congestion and low nervous erethism. The secretions are diminished or depraved. As the enliven-

ing emotions oxygenate the blood, so the depressing passions accumulate carbon, and hence is introduced the train of neuroses, neuralgia, hysteria, catalepsy, hypochondriasis; for the blood of the neurine is poisoned, and healthy thought or feeling is impossible. Even from the sacred thoughts of sympathy, that beautiful blending of anxiety and pity, the organism is equally disordered, and often finds relief in tears.

From the tainted thoughts of shame (the sensation of self-reproach, combined with the fear of discovery), as well as from the purest emotion of modesty or bashfulness, venous constriction induces suffusion of arterial blood, especially in the capillaries—witness the blush on the cheek.

Envy and jealousy constitute the most debasing forms of anxiety. The desire to reduce others to our own level indicates a mind as narrow as it is degraded. These passions are bad marksmen; they aim at others, but they hit themselves. Such was the fate of Haman. If the thought of jealousy be protracted, it will certainly develop the latent germs of disease, even the malignant forms of cancer and of tubercle.

The debasing passions form one dark family of brood-

ing thought; yet all may be passive, save one, to which all the others too frequently lead. Of envy, hatred, jealousy, anger, the climax is too often revenge, leading, as in the case of the first delinquent, to murder.

Anger, the "brevis furor," the "chemin à la manie," at once excites the whole organism. Our popular term for it is, being *in a passion*.

If unrestrained, the head becomes heated, the veins swell, the eye-balls flash with unwonted fire and *seem* projected; the nostrils expand, and the muscles are excited to unnatural action. If protracted, the liver is gorged, the stomach loaded, and the end may be apoplexy, convulsion, death. Even in the brute we see this cranial hyperæmia at once induced, as in the swelling of the comb and wattles of the cock.

Dr. Pupke records a case of complete aphonia from paralysis of the tongue suddenly induced by a fit of anger.

The combination of anxiety and forethought constitutes dread or fear; its more intense degrees are terror, dismay, horror. In all, thought is brooding over a phantom enemy.

On the first thought of fear, the heart throbs, but soon

becomes feeble, so that the blood is sluggish and the skin becomes pallid or ashy, and the features shrunk; the effort to recover from this is marked by rigor, the shivering of fright, and the cold and clammy sweat. If in intense degree, volition is suspended, and the motive power paralyzed. The secretory vessels partake of this atony. Even the piliferous bulb may secrete a gray hair, of which Scaliger, Boulli, Donatus, and others, inform us. That of Montesquieu became gray in one night from anxious fear for his son: the dark locks of Marie Antoinette were turned to white during her journey from Vincennes to Paris; and we believe it was so with Lebeny, who lately stabbed the Emperor of Austria. Nay, that of a young Sardinian was changed in a few minutes. He was suspended on a rope to rob an eagle's nest, and in defending himself from the birds, had cut the rope half through. The thought must have been intense to have effected so wondrous a change. The secretion of milk will constantly cease in the mamma of the sorrowing mother; the salivary flow will stop under conditions of intense fear, a truth of which the Indian magician often takes advantage in the discovery of a criminal.

We knew a merchant who almost invariably dislodged from his stomach the whole of a hearty breakfast, if he received a letter announcing mishap to his freights or his ventures. Murat was directly in a state of jaundice if he heard ill news from Naples while he was in Prussia.

Thought will sometimes induce a disorder that is dreaded. Rabies, for instance, has resulted from the mere notion of having been bitten.

A sudden and extreme impulse or concussion on a ganglion may, in an instant, induce that intensity of thought which will at once become perilous, and even fatal.

We are aware of the effect of concussion or compression on the neurine; and as we believe even a light thought disturbs the molecules of a ganglion, an intense impression might strain or even lacerate the membranous fibres and tubes of the neurine; so that psychical concussion might induce a cataleptic spasm or paralysis. If this be true, how bright a light would it cast on psycho-phrenology; not only the states of aphonia or of paresis, but if the ganglionic nerves be struck, even death itself might be referred to such a source. Something like this would be the rationale of *shock*, by which both

function and volition may be at once disturbed or annihilated, and even the heart cease to act.

Thought may thus travel through spinal or ganglionic centres, and effect extreme changes even in very remote organism. Thus intense emotion will be the source not only of uterine disorder but of death to the foetus which it enfolds. If the influence be not so potent, disturbance of the organic forces may at once so arrest or derange foetal development as to ensure the production of an idiotic child.

A lady arrived at her home soon after her husband had suddenly died, in consequence of profuse hæmoptysis from a tuberculated lung. An intense and protracted rigor was the first perceptible effect of this shock, and this was followed by a variety of abnormal sensations, especially in the uterine region. I instantly imparted to others my extreme fear that the impulse of thought would be centred on that organ so intimately associated with her deepest sympathies; and the prophecy was true. The child was born a cretin.

A mother was standing by her child when its clothes caught fire, but was so perfectly paralyzed, that the child was *burned to death*, although there was a tub of water within the mother's reach.

Two conscript brothers were fighting side by side, when one was killed; the other, on the instant, became an idiot; and a third brother, on the first interview with the idiot, was instantly struck with fatuity, and the two became permanent inmates in the Bicêtre.

The last sufferer of death for forgery was thus laid prostrate by his sentence, and never rallied. Omichund, on learning the cheat of Lord Clive, became at once an idiot, and died imbecile. A girl was condemned to death by Lord Kenyon, and although the sentence was only *recorded*, she fell lifeless in the dock. Brichteau relates the case of a young officer, who, on the reception of a slight blow, died instantly convulsed: and when Philip V. received the report of the defeat of his army, he sickened and suddenly died.

A few years ago, just previous to the death of Sir Astley Cooper, he was called in to reconcile the difference of opinion between another surgeon and myself regarding the propriety of operating on the scirrhus breast of a lady, who came from the country, not to *consult* me, but to request me to operate on her at once. Her expressions were most cheerful, and she was evidently buoyed up by a confident hope of speedy relief from the opera-

tion. On Sir Astley's announcing, somewhat abruptly, his disapproval of the operation, the lady almost started from her seat, and soon after fainted. From the moment of the return of consciousness, despondency took possession of her thought, and gradually declining, she died in three weeks from the delivery of the verdict.

In these extreme cases, complete *enervation* was the result of the mental blow. But in what does that consist? Probably, not only in extreme disturbance or derangement of the neurine fibres, but in various degrees of straining or even laceration.

The secondary effects on the heart, the lung, and the secretions, are not so prominent, for although every organism is at once disordered, the crisis is too sudden for the display of such results.

