

WRIGHT (THOS. L.)

NOTES

ON THE

THEORY OF HUMAN EXISTENCE.

COMPRISING REMARKS ON

VITALITY, THE MIND, AND INCIDENTALLY, THE SOUL.

THE WHOLE BEING AN EXPOSITION OF THE

NATURE, POWERS, AND DESTINY OF MAN.

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## P R E F A C E.

The importance of our subject needs no remark : it is evident to the mind of every one. It has been thought proper in the following pamphlet before treating of the main subject—Human Existence and the dignity of man—to premise some observations bearing on the being and attributes of God. These are found in the introductory chapter.

In regard to Vitality, the subject which is treated of in the succeeding four chapters, it may be remarked that its importance as a subject of inquiry, is by no means confined to the relations which it bears to the present investigation, but it is of pressing importance, also, as connected with Pathology and Practice of Medicine—concerning which connection, the Author may, if encouraged to do so, offer remarks at some future day.

In the three remaining chapters, Mind is treated of, and also, incidentally, the Soul. These two, the Author firmly believes to be distinct ; still, this must ever be a mere matter of opinion. This subject is so far removed from the pale of human reasoning, that it cannot be rationally treated of “*in extenso*.” Many, it is true, believe the human Mind and Soul to be identical. This may be true, and yet not interfere in the least with the principles of this essay. The Author has studiously avoided all rhetorical flourish, or vain quotations, as inimical to the thorough exposition of the topics here discussed, and to the prescribed limits of these “notes.”

For the chief *facts* here presented, the Author is indebted chiefly to the works of Carpenter, Muller, Allison, and other physiological writers.

The terms Vitality and Life are employed as synonymous, to prevent too much sameness of expression, although the Author is aware that Life is more properly applied to the *manifestations* of the specific action of a structure *after* its formation. All other terms used, as “comprehension,” &c.—the connection and general sense will fully explain.

If the Author has said anything worthy of praise, he will be gratified when he learns it ; if not, he falls back into the ranks of a very hopeful majority of the writers of the present day.

BELLEFONTAIN, Feb. 5th, 1848.



## CHAP. I.

### INTRODUCTION.

The Elements of Human Existence—Character of the natural pursuits of Man—Obstacles in his way—General character, uses, and object of Vita'ity—Mind—Soul—Periods in the process of Organization—General Reflections—The Existence of a God.

Physical Life, a Mind and a Soul, embrace all that is essential to the idea of humanity. To comprehend which of these stamps upon man his character, and distinguishes him from all other beings, it is necessary to understand the nature and object of each, and the conditions of their mutual dependencies.

The progress of Science reveals to man how narrow are the boundaries to his knowledge. It displays new and broad fields of inquiry, concerning the intimate nature of Agencies; silent and mysterious in their operation, producing results wonderful and magnificent though common and familiar to all.

In pursuing such inquiry, however, the mind speedily encounters obstacles which it cannot surmount. To comprehend the intangible, imperceptible agencies in operation about him; to know the Myste-rious, the Infinite, the Eternal, is the ardent, constant desire of man. To accomplish it, he spends wealth, and toil, and years; he puts in requisition the mightiest efforts of his mind; he studies, reasons, ponders. Imagination, taxed to her utmost, wings her highest, proudest flights—but Time, and Wealth, and Intellect fail, and the delusive images of imagination and fancy, satisfy not the longings of the hungry soul.

While the chains of mortality bind the mind to a corruptible, changing body, man never can attain such knowledge. Fetters which he cannot shake off, weigh down his efforts; a dim mist obscures his vision, yet, rolling, changing, varying always. Sometimes, almost, he thinks he can see the brightness of day; he can almost strain his fettered arm to the object of his desires; but—no! he is blind still, bound still. Oh! shall he *never* enjoy the sweet fruition of perfect knowledge? Perchance, like Tantalus, his thirsty lips almost touch the waves, his tired arm can nearly reach the golden fruit; one more effort, a little stronger, and he shall enjoy full satisfaction. Suddenly the links which bind the spirit to its clay, which connect the mortal with the immortal, are burst asunder. All obstacles are removed. The soul, liberated and beatified, soars away to regions of boundless space, where eternity marks the limits of duration, and immortality dwells. He is dead.

With what delight does the eternal spirit, freed from the trammels of mortality, drink at the fountains of infinite knowledge! How the soul expands with the contemplation of Eternity, of Truth, and the causes which brought into existence the Universe! How delightful the intercourse of Spirits, when such glorious conceptions prompt to communion, and become the theme of discourse!

This longing after immortality, or the knowledge which it only can supply, is the chief characteristic of man.

It is highly probable that all matter, even the earths and metals which are regarded at the present, as simple elements, might be so situated as to assume the gaseous form. But whether this is true of all matter or not, it is true of such part of it as may be operated upon, most generally, by the actions of vitality. Those elements which most readily enter into the condition of an organized structure, may usually be made to assume the gaseous form, either by decomposition, as water, or by further combination, as carbon with oxygen. Possibly, it is through the operation of the ordinary laws of affinity, that inorganic matter is prevented from bursting forth, into an elastic condition. Still, the force of Chemical affinity, when applied to certain substances, operates in such a manner as to destroy the gross condition and induce the gaseous. To such substances, other force must be applied; and other laws be brought to bear, to preserve their definite form. Such force is Life, or Vitality, and such laws are those under the operation of which it is manifested.

Life, then, is the regeneration of matter; not in fact, it is true, but in condition. Those substances which are in the most decayed situation, giving off the fœtid gases, as ammonia and sulphuretted hydrogen, are such as submit most readily to the re-organizing process of vitality.

The great and essential object of all Life, wherever it exists upon the globe, is to furnish the conditions of existence to the human body. The human body exists to supply the wants of the human mind; while it is the human mind which ministers to the joy, the peace and satisfaction of the soul; or, it becomes the instrument of terror and distress, and general unhappiness to it. The Mind is the medium of communication between the Soul and all the universe; the link which connects them together; while the physical body is used, in this world at least, to bring the *mind* into relation with the physical world, in order that the communication may be complete. The Soul is that sense which experiences *satisfaction* upon the reception and perfect comprehension of facts, (or knowledge,) by the mind. It is this sense which, deriving satisfaction, spurs on the Mind to the acquirement of knowledge, and keeps it ever active: even when it is unconscious of its own efforts. It may be said, also, in morals, to be that general sense of *appreciation*—something similar, though not precisely, to mental judgment—which decides upon the character of moral actions: not as to whether they are right or wrong, which is the office of conscience and judgment, but whether they are of a nature to afford it enjoyment. When a soul receives pleasure in cruelty and wickedness, it is fiendish; when it receives enjoyment in the contemplation of goodness, it is divine.

There are periods in the general course of vitality. In man, life is reckoned by generations. The years of each generation are few, and the individuals comprising it quickly pass away. The care, the management, the control and the enjoyment of the world continually change hands. The world has had many masters; each in his day was counted greatest; and each, after his short reign of folly, madness and puny, stamping wrath, she hath received into her body again.

The broad and sombre forests, also, may be said to exist by generations; but of these, the duration of each extends over many of men. The old oak tree may see the child, as he gambols under its shady boughs; it may see him again in manhood's prime; and in his old age, and at last shall spread its leafy branches o'er his grave. Thus many generations of sires and sons shall pass away, each in his turn calling the tree his own, and carving thereon his name, bet still it lives on, towering its mighty tops to the clouds, and casting its still shadow upon all their quiet homes. O man! how vain to call the things of earth thine own, while passing quickly through it. They shall remain after thee, and they not man who live upon the earth, can tell who have inhabited it.

But Time, whose ceaseless tread we wot not of, save by the change he works around us, speeds his way. The old forests, which have witnessed the rise and fall of men, and even nations pass from off the earth, and every vestige is effaced. Others take their place, and stand in turn the landmarks of Time; receive his impress, denote his progress, and partake in his mutations.

Though Time is ever on the wing, and change, itself, only ever changeless, attends upon his course; though all things earthly have the stamp and seal of death printed ominously upon them, and "passing away" is there written character as hastening on to consummate their destiny. Yet, doth death not leave the earth desolate, but scattereth behind, the seeds of other life, which preserves creation in its primal beauty and perfection.

Who knows but the worlds in space around us, also live by generations of countless ages. The stars, many of them, disappear, while others constantly are filling their places, so that the heavens themselves become changed. Who knows but this, our own world, may possess within itself the germ of another or many worlds which shall spring into existence at its destruction; thus, having the power of reproduction, the essential characteristic of vitality. Even this *may* be true, and the whole universe of God, known to man, teem with life.

Whether the changes wrought upon the heavenly bodies, be effected through the instrumentality of laws pertaining to vitality, or not, analogy, experience, and reason teach that they must occur in accordance with some laws, either organic or otherwise.

Who shall regulate the laws of change throughout the universe? Who shall prevent confusion, confining rapid growth and decay to one portion of matter, and restraining imperceptible change, yet unerringly accomplishing it in another? Who shall preside over the destinies of men, of nations, of worlds; not of one generation only, but of every particular generation and race, whether the Nation or World be one, or different? Truly it must be that power which itself, can now no change. "The one unchangeable God," who knows the past, rules the present, and directs the future.

Do Nature and her laws preside over the mutations of Time? Who shall describe Nature and determine her laws, and their office, whose duration must be commensurate with Time, and whose operations are

beyond the ken of humanity. Shall man do this, man evanescent as the little clouds of summer, which melt away in blue sky; who at best scarce lives to appreciate his own helpless ignorance. Pride, accompaniment of ignorance and infatuator of humanity, when wilt thou leave the heart of man, and permit him to appreciate his actual condition! If nature presides over the universe, then is nature intelligent, and nature but another name for God.

Is there no God? Then what is it—when alone, man views the countless watchers of the night, as they gaze upon him, with their calm, silent, and unwavering radiance—when he looks beyond those nearest him, and beholds, in the far blue distance, others appear, and yet others, still farther on, till almost he fathoms the Throne of God—what is it fills his breast with awe, which language falters to express, and the full heart can scarce contain? 'Tis the voice of the Almighty whispering to the soul, His presence. The eye drinks of the glories of creation, the mind receives them, and the soul appreciates and contemplates them with joy. After death, when the medium of sense is more perfect than this gross body, the happy spirit in the fulness of its knowledge, incapable of other utterance, shall shout the praises of Him who made it.

A beautiful and exact adaptation exists throughout the whole range of creation, to the perfect and happy existence of the human race.—The Earth, the Sky, the Air, the Sea, are all the instruments of man's happiness and perfection. The clouds and sun minister to his necessities; the tiniest insect affords him protection by destroying substances inimical to his health, while insects themselves become food for animals more directly necessary to him. Vitality, also, though its first result may be the regeneration of matter, though it is the preservative through which the earth is maintained in its original beauty and freshness—has for its ultimate object, wherever manifested, the preservation and sustenance of the human body. And although life is essential to the accomplishment of this object, the other departments of nature, also, are not wanting in their contribution towards the same purpose.

What is man, that all the world of matter, organic and inorganic, with its dependencies and influences, unknown and inappreciable, should combine to form a habitation worthy of him, and furnish the means of his existence? When in every department of inanimate and brute nature, we see the admirable workings, and impress of fitness and design, shall we suppose man himself for whose sake all things are, the plaything of time, the toy and passive subject of chance? Is man alone of all God's handywork made in vain? Has he no destiny? Did the wisdom and power of the Almighty falter when he created man? All other things of earth, centre and live in him. Vitality and the elements have put forth their power to effect germination, growth, and maturity, for his comfort and support. Shall all this at last come to naught?