The intense degree of grief is all-absorbing; thought broods in silence, and so loth is it to admit an intrusive subject that it is *grated* by the conversation of friends, and even by mere impression of a sense. The being that mourns is at once a recluse; and in retirement, thought nurses its infant sorrow, jealous of all intrusion: this may be the luxury of woe. But another phase of thought may be assumed: melancholy, with its lengthened train

of psychical and organic maladies, which grow by what they feed on. And how often is judgment on this distressing foe allowed to go by default. Sympathy might become the life itself of a sensitive heart, which, without it, must droop and decay. The solitude of the social being is not like that of the mindless savage, that roams and almost feeds as one of the feræ: it is constantly peopled with spectres. Such a life is a blank—its place in the busy world is vacant. This is even the brightest picture. Where irreligion has marked a life, every thought is a *sting*; a fury haunts every waking moment and every agitated dream. Yet even in deep grief and despair, the abstraction of mathematics, by fixing, and in the end convincing the thought, may work a wonder. Of this power we have illustrations in Hoffbauer and others.

The longing thought of home, *maladie du pays*, is a form of melancholy that may be elicited merely by a string of melodious notes, from the pibroch and the alpine pipe. The *Ranz des Vaches*, and other national airs, have been forbidden in the regimental bands during cantonments in foreign climes; in the African slave this longing thought may induce the loathsome malady, *cachexia Africana*.

This is, briefly, the course of emotional thought towards the induction of some of the functional disorders of man's system. The excitement cannot be long permitted without the sequelæ of diseased changes in the organism — hypertrophy in the heart, tubercle in the lung and liver, hyperæmia or ramollissement in the brain. It is clear, therefore, that thought acts on organism, like a poison or a fate.

PSYCHOPROPHYLAXIS—PSYCHOTHERAPEIA.

BUT thought has its bright side both in psychics and in physics. It may constitute a prophylaxis and a remedy, even as we direct or avert a thought to or from a delicate or diseased organism. Thus in allusion to the treatment of Socrates by Charmides: *εοικε δε τα της ψυχής παθη παντα ειναι μετα σωματος.* A sthenic disorder excited by excess of emotion, will frequently subside on the induction of an asthenic condition, and it is often deeply interesting to mark the salutary change resulting from the influence of a devout or philosophic spirit, or from the lighter and more joyous temperaments of thought, even on organic disease. It would seem, indeed, that the principle of Hunter is recognised even in psychology—one thought, even though it be painful, producing benefit by displacing another—just as potent medicine will cure by the establishment of its own action in the system.

Thus, says the Wit to Romeo—

“Tut man, one fire puts out another’s burning,
 One pain is lessened by another’s anguish.
 Take thou some new infection to thine eye,
 And the rank poison of the old will die.”

A passion of a dark and gloomy nature also will subside on the full establishment of one of opposite character.

It is clear, then, as even Aristotle and Thomas Aquinas seem to have believed, that, on the allopathic principle, there is a course of psychological antagonism, yet of close approximation, in these workings of thought. So every psychical bane may have its antidote: the casket of Hygeia, versus the box of Pandora.

We may sketch these contrasts thus:—

Anxiety, vanity, ambition, avarice.	Resignation, wisdom, humility, devotion.
Deep attention.	Mental repose, 'far niente.'
Deep study.	Recreation.
Morbid sensibility.	Tranquillity.
Sympathy.	Stoicism.
False delicacy.	Simplicity.
Poetic frenzy, illusion.	Reason, common sense.
	Sacred or mathematical philosophy.
Fear, apprehension, distrust, suspicion.	Hope, confidence.
Timidity, cowardice.	Courage, boldness, heroism.
Dread, terror, horror.	Self-possession, analysis.
Sorrow, distress, grief, anguish, misery.	Joy, gladness, happiness.
Melancholy.	Cheerfulness.
Chagrin.	Satisfaction, delight.
Regret.	Eumneia, happy memory.
Disappointment.	Contentment.
Shame.	Innocence, modesty.
Remorse.	Good conscience.
Despair.	Religion, bliss.
Anger.	Placidity, self-control.
Envy.	Charity, piety.
Jealousy, blighted passion.	Happy love.
Hatred, disgust.	Affection, admiration.
Misanthropy.	Benevolence.
Revenge.	Forgiveness, self-conquest.

The immediate effects of the depressing passions closely resemble those of the sedative class of medicines, and even of the depletion by hæmorrhage. Digitalis and venesection will induce syncope, and even death, if either be excessive ; so grief and fear will reduce vascular action so low that it may kill. It is therefore clear that they may, in milder degree, become a remedy in the suppression of hæmorrhage, and in those cases of neuralgia that depend on plethora, or increased action, as in inflammatory toothache. So by derangements, or counteraction of thought, even organic disease may be removed, as we have it recorded to be the result of friction with the hand of a hanging criminal, and the toad amulet, and the drinking of warm blood that was gushing from the wound of a dying gladiator.

It is clear that unless we ensure repose, tranquillity, contentment, we shall be constantly foiled in our therapeutic efforts.

Under the anodyne of tranquil thought the *vis medicatrix* will work with greater energy ; assimilation and other processes will assume the integrity of health. To "laugh and grow fat" is become a proverb.

Even in the cure of that heartache which, as Lord

Bacon has written, "has no holidays," reflection on the divine precepts, and the adoption of a holy course, may nip this canker in the bud. I do not mean the harping of the designing bigot on the hopelessness of a sinner's state, by which the penitent may be driven to despair; but the assurance of the saving influence of repentance, and faith in redemption and the promises.

Hope casts a *couleur de rose* on every thought and thing.

"She always smil'd, and in her hand did hold
A holy water sprinkle dipped in dew,
With which she sprinkled favours manifold
On whom she list."

She has been the pet theme of our poets, from Spenser to Campbell.

While life is even ebbing fast, Hope will whisper peace over the couch of death, and render the sting of dissolution painless. The encouragement of hope is therefore a paramount duty in the practice of medicine.

There are few feelings more woful than the sudden extinction of highly excited hope; it is the fall of a Titan from Olympus back to earth. So there is none more delightful than the fulfilment of a longing: the

thought regains its buoyancy, and the diseased organism has already started in its progress towards the goal of health.