If there is no *hereafter*, no immortality, then were this whole earth made in vain. What a bitter mockery is Life, if annihilation is the

destiny of man. Why did not the human race perish in Adam? Why prolong the experiment of human life, attended as it is, with so much misery and crime, and repeat it so many million of times, when its manifestation in the first man was perfect? How sickening it comes home to the soul, that all the suffering, pain and trouble attendant on humanity, the cares of parents, the solicitude of friendship, and duties of love are all for naught; and the very existence of vice and virtue is a chimera, which holds a sway over the physical actions, and thoughts of man, and which shall perish forever with him. It cannot be so!—Is this great nature's wisdom? Then how stultified is nature!

Generations of men rise from the dust and live through their little life, digging their sustenance from the earth,—whence shortly, they and it return. Men, with busy thoughts and actions, spring into life striving to say or do that which shall make him immortal—O who does not want immortality?—And though some may be great in their day and generation, yet to those who come after, their names shall never be whispered, and the sun and stars which witnessed their deeds and treasured them up, shall not reveal their history.

Man does not live for posterity. The knowledge, deeds, and fame of ancestors, do not in any degree improve the natural condition of those who follow. The infant is as helpless now, as at the beginning; and as dependant upon its own sensation and experience for knowledge. The mind is not more wise nor capacious now, than it was in the ancient periods of the world. Moses, Daniel and Solomon, Homer, Aristotle and Demosthenes, have never been excelled by those who have followed them, in strength of mind. Accident, or reason may discover inventions and sciences, as the world increases in age; but mind has not increased the smallest iota in strength and capacity. History teaches that the Intellect is the same forever.

Man's *destiny* consequently cannot relate to others, but himself.—He lives for himself alone. His destiny is immortality. His work is, to determine his condition in that immortality. He receives the benefits and use of the earth's substances and associations, that he may accomplish it. He exists in the human form, to train the young soul in the love of good or evil, through the mind. It imbibes knowledge and the soul feasts upon it. It hence becomes an object to *improve* the mind, that the soul may be more perfectly and adequately nourished.

There is probably a period in the improvement of the mind beyond which it cannot progress, through means of its gross mortal instruments. True, it may still be receiving new facts and thus in a measure satisfy the demands of a thirsty soul. But the improvement implied in the reception of such facts, has already been had in the acquirement of previous ones. Not being susceptible of farther improvement in Time, sufficient to justify a farther sojourn there, the mortal body is destroyed and it is supplied with more perfect and delicate instruments in eternity. Such are the great and wise men of the earth. Others, who fail or refuse to develop their capacities, are cut off, cumberers of the ground. While others are cut off in infancy,

for what cause we know not. Consequently it would be the part of ignorance as well as presumption, to say it is not wisely done.

Passing farther reflections of a general nature, respecting the character and uses of Vitality, as displayed throughout the creation, the main subject, Life, as it exists and acts in the molecular changes which result in the organization of matter, shall now occupy attention.

## CHAPTER II.

Life, the process of Organization—Its two effects—The result of Causation—Leibeg's opinion—The *vis vitæ*—Elementary agencies causing its manifestation—The Germ—Stimuli—Pabulum—Vitality, not creative.

Modern research has afforded much satisfactory information on the subject of life; explaining and elucidating the nature and object of those actions which constitute it, and determining the conditions on which they depend. Consequently this subject, once involved in perplexity and obscurity, has become comparatively simple and easy of comprehension.

Such molecular actions as result in the formation of an organized body, are vital. Taken as a whole, they constitute Life; and the laws of their operation, are the Laws of Life.

Every organized structure which possesses life, is endowed with properties, such as not only impress upon it the characters of organization, but, such as fit it to assume specific relations with the world of inorganic matter and with other organized bodies. Such relations, when assumed by similar compounds, are always observed to be similar in character. Thus, each exhibits in its own specific properties, the marks of peculiar design. The influence of vegetation on the atmosphere, and the various operations of animated existences, are merely exhibitions of the specific properties of organic compounds.

When, however, the actions of vitality cease in any organized body, all further manifestation of its properties as a peculiar compound is arrested, though its texture may, for a time, remain unchanged, and become the object of application and use. Such, indeed, is one great design of the organization of many structures. Without the possession of organized matter—the result of vitality—the human race must perish. Whence could man derive his food, his clothing, his facilities for intercourse, and social enjoyment, and mental improvement? Except through the instrumentality of vitality, operating around him man must become *at best*, a piteous spectacle of helplessness and destitution.

Vitality, therefore, in its special molecular actions, operates in the fulfillment of two offices—

1st. An immediate and primary office, having for its object the production of Organized Matter. Vital actions are nothing more, than the selection from inorganic matter of crude material, and their conversion into organized compounds.

2d. The second office of vitality is remote. Its object is the formation of structures capable of assuming specific relations, and becoming the instruments of specific actions. Such relations and actions vary, in accordance with differences in the nature of the compounds, becoming the subjects of them. The remote object of Life therefore, depends upon the primary. The function of the structure cannot take place till the structure itself is formed. Not only is the production of the simple mass of the structure dependent upon the actions of vitality in their ultimate or molecular operations, but the specific actions of the compound itself cease, when life departs out of it, though its composition may remain unchanged. Yet till the very moment of death, both animal and vegetable substances perform those functions which pertain to their structure, in greater or less perfection.