For hope is not only *felt* in the heart, but it is synchronously the cause of a vigorous circulation ; while its converse has the effect of inducing direct depression. So soon as the army turns on its inglorious retreat, the energy of the soldier is at once diminished by his brooding thought. The pulse is irritable and languid, the respiration slower and irregular, and the asthenia of disappointment at once sets in. In the hospital of a *defeated* army the healing process of a wound is far more slow and imperfect than in the wards of the conquerors. During the voyage of Lord Anson, when depression chilled the hope of the mariner, scurvy was observed to be intensely aggravated. When thought was elevated and brightened by the hope of discovery, the disease at once began to subside. And why is this? The course of thought, through the medium of the heart's stimulus, carbonizes the blood in the one case and oxygenates *it* in the other—the *extremes* of these conditions, however, being liable to rise or lapse into states of inflammation or of melancholy.

These psychical contrasts have indeed been noticed in the same subject. The thought of the drivelling idiot has, under acute phrenitic fever, become half rational for a time ; that which would, by excess, make another mad, brings out into relief his asthenic or apathetic thought, which again dwindles as the action subsides.

The analogies even of intoxication and delirium at once illustrate this apparent enigma.

Confidence, the combination of imagination and faith, possesses a more decisive influence even than hope. As evil tidings will induce loss of appetite and dyspepsia, so good news will quickly set them right. The sudden entrance of a strange accoucheur will instantly quell the parturient effort ; the favourite doctor will instantly restore it. The tractors of Perkins, the manipulations of Greatrex, the miracles of Hohenlöhe, are all the sequelæ of this impression of confidence—the remedial force of thought. It is true, superstition would point in triumph to these miracles, and exclaim, “behold the wondrous power of faith.” Psychology meets the visionary on his own ground, and at once admits the *fact*. But *how* has faith *worked* the miracle ? On the principle of imparted confidence ; and of this happy influence our note

books teem with illustrations. The psychologist must not fly, like the priest, from the study of secondary causes, or he neglects his sacred duty and dwindles from the physician down to the blinded bigot.

It is on this principle that the agreeable deception has been adopted, especially on the hysteric and the hypochondriac. The blight of feeling from the easterly wind has been at once averted by nailing the vane to the westerly point. And the illusion of monstrous *entozoa* in the intestines has been dispelled by an emetic: something resembling the parasites having been previously and secretly placed in the basin.

At the siege of Breda, in 1625, exhaustion and famine induced an intense and destructive form of scurvy. The Prince of Orange, failing to relieve the desponding garrison, smuggled letters of promise into the citadel, together with a wondrous elixir, announced to be of great price, but intrinsically worthless,—a panacea for their malady. Confidence, the result of this pious fraud, directly raised the drooping thoughts and energies of the soldiers; health was restored, and the mortality at once ceased to decimate the garrison. How emphatically was this illustrated in the brave and confident

governor of Malta, who survived untainted, while all his trembling soldiers, *commanded* to bury the victims of the plague, sank at once beneath the pestilence.

As hope is quiet and prospective, joy, a feeling of far higher intensity, is real and active, and centred in the present moment. It has been the theme of all ages, even of the sacred volume. "A merry heart is the life of the flesh," "Gladness prolongs his days," are very truths of Proverbs and Ecclesiastes. Joy is the minimum of that which in excess becomes ecstasy. Transport, rapture—are words implying that thought has *leapt out of us*. Like other potent remedies, therefore, even joy must be administered with caution. The Spartan mother fell lifeless on the return of her son. The felon has dropped dead on the scaffold on the sudden announcement of a pardon. Such was the electric shock on Chilo, Sophocles, Diagoras, and Leo.

With this buoyancy of thought there is a corresponding elasticity of body—the muscles may be stimulated even to eccentric excess ; impulse is uncontrollable, and we jump for joy. I was some time ago one of a long list of doctors who had been endeavouring in vain to restore the power of speech to a young lady who had

for many months been afflicted with hysterical aphonia. During this course she fell in love with a jewel in the exhibition, and it was promised to her if she would pronounce its name. With extreme effort she gained her prize, but the *strain* directly aggravated the degree of her malady.

The impetuosity of anger, however the nature of thought may differ, may, by exciting the heart and inducing violent counteraction, prove remedial; raising the thought and force from the asthenia of the neuroses. Van Swieten and Haller refer to this mode of relieving paroxysms of gout, and Valerius and Tulpius record restoration of feeling and action in a paralytic limb. The sense of shame may thus relieve internal hyperæmia by exciting a rush of blood to the surface. The excess of this, however, might end in phrenitic fever. When thought is pleurably excited, circulation and innervation are, of course, more healthy: like the effect of exercise—a series of deep sighs, the instinctive resource indeed of all breathing things, will produce, in a few seconds, a magical effect on thought; happiness may be quickly induced by the systemic glow consequent on a deep inspiration.

Even the organic functions dependent on spinal or ganglionic forces, may be instantly excited. Peristaltic action has been regularly induced by the perusal of "The Times" newspaper, and the study of a map.

We know how instantly a thought will stimulate the spermatic and other glands.

If these influences be marked, a thrill of excitement may be often perceived in the course of the splanchnic and other nerves. This *continuous sympathy* is illustrative of the transmission of force along the fibrillæ of the neurine, although it is usually very slight, and indeed imperceptible. The sensation is so closely resembling the thrill of electricity, that some latent fluid is probably set in motion to produce it—a principle that would seem more consistent with the fragile nerve than *vibration* of the neurine.

Throughout its pilgrimage, thought never displays more its light and shadow, in all their blendings and changes, than in the emotion of love. For true love is a *combined* passion, a blending of desire and esteem; so there is a constant conflict between the animal and the intellectual, the one exciting, the other restraining indulgence—the difference between voluptuousness and pure affection.

This is the chivalry of the heart, and love is no longer animal but psychical. To comment on the shadows of erotic passion, to display its protean varieties of thought and action, would require an analysis of half the maladies and sympathies of womanhood.

The light of love is a paradise that illumines every thought and feeling of a woman's heart: the clouds and shadows, anxiety, fear, envy, jealousy, and disappointment, reduce it to despair. A woman's whole life is indeed a history of the affections, the blush so constantly mantling on her cheek is an index at once of her deep sensibility. The heart is the world of woman; it is there her ambition strives for empire; she embarks her whole soul in the traffic of affection; and if shipwrecked, her cure is hopeless, for it is a bankruptcy of the heart. The blighted thought of one forsaken is constantly the "worm i' the bud" that foils our most anxious study, especially regarding the etiology of chorea—hysteria, melancholy—and other maladies of civilized life.