Thus, the actions as well as the structure of a body possessing life, appear to be in immediate relation with the elimination of organized matter. Though the specific functions of a compound appear to arise and flow from the microscopic operations of vitality in its structure; yet till recently, many have had no farther idea of Life than as an organized compound, exhibiting its individual functions; and the attempts to define Life have been descriptions of such functions, as embracing all that was known concerning vitality. Mistaking an agency, itself the result of vitality, for life itself.

The immediate office of Life, then, is the formation of an organized compound, with reference to its use as an object. The remote, is such formation with reference to its efficiency as an agent.

As all actions of true vitality result in the formation of the compound while *its* actions as an agent, are dependent—as a brook upon a fountain—any exposition of Life will be a description of those actions which result in the formation of organized matter, and the conditions of their operation.

Every phenomenon is the result of a concurrence of circumstances, to the combined agency of which, the term cause is applied. Life is a phenomenon and as much dependent upon a cause for its manifestation, as any other. What the cause of life is, has been a question of great doubt and speculation. Its operations have been attributed to some agency entirely inappreciable, without the pale of human sensation and perception. Hypotheses, the wildest imagination could invent, have been formed to account for it, and the various reasons which have been offered to account for life, have usually been of such a character, that their correctness could not be tested by human faculties; attributing it, as they do, to agencies whose operations are guided by laws unknown and beyond the comprehension of man.

At the present day, truer conceptions of life, its nature and causes prevail, although the intimate nature of those actions which constitute it, cannot be accurately ascertained, on account of their molecular character, still the combination of agencies requisite for their manifestation, and the laws which operate in their modification, and changes, are becoming clearly understood; and although analogy and experience go far to teach, that the intimate molecular actions *might* be fully

appreciated by the mind, and the laws which direct them ascertained, if instruments could be devised sufficiently delicate to present them to the senses,—there are yet some who attribute in connection with them, a power, spiritual, uncontrollable,—the laws of its operation unknown—set apart solely to operate in originating them.

According to Leibeg, there exists in the seed of the plant, as well as in the animal ovum, a certain remarkable force in a state of rest; the source of growth and increase of the mass. By the operation of certain external influences, the condition of static equilibrium in this force is disturbed, and it enters into activity. It has received the name of "*Vis Vitæ*," and life is nothing more than this force in action.

The *Vis Vitæ*, if it exist, cannot be the cause of vital actions; for life cannot exist till this ideal agency has been stimulated into activity, by *other sensible agencies*, and its operations cease upon the withdrawal of these elements the influence of which first afforded the conditions of its activity. Certainly those influences or conditions which, being present life is present, being absent life is absent, must be considered the cause of it, and the introduction of any such mysterious agency as the vital force, is introducing an element not necessary to the explanation of vitality.

The combined action of three elementary agencies appears to afford the conditions requisite to a display of vital operation, and in every case must be regarded as the cause of life.

1st. A germ of organized matter;

2nd. Stimuli to act upon it and afford it the conditions of activity;

3d. An object or pabulum, to receive the actions of the germ.

1. The presence of a germ is always necessary to the origination of vital changes; Life consists in the actions originated in the germ, by the operation of peculiar stimuli. The germ itself is an organized compound, the result of vital operations commenced by a former germ. When life manifests itself by motion exhibited in a germ, the result is invariably the production of an organized structure; and if all the conditions pertaining to the peculiar kind of germ, which is about to exhibit the actions of vitality be present, the organized structure which results will be precisely similar to the parent germ. It is the function of each germ to re-produce its own kind; and it is by an aggregation of the germs resulting from a series of vital operations, that the mass of the resulting structure is formed. Each germ, therefore, is a component part or ultimate molecule of the compound, into the body of which it enters. Hence, it contains in its own composition all the ultimate elements of the whole.

Germs vary, of course, in their nature and composition with the compounds whence they are derived, and which they are destined to re-produce; so that each kind of structure originated from actions of vitality in its own peculiar germ.

2. The influences or stimuli which start the actions of vitality in a germ, vary with the kind of germ which is to become the center of them. Yet there appear to be certain stimuli necessary to vitality in all organic structures;—particularly oxygen, moisture, warmth, and in some degree, light. Such might be termed common, or general stim

uli. Independent of these, there appears in every instance, some influence necessary which is peculiar to the germ. True, there is not a peculiar stimulus, probably, attached and peculiar to each germ of so specific a character, that each must be regarded as isolated from all the rest; making necessary as many peculiar influences, as there are kinds of structure. But the circumstances connected with the application of the various stimuli to the primary germs, are various. A number of separate influences may be indispensable in one instance. In another perhaps the influences might be the same so far as they go, but fewer of them are requisite. At other times, something peculiar to the kind of life, must be in operation to cause vital phenomena; and in some instances, doubtless, the stimuli may be the same in different cases, and all the circumstances differ, only by reason of difference in the germs themselves. Hence, although each germ may have its own specific stimulus, as determined by the arrangement, and kind of the individual influences forming it; that is, each is competent to assume the actions of vitality in perfection, by no other, except one particular stimulus, which pertains to itself;—yet, the same stimulus might become the proper and specific stimulus, of different kinds of germ.

3. The office of the Pabulum, may be considered in a measure supplementary, probably merely supplying the conditions through which, there may be a continuation of vital action already commenced by the influence of stimuli, upon the germ. Although the first two elements in the causation of vital action, may be properly exerting their influence, still, without the third, life cannot exist, because there is nothing upon which it can act, or which it can employ as the medium of action. It is this indispensability of the pabulum to the *manifestation* of life, that renders it worthy to be reckoned an element in its *causation*.