While love has degraded many a Sardanapalus into a slavish voluptuary, or transformed an Anthony, "the triple pillar of the world, into a strumpet's fool," it has raised many an idiot Cymon into manhood, and has inspired

chivalric thought into the bosom of many a knight, to tilt and bite the dust for the mere privilege of wearing a lady's favour in his helm, and gaining the blessing of a smile from her unpressed lip.

Even the poet dips deep into the physiology of love :

“ Flush'd by the spirit of the genial year,
 Now from the virgin's cheek a fresher bloom
 Shoots less and less the live carnation round.
 Her lips blush deeper sweets; she breathes of youth;
 The shining moisture swells into her eyes
 In brighter glow; her wishing bosom heaves
 With palpitations wild; kind tumults seize
 Her veins, and all her yielding soul is love.”

We remember how Erasistratus discovered the love of Antiochus for his step-mother, Stratonice. Plutarch writes, “*ad ejus nomen rubebat, et ad aspectum pulsus variebatur.*”

If erotic thought be in excess, throbbing of heart, and flushing, and heat, and systemic erethysm supervene; hence the terms passion, fever of love—inflamed by desire, and fire in the heart.

The sexual stimulus is very often depressed or subdued by the power of thought—even by the excess of esteem. I am aware of more than one instance where consumma-

tion can only be efficiently effected when thought and consciousness having been lost in slumber, have left for a time the spinal or animal influence unrestrained.

The hyperæsthenia of erotic passion will often in a moment induce syncope and insensibility. We have been often called at midnight to a young married lady, who, although perfectly well on retiring to bed, was suddenly attacked by acute hysteria, and complete *aphonia*, the result of mere connubial excitement. In this impetuosity of passion, the force is probably concentrated on the sensory ganglion.

But as the stings of thought on love's denials prove so detrimental, its happy fulfilment will often effect a wondrous change of every thought, feeling, and function in the chlorotic or sensitive girl,—even phthisis might often be averted by love's influence, did not pride, dignity, wealth and *blood*, interfere and mar perhaps the everlasting happiness of two congenial hearts.

PSYCHONOESIS :

THE LIGHT AND SHADOW OF THOUGHT IN INTELLECTUAL LIFE.

Thought in the untutored or vulgar mind must be as uninteresting as the psychical biography of a child.

The poet and the painter do not revel in the common phases and expressions of nature ; they look to the exalted effects, the bright light and the gloom, the rise and set of sun, the deep repose or the war of the elements, as subjects for the beauty and the glory of their art. So we shall take rather the deep or the exalted workings of a thought as the high types of those faculties which constitute *par excellence* the intellect of man.

The working of a faculty may be chiefly quiescent and pacific, yet, often, that which began in health, leads on to disorder, to derangement, or to death.

Were we to adopt as our theme the complete analysis of the faculties, we should be compelled at once to wind through the mazes of logic and then to bring out the

intellectual lives of the wisest, the bravest, or the best. Our course must be more limited, and chiefly to the contemplation of those *shadows* of the intellect, which the wise Creator has flung around its brightness, to compensate for the dull routine of a less embellished existence in those who do not aim to

“Soar above the element they live in!”

While we are dazzled with the brilliancy of genius, we are often struck by the gloom of those Rembrandt shadows which are floating over intellectual life, as well as those eccentricities of thought and action, which so often loom out even in its dawn, and through life *humanise* that being who might otherwise almost extort our worship. Michael Angelo was “the divine madman,” and Oliver Goldsmith “the inspired idiot;” the wild pencils of Fuseli and Turner have often caused them to be stigmatized as fit subjects for a keeper by the wiseacres at the Academy Exhibition. The eccentric thought of genius may be a mere brown study; the intellect is so absorbed with its own conceptions, that the impression of a sense does not call up a perception of a present object in the sensory ganglion. Archimedes and Pliny, and Parmegiano and Newton, were prominent examples of this intellectual

abstraction. They were scarcely to be called fit keepers either for their persons or their purses, and the common courtesies of life were often a blank with those whose works will still beam as guiding stars long after their eccentricities are forgotten. But there is a darker picture than this.

The halcyons of intellect may often point to real aberration, if the perils of precocity be not averted. There are many who are marked as the martyrs of thought in youth,—like Wm. Pitt and Lord Dudley, who, indeed, “were never children.” Genius, like beauty, is often a fatal gift: thought not only begins to grow, but bursts into bloom while the organism is as it were still in the bud. By this forcing of the germ, the sensorial ganglion is exhausted of its energy, and the thought that was once a bright and rational thing becomes a chaos or a blank.

It is these beings who mentally exclaim with Manfred :

————— “Look on me, there is an order
Of mortals on the earth, who do become
Old in their youth, and die ere middle age.—
Some perishing of study—
And some insanity.”

The irritability of genius is the first link in that chain of psychical maladies so often terminating in hypochondriasis, when melancholy marks the martyr of thought as its own. The brain of such a being is acutely sensitive, and he shrinks like a mimosa from the breath of criticism. The thoughts of vulgar intellect are a fret to his own, for they have nothing in common. Seneca, we remember, affirms that intellect cannot be happy in society, as the collision would ruffle the courses of its thought. The eye and the mind's eye, the thought, of the astronomer are ever fixed on the "majestic roof fretted with golden fire," his thought soars far beyond the influence of the passions and the collision of earth and its people; that earth that, like a Moloch, by a thousand subtle poisons is hourly guilty of infanticide: Halley, and Herschel, and Newton, were octogenarians.

But the *poetic* thought is almost a creation; and the birth of this thought may often be a convulsive pang of parturition.

The creation of a *beau-ideal* of thought renders the intellect deeply hypercritical, contented with nothing short of perfection. There was a girl who rejected her real suitors, and died for love of the Belvidere marble. She

would sit gazing stedfastly on the Apollo, and strewing flowers over the mosaic steps, and enfolding the statue with a muslin veil of Inde fringed with gold. At length she died raving. The body may become so acutely hyperæsthetic as almost to "die of a rose in aromatic pain." The poet's eye, that, at one time, would, like the Titan, scale Olympus, will, at another, look like Semele, on Jupiter in all his glory, and perish.

Of Viotti it is recorded that "a simple violet would transport him with the liveliest emotion: the slightest impression seemed communicated to all his senses at once, everything spoke to his heart."