Since life in its perfect condition is nothing more than the process of reproduction going on in the germ, it is evident, that the pabulum to become the object of the actions of vitality, must contain the elements of the germ in which vital actions are in progress; and consequently, also, of the whole structure which the germ can produce.—Accordingly, those elements which disappear and become assimilated from the pabulum during the process of organization, are found again in the organized body, which results; and they constitute its whole mass. Consequently nothing is *produced* by the agency of vital processes. There is no creative power attached to them, but through their influence, merely a change takes place among the ultimate particles of the same thing; causing it to present different sensible qualities, and adapting it to assume different natural relations.

Indeed, this substitution—change—is all that man can perceive in nature; and all that he can know about her or study, are the laws of change as they operate in Physics, in Chemistry or in Vitality.—There is nothing added, nothing subtracted;—no annihilation, no creation.

### CHAPTER III.

Distinction between Vital and Chemical actions—Cellular Phenomena—Production of the secondary and other germs—not chemical but vital—Must be a perfect adaptation between vital action and the formation of the structure.

The changes wrought by Vitality are molecular in their character. The attractions and repulsions originating them, operate at insensible distances. And the actions themselves, consist of a change of relative position, and the ultimate elements going to form the resulting structure. Thus far vitality resembles ordinary chemical action. Certain chemical re-agents being placed in particular relation with each other, motion is induced among their ultimate particles, which results in their assuming such new and peculiar relations, that a compound possessing specific properties is produced,—so, also, the agencies or causes of vitality, being brought into peculiar relation with each other, changes ensue which also are molecular in their nature, and result likewise in the formation of a compound.

But the structures resulting from the operation of chemical and vital action show points of difference which indicate their formation by processes widely different. The first is the result of processes begun, and directed according to the laws of inorganic matter, while the latter compound derives its origin from the operation of laws pertaining to vitality or the formation of organized structure.

These laws, in their operation, exhibit many features of similarity, but there are others which indicate their entire distinctness. Thus, the compounds resulting under the operation of each, are composed of molecules; each molecule, itself being a compound and made up of ultimate elements which go to form the whole structure. And the compounds themselves, both organic and inorganic, are only an aggregation of these molecules. The only difference which can exist between chemical and vital action, consists in the manner in which the primary molecules are formed.

The elements of an inorganic compound, being presented to the requisite agencies, all the molecules are formed at once and directly, by the immediate union of their elements. But there can be no conditions presented, under which the elements of an organic compound would thus directly combine and form the living structure. Not alone, are the elements of the organized structure in the pabulum necessary, but also a germ,—itself a molecule from an organized compound and consequently, containing all the elements of the whole,—before the molecular actions of vitality, can be brought into existence. The germ submitted to proper influences, becomes the subject of action in

its elementary components, and assimilates the pabulum presented to it; that is, converts the elements of its own structure, which are within reach of its operations, into other molecules similar to itself. By a constant continuation and repetition of these actions, the perfect structure is at length eliminated. The office of each molecule is therefore to reproduce its kind. And the whole action and phenomena of vitality, abstractly considered, result in reproduction.

The difference between chemical and vital action in the mode of producing elementary molecules, implies a corresponding difference in the manner of their aggregation into a mass; for where molecules are not formed immediately, as in the reproductive actions of vitality, there of course can be no immediate aggregation into a perfect body.

The sensible result which indicates the presence of vital actions in a germ, is the production of a cell or vesicle. A cell is first observed in the shape of a raised membrane, on the surface of a germ, which has been compared in appearance and relative position, with the germ, to the crystal of a watch—rising with a slight curve from its face. The young vesicle thus arising, increases in size till the germ becomes a mere speck in its walls. Within the cell are other germs, which in their turn become the centre of vital operations, and propagate other cells, within the original vesicle.

Now the question arises, how are these secondary germs formed? The first, or parent is derived directly from an organized structure, and under the influence of certain natural agencies a vesicle was produced by it. It has been supposed that the parent germ is granular in its structure, and that the effort of vitality which results in the production of the first vesicle is confined to a single one of the granules, and the cell which results in enlarging, incloses the remaining granules. They, subsequently, in undergoing the process of life, form cells within the parent. This explanation of the phenomena of vitality is by no means sufficient. If this were *all* of vitality, the process of organization must soon cease, from a want of granules. New germs must be produced in the process of organization, in order that it may be furnished the conditions of its own continuation. The questions now arise:—

1. Whether the secondary germs in the cell of the parent, are the result of the vital actions, implied in the transformation of the first germ, produced through its operations, from the pabulum, or,

2. Whether their structure did not exist in embryo, in the parent molecule, and become merely developed, through the influence of stimuli, and actions operating in its metamorphosis, or,

3. Whether, again, the conditions of vitality operating on the parent germ, may not become the means—through the molecular operations of life itself—of presenting certain other conditions, under which the elements of the primary germ, existing in the pabulum, may chemically combine and form a compound, according to laws of chemical affinity, and in this manner all germs, subsequent to the parent, be produced.

The truth or falsity of any of these suppositions can never be directly demonstrated; for the tests which may be employed are of so

delicate a nature, that the senses cannot possibly take cognizance of them. Nor indeed is it of paramount importance that such knowledge should be obtained, except it be as a matter of mere satisfaction, in regard to the facts, for the production of the germ in either of these ways will not in any way interfere with what is known of the laws of life, after the germ is produced.

Certain considerations, however, seem to indicate which of these modes of formation is the true one. It is not more reasonable to suppose that the nuclei of the secondary formation of germs, exist on the parent, than it is to suppose that the nuclei destined to become the tertiary formation of germs, exist also, upon the parent, in the shape of nuclei upon nuclei. And that *these* nuclei, contain upon themselves nucleoli, of a *fourth* formation, and so on till the whole structure of an organization, is found existing in the present germ, and the pabulum merely containing their elements, and must be presented, only, that they may swell, and grow and develop. This evidently must be absurd. The idea of a germ containing in its own body the elements of all the succeeding germs, is absurd, also, in other respects. It implies, that each succeeding germ is not so perfect as its predecessor, containing the elements of one germ, or family of germs *less*. This is not the fact, so far as can be known, for each germ, no matter what its number may be in the series, is fully adequate to produce a perfect structure.