Those who have contemplated the course of the "genus irritabile" must feel the deepest sympathy for the penalties of those children of mighty intellect. Ariosto, Dante, Tasso, Alfieri, Voltaire, Rousseau, Cowley, Dryden, Pope, Collins, Johnson, Cowper, Keats, Byron—what a phalanx of beings of bright thought, what a flood of rapture have they rolled into the world of literature, to enlighten and to delight mankind, or to soothe the pillow of anguish. And their own pillow, when the burning brow was laid on that, did the anodyne of slumber always follow? Ask the question of the spirits of those

bright meteors that have blazed but to die; the response will be—

“My slumbers, *if* I slumber, are not sleep,
 But a continuance of enduring *thought*,
 Which then I can resist not : in my heart
 There is a vigil, and these eyes but close
 To look within.”

Such a martyr was Paganini. Sleep almost constantly forsook his pillow. His passion almost consumed his being. He felt that his thought was destroying him, but he resigned himself to his fate with the triumphant murmur—“*Mais c'est un don du ciel.*”

It may be that the irritability and melancholy of genius may be somewhat associated with the expenditure of phosphorus in the brain. We know that after anxious study the phosphates are often profusely eliminated by the kidneys, and phosphorus has proved a potent stimulant in cachectic and strumous and septic maladies, in which it has seemed to be deficient. These propositions remain, of course, to be confuted or confirmed. And shall we presume to prescribe an anodyne of thought for these worn children of genius; nay, would we wish to avert their deep divings into the arcana of science, or clip the pinions, which, by the lofty and sublime flights of imagi-

nation have lighted the glow of admiration, and even of homage in the hearts of mankind? If we do, the curb of imagination must be applied early—ere it has drunk its excess of sunlight. The slavery of its idol worship can rarely be destroyed but by demonstration of mathematical truth—nothing less than such an absorption of thought can quell or quiet this longing of genius after immortality.

The early thoughts of a child is a holy and innocent communing with the Creator through his works, and the even jaded heart, enslaved by deep and even unholy passion, will oft revert to the scenes of infancy with something like regret. It is to his loved sister that Byron thus writes—

“I feel almost at times as I have felt
 In happy childhood ; trees, and flowers, and brooks,
 Which do remember me of where I dwelt
 Ere my young mind was sacrificed to books,
 Come as of yore upon me, and can melt
 My heart with recognition of their looks.”

But, unhappily, it is in this very *dawn* of thought that the plastic brain is allowed to dream while it should be instructed, and so these bloated reveries swell into vain and

senseless phantoms, that become the idols of our thought, the pabulum of our psychical existence. Then when the young sentimentalist is whelmed amid the stern *realities* of life, he wakes from his dream, and feels that he must unlearn his lessons of romance, and discipline his mind afresh. How gigantic this effort none can tell, but those who have endured and conquered.

The irritability of thought is often perilous, and even fatal. The confutation, by Locke, of the metaphysics of Stillfleet, hastened his death. Chatterton, subdued by neglect and poverty, swallowed poison; the critique of the "Quarterly" killed John Keats; Virgil and Tasso, fearing even the posthumous lash of criticism, bequeathed the destruction of their works. Augustus, however, saved the treasures of the "Eneid" from the flames; and Cardinal Cynthio, happily for the world, preserved the "Jerusalem" of Tasso, although the poet had especially condemned it. There might, perhaps, be more reason in the extreme reluctance with which Cowper heard any quotation from his "John Gilpin" when he was near his end. And thus writes Beattie:—"Since the 'Essay on Truth' was printed in quarto, I have never dared to read it over. I durst not even read the sheets,

to see if there were any errors in the print, and was obliged to get a friend to do that office for me. These studies came in time to have dreadful effects on my nervous system, and I cannot read what I now wrote without some degree of horror, because it recalls to my mind the horrors that I have felt after passing a long evening in those severe studies.”

The etiology of monomania and folie raisonnante, is most interesting, in reference to the errant thought. The states illustrate each other. In the one there is somewhere a mad *point*, in the other a sane point, in the organism. In the lofty intellect there may be a dark spot, or phantom ; and in the maniac, one lone lucid spot, which may even light up a bright and brilliant faculty. The judge and the divine alluded to by Dr. Rush, were confirmed lunatics, yet the judgment of the one, and the divine eloquence of the other, were the admiration of those who listened to them on the bench and in the pulpit.

One of the most prevalent errors of the intellect consists in that form of madness on one point, that we may term *Automania*—the conception of erroneous notions or thoughts regarding oneself ; probably the “ Metaphy-

sical lunacy" of Reid. "E cœlo descendit, γνωθι σεαυτον" has passed into a proverb; yet how rarely is this divine emanation perfected. The fretful anxiety to shine often mars its own purpose; the illusive, or morbid consciousness of defect, becomes the source either of vanity or *mauvaise honte*; both tending to degrade or curb the intellect, and prevent the development of great and good things.

The actor, as he leaves the *wings* for the stage, the public orator, as he rises to address an assembly, may be overwhelmed with *egoism*, but as he warms and abandons himself to his *subjective*, and forgets his *self*, so will his force or his eloquence be proportionally displayed. To address one person is often more perplexing than to address a multitude, merely because the two *egos* are in a more immediate and more exciting collision of thought and consciousness.

The principle obtains both in physics and in morals. The concentration on the *non ego* in that state, termed hypnotism, is the source, on this principle, of the power of forgetting all this self, and throwing the thought on other persons and things. This sensitiveness of thought is often aroused by the mere consciousness of personal

deformity. The skeleton legs and crooked spine of Pope, and the club foot of Byron especially induced a constant rankling in their thought.

The concentration of this monomaniacal thought, the illusive belief that disease exists, is often not only the source of indisposition, but it may induce the very organic disease which it had merely imagined.

In Hysteria is this automania prominently displayed, especially as we learn in the records of the middle ages. The whimsical illusions and visions of isolated nuns and sensitive devotees ; the visionary fanatics, from Boehmen and Sta. Theresa to Thom and Smith the Mormon chief, prove to what an extreme point, and how far from truth, thought will wander when once set off in the illusive path of error.

The surface of the body of hysterical girls is constantly hyperæsthetic, its sensibility may be raised to that exalted pitch that a feather dropped on the neck may produce a thrill of terror,—the pain so severe as to simulate that of acute inflammation. This illusion has often its sympathetic source in the organism, but when this is slight, the thought may be diverted from the morbid point, and the *maladie imaginaire* will cease.

That eccentric form of the neuroses, the hysterical spine and knee, is proved to be merely psychical, and not organic, from the sleep being undisturbed in the one, and broken by the *real* pain of the other.

In these cases, if the current of illusive thought and its morbid innervation, be intercepted, or kept in abeyance long enough by insensibility or slumber, or even by protracted diversion, the mind would forget the malady, and, according to the Berkeleian theorem, it would cease to exist. A lady in Sussex possessed that exalted sensibility of skin which was the torment of her life. While her thought was interestingly diverted from herself, she left off scratching. Sensation, then, may not be altogether passive, and Reid is not justified in affirming that we cannot excite sensation by willing it. We visit a married lady who believes that the most offensive odours pervade her mouth. It seems that this belief is chiefly illusory. If she could sleep for a week, and her thought lie perfectly fallow, we believe she might rise up convalescent.

On this principle of intellectual fallow, certain states of imbecility may be remedial. The intellect is then well nigh a *tabula rasa*; apathetic, and not thinking of

danger, the imbecile often possesses immunity from malarious impressions by which a sensitive being would be disordered, perhaps destroyed.

An excess of automania may become insanity. The hallucination is often so severe as to lead to confirmed monomania ; self-consciousness is in excess and morbid, and may at once end in fatality.

A surgeon had long laboured under the illusion that syphilitic caries of the nasal and palatine bones was rapidly progressing, and would ultimately destroy him. He might be *reasoned* at times out of this phantasy, but he would again relapse. In the lucid intervals he visited and prescribed with judgment. Thus he knew outward but not inward things. Immediately after a day spent in professional duty, the illusive thought of self came across him, and, in a moment he very scientifically cut his brachial artery, and instantly bled to death : γνωθι σεαυτον, would have saved him.

Such, probably, would have been the end of the hypochondriac, attended by Feuchtersleben, whose convalescence commenced from the moment when he *closed the diary* which he had been carefully keeping of his maladies.

How important, then, is the control, counteraction, or diversion of thought. Once arrest the attention of these egoists,—fix the thought on any subject but self,—and we shall often remove a malady which has foiled both the laboratory and the *materia medica*. Yet we constantly blink this morbid introspection, this turning thought into ourselves, and go on *draughting* the monomania, and merely removing consequences at best, forgetful of the giant effects of the sympathies, and on our failure, wonder that the brain, heart, and lungs should become in the end disordered or disorganized.

And how stealthily does the insensible yet deeply emotional heart of the mammon slave set up a fatal disease in its own tissue. A merchant of incessant activity had often been sensible of intermission of the heart's action, when immense speculations and the crisis or panic concentrated his thought on his ledgers, and *he forgot* entirely himself and his functions. *Mitral* disease, concentric hypertrophy, and *universal* effusion were the climax of this error, and from his right pleural cavity I drew at once five pints of fluid. This might have been early *averted*, if his thought had been *diverted* by joyous or soothing subjects, or laid up as

much as possible in fallow, instead of being thus enslaved by the mart. This distraction of thought overloads the heart, yet as that is an involuntary muscle, it will still act as well as congestion will allow it; but a gorged lung must be relieved often by *voluntary* effort; we must not *forget to breathe*. The consequent collapse of the air-cells will not only increase congestion, but favour the development of tubercle. The due expansion of cells often subdues and keeps down the granule or germ in the pulmonary parenchyma. Thus volition, or direction of thought to the insurance of full and deep breathing may be prophylactic of consumption. Mysterious dissolution may be sometimes referred to this stealthy cause. The cases of Bateman and John Hunter might have formed fatal illustrations of this, had not the one been incessantly roused from slumber, and the other set himself to deep and voluntary inflation of his lungs. On this principle sleep *may be* perilous in pulmonary disorder, as it checks the transmission of thought, and withdraws volition. It may have been the immediate *causa mortis* in many an old asthmatic, who, after a long course of *atelactasis*, has been found dead in his bed.

The potent concentration, or abstraction of thought, may be useful, as it is detrimental; it may be induced as a prophylaxis. During a perilous night voyage across the channel, there were ten gentlemen in the saloon. Eight were soon prostrate, and we should have joined the interesting group, but for the intense abstraction from *self* to the treasures of the Louvre and Versailles.

The garden of the intellect is indeed a beautiful parterre, gemmed with an infinity of the blossoms of thought.

But what is our mode of culture?

Is it not too often the forcing of the germ of this thought by a sort of hot-house education?

Even in the arena of the senate and the bar, how have we seen their brightest ornaments drop prematurely, or, exalted to frenzy pitch, themselves extinguish the lamp of life?

We cannot wonder that illusion should be one of the shadows of the overworked brain, especially among the children of genius, when their intellect is so often displaying one persistent course of ideal conception. The *consciousness* of the intellect may, however, be still perfect, and mark the hair line between illusion and insanity. Consciousness soars with thought in these lofty flights, and judgment hangs upon her robe.

In this, imagination differs from *phantasy*.

Thus the illusions of Tasso are contrasted with the *conscious* conceptions of Shakspeare; the mad ideations of Blake, with the merely wild eccentricities of Fuseli. *Eidola*, or phantoms, were as perceptible, nay, as real, in the mind's eye of Shakspeare and Fuseli as in that of Tasso and Blake, but the former were conscious of their being phantoms. The familiar spirit of Tasso was his constant companion, and their conversations were carried on with fluency and brilliancy of thought. The phantom conjured up by the creative thought of Mozart sought only two interviews with that genius—yet, however we may sympathize with the shadow of his intellect, we may scarcely regret that phantasy from which sprung the “*Requiem*”—even though it *was* chanted over the

grave of the mighty Maestro. This was the dark side of melodious inspiration.

During the reverie of Tartini, a still wilder and more eccentric vision was the theme of his thought.

“One night, it was in the year 1713, I dreamed that I had made over my soul to his Satanic majesty. Everything was done to my wish; the faithful menial anticipated my fondest wishes. Among other freaks it came into my head to put the violin into his hand, for I was anxious to see whether he was capable of producing anything worth hearing upon it. Conceive my astonishment at his playing a sonata with such dexterity and grace as to surpass whatever the imagination can conceive. I was so much delighted, enraptured, and entranced by his performance, that I was unable to fetch another breath, and in this state *I awoke*. (?) I jumped up and seized upon my instrument, in the hope of reproducing a portion at least of the unearthly harmonies I had heard in my dream. But all in vain. The music I composed under the inspiration, I must admit the best I have ever written, and of right I have called it the Devil's Sonata; but the falling off between that piece and the sonata that had laid such fast hold of my imagina-

tion is so immense, that I would rather have broken my violin into a thousand fragments than have been robbed of the enjoyment the remembrance afforded me.

“ This introspection of thought may assume a still more melancholy form. Like Macbeth, the intellect may be *haunted* by the *umbra* of his victim, or the phantom may assume the *double* of the seer. This illusion, whimsical as it may seem, has a source often deep and perilous in the organism of the intellect. Judgment has lost its control over the representative faculty.”