Such an idea, also implies immutability in the course of life, which is to ensue. This interferes with the fact, that successive germs may be modified in their character, by certain extraneous influences, operating along with the stimuli of life.

In this connection it only remains further to remark—as in respect to the theory of the granular structure of the germ, that even if the parent germ does contain in itself nuclei of a secondary or even tertiary formation, yet there is a period when new nuclei, the embryo's of perfectly developed germs, must be formed; and these must result either from actions vital, or chemical.

It has long been the opinion of many, that the laws of chemical affinity, have much to do in the formation, and sustenance of organized structure. But if they possess any influence whatever over the organizing process, they act in a very subordinate sphere, depending as they do, altogether upon the actions of vitality, to furnish the conditions of their activity.

That those actions of vitality which result in the transformation of a germ into a vessel, may have such an influence on the elements of the structure in the pabulum, as would cause them to unite chemically, into other germs,—which, in their turn, may be come subject to the influences of vitality, is possible. But, still, there are various considerations which render this highly improbable.

Were it true, that the actions of life afford conditions under which inorganic matter in the pabulum, may be thrown into such relation with itself, in its ultimate particles, that they unite into organized germs, influenced by the ordinary laws of chemical affinity, germs which, themselves, are similar to those acted upon by vitality, and

competent to originate living structures—there is a high probability, out of the infinite variety and concatenations of circumstances, effected by the mutations of Time in his course, influences would accidentally be brought to bear on inorganic matter similar, in *effect*, to those effected by vitality—though in *fact*, different—and cause the formation upon the principles of inorganic chemistry of a perfect germ.—Of course, it must possess the properties of that kind of germ the influence of whose actions, in a state of vitality, the accidental concurrence of circumstances simulated.

Here then is a perfect germ, sufficient, under the proper influences, to begin the actions of vitality, and end in the pro-creation of an organized structure, though it is not, itself, the offspring of any previous process of life.

Such an accident, however, has never been known to occur; and, considering the age of the world, the probabilities are that such cannot occur. Fabulous history, indeed, treats of men who have crawled from the earth, perfectly formed. But the existence of such fable is evidence of the want of any semblance of fact.

It is, moreover, highly improbable that, when nature has ordained a particular and complicated process for the growth and decay of the living structure, in the formation and destruction of cells, the finer and more mysterious process of vitality, the production of the germ, should still be left under the control of the grosser laws of inorganic matter. Reason and the faint glimmerings of light which experimental research has thrown upon this subject, seem to indicate that the reproduction of the germ is the result of the process of transformation, in the primary germ, by which it becomes a cell, and that the two results, the production of the previous family into cells, and the formation of a new family of germs, are the effects of the same series of vital operations.

Life, once commenced, cannot *continue* in the new germs by the influence or operation of any such mysterious power as the "Vital Force." The same conditions which operated in causing reproduction in the first germ, are essential to the reproduction of those which follow. That the same agencies operating on the same material should in every instance produce the same result, is not wonderful. It is only an exemplification of the universal truth, that similar causes effect similar results. But, why it is that the result of a series of vital actions on one germ, should invariably be the production of another germ similar to the parent, instead of some other structure, containing the same elements, is not *manifest*, because vital action is too minute to convey any perception of adaptation between it and the structure it produces. But that such adaptation exists in perfection, is evident from the result,—the uniformity of which, shows, that precisely the *same* series of actions are employed in the formation of each cell and germ.

Just so, a particular series of actions, directed by the skill of the craftsman, upon proper objects, will always result in the formation of a particular instrument. In this instance, it is true, an adaptation between the actions employed, and the structure formed can be perceived, but, although more gross in character, it cannot be more perfect, than that which exists between the actions of vitality and the production of a germ. For the result is not more uniform, nor, can the actions be more complicated,

## CHAPTER IV.

Life manifested under two aspects—Simple—Heterogeneous—Illustrations—Explanations—Heterogeneous vitality a deterioration—All life is *essentially* simple and alike.

Life, wherever exhibited upon the face of nature, is either simple, or heterogencous in its manifestations. Simple life, is such as is exemplified in any structure, the formation of which, depends upon a simple repetition of the *same* actions, in a single kind of germ; thus producing a structure entirely homogeneous in its composition. An heterogeneous exhibition of life, is such a variety of distinct vesicular actions, as results in the formation of a definite structure, made up of a variety of parts.

Simple life, consists in each germ merely reproducing itself, till a fabric is produced, the whole of which, is composed of precisely the same elements, as is each particular molecule. It follows, that each molecule is capable, being submitted to its natural conditions of vitality, of reproducing the whole structure. Such is the action of life in its simple, and perfect form, and as it is approached in its simple form, from its exhibitions in more complicated structures, its *natural* conditions are perceived themselves to be *essentially simple*, as complications, and addenda disappear.

Occasionally, in simple life, the pabulum is in direct contact with the germ, without being brought into such relation, through intermediate agencies; and the stimuli of life, are, at the same time, more general, in character.

It is quite possible, that the production of yeast, is a vital operation; and as such, may be regarded as an example of simple life. Thus, to a particular solution, containing the elements of yeast, add a small portion of that substance. Under the influence of temperature and other causes, motion is induced in the yeast germs, which results in the assimilation by them, of their elements in the solution. The elements of yeast which existed in it, in a particular form, disappear, and assume the form of organized structure.

Life is propagated in this instance, not through the complication of a seed, or any peculiar apparatus, eliminated specially to start it into existence, but, by the simple reproduction of any one of the germs, which go to form the mass.