Thus writes an eccentric yet learned friend, with whom we were wont to engage in many a smart skirmish on psychological mysteries :—“ I knew a very intelligent and amiable man, who had the power of thus placing before his eyes *himself*, and often laughed heartily at his double. This was long a subject of amusement and joke, but the ultimate result was lamentable. He became gradually convinced that he was haunted by himself, or (to violate grammar, for the sake of clearly expressing his idea) *hisself*.” The climax of this was suicide.

Can these phenomena arise from one indivisible essence, itself creating an illusion and informing us that it is so? Unity cannot at the same time be sound and

unsound. But, if we believe even one vesicle, or tube, or fibre, or convolution of the neurine to be perfect, and others imperfect, or distorted, or diseased, the dilemma at once vanishes. This *double action* of thought seemed to be exemplified in the case of Dr. Wollaston, who was quite sensible of the etiology of his malady, declared to him indeed by paralysis. Thus writes Sir Henry Holland:—"He was accustomed to take exact note of the changes progressively occurring in his sensations—memory and voluntary power. It was a mind unimpaired in its higher parts, watching over the physical phenomena of approaching death: and, what well deserves note, watching over the progressive change in those functions which seem nearest to the line separating material from intellectual existence." With all this spirituality, however, there lurked some leaven of self-interest in this thought, and a transient homage to Mammon, on his divulging just previous to his death the platinum secret, implied that partial disorder of organism interfered with the spirituality or philosophy of the prevalent thinking of his master mind. And is not this evidence of the combination of a pure essence with impure or unhealthy organism? Let us resume for

a moment our analogy of light. Sunbeams are lighting up an Alp. Those which play on the cone are reflected in all their purity, those which impinge on the "grands mulets" revert to the eye as a dark, misshapen surface. So the blending of the soul with healthy organism will reflect the light of moral and intellectual thoughts, while its union with diseased structure, especially if there be disorganization of its *totality*, will be evidenced by sentiments and acts overshadowed by error or debasement.

In the contrasted play of bright and dark thoughts consists those forms of illusion that we may term *chairomania* and *scotomania*. Many of these illusions may arise more from quality or quantity of the circulating blood than from disease in the structure of the neurine. Their often protean changes, the chameleon hues which thought may display within the lapse of a few seconds, indicate the influence of transient and rapid forces in the blood. Its hyperoxygenation will cast a halo of light around the thoughts, as excess of carbon will at once tinge them with gloom and melancholy.

To the *chairomaniac* every phantom is tinted with *couleur de rose*, every voice is the whisper of an angel. The phantasy of Jacob Behmen and Benvenuto Cellini,

and Petrarch, and Santa Theresa, and Swedenborg, and many other visionaries, may almost prove to us how important is the *brain-blood* in the analysis of these illusions of thought.

But the exaltation of even bright thought is not always without its peril. The sudden onset of *high spirits* should not be altogether slighted. A lady had been for some weeks heavy and lethargic, when, for an hour or two before she attended the morning service, she seemed to *brighten up*, and expressed herself as supremely happy. She had not been ten minutes in her pew, ere she dropped apoplectic, and expired. This is far from being a solitary case. It is this hyperoxygenation of the encephalic blood that induces the exaltation of thought in periodical mania, the recurrence of which the patient anticipates with extreme delight; and the chairomania of the first stage of intoxication differs from this state mainly in the duration of the paroxysm and in the exciting cause.

Let us look on the other side of the picture. By the continuous thinking or brooding over ideas, remora ensues, and then supervenes the congestion of hypercarbonized blood, as in the delirium of fever. Phantoms float across the eye of the mind, which constantly distresses,

and may often madden. Who will gainsay the monomaniacal taint of thought in Rousseau, when in the company of his phantom; or of Luther, while he was conversing without suspicion with the demon in his study. Nay, who will disbelieve that a transient wandering of superstition — monomania — was coincident with dark blood in the brain of the reformer, when he coolly suggested the drowning of an idiot in the Moldau, which he decided was the changeling of a demon!

Frankenstein was not unique in his penalty. The thought of Spinello, while he was deeply studying for his picture of the fallen angels, was so intensely concentrated on the conception of Lucifer, that the *horrible* shadow of the arch-demon was ever in his sight. Jurien imprisoned himself in his library while he was *analyzing* the Apocalypse. The intensity of thought, aided, perhaps, by the breathing of his own carbonic acid, called up the awful illusion of the “Beast of Blasphemy” in his brain, which he believed was pent within his body, and preying on his vitals.

Of the phantasmagoria of the thought, &c., we forbear to repeat what we have already fully discussed in the “Philosophy of Mystery.”

The irritability of thought is often a consuming fire—a sort of charged jar of intellectual electricity; and the brain finds relief in the safety-valve of exalted composition or acts of absorbing interest. “The Bride of Abydos” was written by Byron, to keep him from “going mad, by eating his own heart,” and Reid believed that, if John Howard had not been a philanthropist, he would have been a madman. The eccentric Elia, perchance, had been as mad as his sister, had he not written *hard*. Galileo, close on his 80th year of age, “could not prevent his restless brain from galloping on.” We may conceive the result, if a curb had been placed on the impetuosity of his thought. Burns was also a martyr to his thought. There were transient gleams of splendour, but his existence was a penalty; it was a sort of champagne vitality. Devoted to the worship of Bacchus or of Venus, he was an enduring slave, either of the Thyrsus or the Cestus. It is perhaps no slight task to decide the struggle between the animal and the intellectual; but in the sensitive, especially, thought *must* gain the victory for intellect, or it will go mad at once—we will not qualify the term. It is true that organism may be so specially *animalized* as to overwhelm a light opposition; but the discipline of

thought can effect "a powerful control, even over those remote organic excitements that so wofully tainted the intellectuality of Burns, who, like the accomplished but wayward Byron, failed in consecrating his licentious pages with his hypothesis of mock morality and virtue." But, it seems, with all this *esteem* for virtue, Love will be "Lord of all," and while it inspired the warm outbreathings of the rough and of the polished child of genius, was uncontrolled by pure thought, and thus the heart of each was reduced to a tainted sepulchre. It is a sad thought that without this erotomania, we should never have revelled in the beautiful episode of the exquisite Haidee, or wept for "Mary in Heaven." It is true that the stimulus of Eros may not be in the cerebellum; but there are doubtless two or more conditions somewhere in the organism of those who write morality and practise vice. The most wanton cruelty marked the life of the Dean of St. Patrick's, by which the hearts of three innocent and doting girls were wrung and broken, one dying in her blighted passion; and all the while morality was flowing from his lips and pen. Had this been merely moral insanity, Swift would have been a demon; but we pity as well as condemn, when we know the deep

organic disease which was discovered in the brain of Swift.

We are now emerged from the shadows of the darker ages of the world, when these contrasts and conflicts were referred to the influence of *real* spirits striving for the possession of man's heart. Yet even now the fanatic may affirm that conscience, the good spirit, is whispering virtue in one ear—vice, the evil genius, like Satan, holding up the sensual pleasures of the world as a temptation to crime: while the phrenobiologist will argue that the sound convolution of the brain was the good spirit, the diseased portion the evil genius, and so on.

Psychology needs not this spurious kind of causation. Her researches discover to her that the excitement, even of a thought, in a soft and sensitive brain, will at once induce various degrees of intellectual disorder, from simple headache to confirmed mania, and this by altering the condition and arrangement of the organism and its circulation. The extremes of this erethism of the brain are phrenitis and melancholia. But the slightest thing may, in a moment, direct the train of thought to a more propitious haven,—as a tile on the roof of a house determines if a drop of rain shall be mingled with the Irish

or the German Sea. One of the poor Hyps wished to quote an author ere he committed suicide. In his search he forgot both his pistol and the purpose for which he had loaded it.

In no psychical malady is the subject of the blood of more consequence than in that of melancholy,—the constant penalty of the over-worked brain. It is true the functions, especially those of the liver and stomach, are disordered in melancholia; for few, we believe, who are *unconscious of possessing* a stomach are *real* hypochondriacs. But even if they be, we may directly feel how the healthier circulation and crisis of the blood, induced by exercise or deep and free breathing, will in a few seconds change the nature and character of a thought.

In deep study immediately following repletion from food, the organ of intellect is forced, and then begins the struggle of the circulation. Byron often exclaimed, after eating,—“Oh, fool! I shall go mad!” If the brain *beats*, and withdraws the blood from the stomach, dyspepsia and its train follow at once: if the stomach beats, and the brain be compelled to labour with a defect of blood, its fibres are strained, perhaps for ever,

as a weak arm would be in lifting an overwhelming weight.

Now who has known this

————— “Loathed melancholy
Of Cerberus and blackest midnight born,”

ever relieved by moral suasion? It were as wise to tell a leopard to change his spots, or an Æthiop his skin, as to attempt to dispossess the fiend, except we change the blood by therapeutics and by exercise, or by the potent remedy of directing and fixing the thought, which will often, through the medium of the heart, work an immediate wonder: it is thus that thought oxygenates the blood. The *result* of melancholy is intimately dependent on cerebral organism. The iron constitution of Samuel Johnson endured and overcame; William Cowper, like the reed, was bent down and laid prostrate. Even before his majority, Johnson was afflicted with religious melancholy; at fifty he was to an extreme degree irritable; at sixty the dread of death and futurity again came over him, and he told Adams that he “would endure the amputation of a leg, if it would make him *recover his spirits.*” And yet he was all his life a social and a *clubbable* man—by effort.

Even in his despondency, a ray of hope would sometimes for a moment light up the mimosa intellect of Cowper, as when he wrote,

“Joy of heart is the best of all nervous medicines.”

But the mournful automaniac unhappily retired to the world of his own thought ; his converse was chiefly with a set of very crotchety people, enlivened a little, perhaps, by his platonism with Mary Unwin ; but he was then set to the composition of the “Olney Hymns,” and Dr. Madan, believing him the subject of *special visitation*, went *metaphysically* to work, and made poor Cowper infinitely worse. It is true he himself deemed all *physical* explanation of his case profanation, but it was a devout mistake. The Rose of the Alhambra, perhaps would have been, as she was to Philip of Spain, the best physician.

This fretting canker of the thought also marked the life of poor Collins with a continued course of mental agony:—

He passed in maddening pain life's feverish dream ;
While rays of genius only serv'd to show
The thickening horror, and exalt his woe !

This asthenia of the intellect, after extreme thought, is

often displayed in the most interesting form—in the closet and the world. The gigantic labours of Burton in penning the “Anatomy of Melancholy” terminated in a sad illustration of his own prolific theme.

The retired moments of the French Harlequin were darkly shadowed by intense hypochondriasis, and he consulted a learned physician on his case. The doctor, after a patient investigation, assured him medicine would be of no avail, and he knew of only one remedy, that was to see the wondrous tricks of Carlini on the stage. The patient instantly burst forth with this piteous exclamation:—“Alas, alas, I *am* Carlini!”

Depression, asthenia, apathy, oblivion, will follow extreme excitements of thought, as darkness follows light, displaying often extremes of psychical manifestations: hence the brightest intellect, worn by thought, so often sinks into abject idiocy, the lowest grade of intellectual being.

In this metamorphosis, the failure of memory, in which *every* faculty is, indeed, involved, is often the primal indication of the waning intellect—for memory seems to require an entire integrity of organism for its play.

The suspicion of Scott, of the dwindling of his thought

or intellect was first excited by his failure of recognition of his own ballad; and indeed the Muses, the daughters of Memory, soon after altogether forsook their favourite. Yet Sir Walter in his zenith, repeated to Hogg an entire poem of the Shepherd, of which he himself could not recollect a page or a couplet. The memory of a tragic author in Spain was so utterly destroyed, that he forgot not only languages but even alphabets, so that he was again a schoolboy. He had no recognition even of his own poems, until at length he began again to compose, and these new poems were so like the former, as to strike him at once with conviction.

Who, then, can doubt that a divinity has been blended with the being of man, and that mind is the result, the consequence of an organism thus consecrated, when he sees intellect so prostrate and debased? or who can believe that the thought of an immortal essence can be changed in a few seconds by the repletion of a feast, or that the soul itself, and not its associated organism, is diseased, when reflection must directly whisper him that the thing which is diseased must die, and that he is thus sapping the very foundation of the Christian's creed?

Yes, even this wandering thought of intellect is one

of the many awful proofs of immortality. That essence, which, through its organism once moved the lips and pen to speak or trace the syllables which still delight mankind, is unchanged, unchangeable; but the phenomena both of the highest intellect and of the deepest madness, are the result of health or disease in that structure, by its emancipation from which, the divine emanation at once annihilates the intellectual yet tainted mind, and becomes the self-existing and immortal soul.

THE END.

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