A little higher in the scale of vitality, life is manifested, not merely by the simple reproduction of the germ; but the germs and cells become aggregated together, during the process of reproduction, in such a manner, that the resulting compound becomes a structure of a *definite* and *peculiar* form. Such compound, in every instance, corresponds in shape and appearance, with the peculiar kind of germ employed in its formation. The same species and genera of germs, always producing a corresponding species and genera of compounds, which are knowu

by a peculiarity of conformation and appearance. So that the kind of seed or germ being known, it can be predicted with certainty, from observation, what will be the character of the resulting structure. So *unvarying*, and *definite*, is the peculiar conformation of separate species in the vegetable kingdom, that it has become the basis of the science of Botany.

The reason why a definite compound, possessed in each instance of *constant* physical properties, should arise from the molecular aggregation of the germs producing it, is not clearly understood. Something similar is observed in inorganic chemistry. The molecules of all inorganic salts or compounds, exhibit a tendency to aggregate together, in a *peculiar* manner. Through the operation of this disposition to *peculiar* aggregation in its molecules, each salt has its peculiar crystal, consequently in many instances, the salt being known—that is, the composition of each of its component atoms—the arrangement which these atoms will assume towards each other, or the *crystal*, can be foretold, and on the other hand, an examination of a crystal is often sufficient to determine the composition of its component atoms. So universal is the fact that each particular sort of molecule, or germ, aggregates to form a compound possessed of constant properties.

Although the aggregation of the molecules of organized structure into a definite, and the instance of the same molecules, a constant form, cannot be regarded as *identical* with crystalization, or perhaps, even *similar* to that process, it is certainly analogous.

The structure of yeast, [probably] exemplifies, that life may exist, and produce its results without any tendency on the part of the germs, to become arranged, perceptibly at least, in any definite shape. Just as inorganic compounds may and do exist without any tendency to crystalization. But as a general proposition, it may be said, that there does exist a tendency in the germs, and cells of inorganic compounds, to arrange themselves in a peculiar, and,—in accordance with the elements of their composition, and the laws of their development, an unvarying manner.

Organizations, though possessed of this definite structure, may still be homogeneous in their elementary molecules. The simple structure of compounds is evinced, by their capacity of simple propagation through the instrumentality of germs, directly excised from the mass. In homogeneous structures, a fragment, or germ, separated from the body, and submitted to influences and conditions, congenial to the life of the species, will assume the relations of vitality, and reproduce a new and perfect structure, according to its kind. Each germ, containing in itself all the elements of the whole, by its simple reproduction, the whole may be reproduced. In Heterogeneous compounds, where the mass is made up of a variety of distinct structures, no *one* germ can, under its own influences of vitality even though exercised in perfection, reproduce the *whole* body, but at best only a single tissue of it.

Many vegetable substances, furnish examples of homogeneous vital action, in their mode of growth and propagation. Parts taken from

the body of certain species of moss and Leichen and submitted to influences congenial to their vitality, will assume its actions in their germs, and reproduce the whole plant.

Life is also displayed in its simple form, in the production of certain animals,—parts of whose bodies may be removed from the rest, yet, remaining, under their original conditions, in other respects, perfect structures will arise from each of the fragments. Such is the truth in regard to many polypi. The Hydra, or fresh water polypus may be divided into as many as fifty pieces, and yet each, is able to reproduce by *simple* vitality the perfect structure of the animal.

This polypus extends its species, naturally, in a very simple and interesting manner. Small buds appear upon the body, which enlarge and develop into shoots. These eventually become separated from the parent, and assume the relations of independent bodies.

The phenomena of buds in plants may perhaps be regarded as an attempt on the part of the structure, to reproduce itself in a similar manner. But on account of the greater complication in the conditions of vitality, requisite to the production of compounds not simple in their organization, such attempt fails. Buds, and the twigs resulting from them, not being presented to the elements of their structure, in their contact with external air, cannot in consequence, draw their nourishment from without; therefore their connection with the parent cannot be severed, and they remain as appendages, and draw their nourishment from it. Still these buds and twigs, if removed from the parent and submitted artificially to the elements of their structure, and circumstances congenial to the growth of their species,—like the fragments of the hydra—will, each one, reproduce a perfect structure after its kind.

Although there is a failure on the part of the plant to reproduce itself in this manner, such failure cannot be considered as morbid, or injurious, since it becomes the means of furnishing the structure with certain organs essential to its health, and further development, while other means are provided for propagating the species. Though structures which do not extend their species by simple extension of their own bodies, must be regarded as more or less compound in their nature, yet in their actions, it ultimately appears, how closely they approach to homogeneous compounds.

Certain conditions being requisite to occasion vital action in a germ, it is evident from the laws of causation, that the same conditions being always present, similar actions must necessarily follow: while if any modification is presented in any of the essential conditions, either life will not ensue or its character will be correspondingly modified. Now life in heterogeneous structures, presents many wide apparent differences from its elementary type. The structure is not composed, merely, of an aggregation of a single kind of molecule, but consists of a variety of *tissues*, each being produced from its peculiar molecule, and approaching in individual composition, to the type of simple structure. Yet they are so interwoven in structure and function, that each becomes necessary to the existence of the rest:

and thus all become necessary to the formation of a perfect compound.

Much complication is implied in the conformation of any structure, within the bounds of which, the pabulum and many of the stimuli of life must be presented to so many and different tissues; and in which the actions of increase and decay in each structure, may proceed without confusion. The laws of formation, and increase, in such complicated organizations, are illy defined, if known at all.

Every living thing, whether it be the simplest plant re-producing itself by simple extension of its own structure, or the most complicated animal, or vegetable body, has its origin and fountain in a *single* germ. How is it, that, from this germ, whose natural vitality consists in simple reproduction and extension of its *own* species, there should originate, under the influence of vital action, a compound, of *many separate* and *peculiar* tissues, or simple structures, not one of which, probably, possesses the properties of the parent germ.

Since the result of the natural, and perfect actions of vitality, is the re-production of the species, life cannot assume a higher function than this, and do *more* than reproduce organic structure. There can be no actions *more* than *perfect*. Hence, if any modifications occur, so that the germ does *not* reproduce itself, the structure formed, must be regarded as the result of a *deterioration* of action,—a falling short in the attempt at reproduction. This will manifestly depend in amount, on the difference between the *natural* conditions of life, and those, under the influence of which, its actions have actually occurred. If conditions widely different from the natural be presented to the germ, no action ensues. If agencies more congenial to the kind of life to be originated, but which still fall short of the natural, be presented, life may result, but not perfect in its action. A germ similar to the parent will probably be formed, so far as its development goes—but it will differ according as its conditions of existence, its stimuli and elements differ—whether the difference be considered merely to consist, in inequalities of development in the *same* elements, depending on modifications in the stimuli, or in differences in the perfection of the structure, depending on the presence of elements, *differing*, in some way, from the perfect and natural.

There is every probability that a more or less perfect development, comprehends all the difference that is known to exist between germs of the *same* species. This imperfect development consists in either stopping short of the progress of the germs before they are perfectly formed, or in the absence or imperfect qualities of some of the usual elements natural to their vitality. Still all of the same kind of germs are perfect so far as the stimuli applied, or the qualities of the pabulum presented, will permit.

The kinds of modification which may exercise an influence over the actions of vitality in re-production, are, therefore, two: Modifications of stimuli, and modifications of nutrition. Under the influence of the former, the character of re-production may be so affected that it becomes imperfect, in the *extent* of its development, but still, as far as it progresses, the same processes are originated, that were in action during the formation of the most perfect germ; while, under the influence of the latter, re-production is modified by the re-

sulting germs receiving into their substance elements differing in some respects from those found in the parent. Yet such germs are similar to their parent, so far as the elements of its structure are found in them and their development will permit. Considered, therefore, as the result of *re-production*, they are *imperfect*, but considered as isolated, and *new* structures, they may be perfect, possessing the power of reproducing their own structure even to the formation of a perfect tissue. It is possible that a new, and modified germ thus formed, might have *its* peculiar conditions also, so modified in one or both of the foregoing methods, that its vital manifestations might result in a structure, not only modified with respect to its parent, but so modified that it would present still *less* of the properties of the *original* germ, than its own progenitor—and thus, by a series of similar phenomena, tissues at length ensue, entirely different from the primary germ, and composed of germs which *it* could by no means directly produce.

Now the Histological transformation in a body, whether animal or vegetable, which results in the formation of a heterogeneous compound, is doubtless the consequence of an application of modifying circumstances to the conditions of vitality of a primary germ; or, perhaps the modifications are rather presented to the secondary formation of germs, which result from a *perfect* manifestation of vital actions in the parent. The reproduction in *these*, differing in this character from each other, and from their parent—becomes, either directly or through the intervention of a *series* of modifying conditions, applied during the initiatory period of life—the foundation of the several tissues. After germs are eliminated in this manner, by a compound process of vitality, which are fitted to become the parents of the separate tissues, the tissues themselves result from a *simple* manifestation of life in them—merely the re-production of the germs.

The different tissues, are probably the result of different conditions of vitality, applied to the same kind of elementary germ. This kind of action of course cannot be the usual, natural action of vitality, abstractly considered, but is perverted and in some way imperfect. That it is deteriorated, may be inferred from the fact, that there is no kind of probability, that one of these modified germs, though in a great measure derived from a parent, could, on account of its involved conditions of vitality, even re-produce the parent. And hence the necessity on the part of the tissues, of making a *common* effort, by which a primary germ, in the shape of a seed, or animal spermatozoon may be eliminated, in order that the *whole* organization may be re-produced.

The formation, then, of several tissues in one structure, and of certain structural diseases, are the result of an heterogeneous manifestation of vitality.

## CHAP. V.

Organized bodies are animal or vegetable—differences between them are not real, but in appearance only—do not occur as though indicating a radical difference in organization, but with reference to the convenience of the body after it is formed—vitality is an unit—differences in the character of the structure do not rise from difference in vital actions.

All organized structure, exhibits properties which indicate its natural classification, to be within one or the other of the two great kingdoms, Animal and Vegetable. And life, in all instances resulting in the production of structure belonging to one or the other of these kingdoms, has been divided into vegetable and animal; as though there should be a radical difference between the actions of vitality resulting in the production of two different kingdoms of organized compounds. Indeed, such an idea cannot but appear reasonable, when the distinct and unchangeable properties of the two classes are considered. Yet, upon examination, it will be found, that the radical conditions of vitality, are, everywhere, *the same*. The germ, the stimuli, and pabulum, are essential equally, in animal and vegetable life, and the most *essential* difference between the two will be found to arise from *peculiarity in the circumstances*, in which the natural conditions of vitality are brought into operation. But in the higher orders of animal existence a farther difference is caused, by the *extra exertion* of vitality and its laws, to produce a superior structure.—Though as far as these laws can be observed in operation, in accomplishing such task, they may readily be uninvolved, and reduced, to appear as *modifications* and *deteriorations* of the simple laws and conditions of vitality.

The formation of the complicated human body is only the manifestation to its uttermost extent, of the same power, which operates in the re-production of homogeneous vegetable or animal structure. But the more complicated the machine becomes, upon a taxation of the skill of the mechanic to the utmost—the more involved the structure is—the easier it will become disarranged, and cease to perform its office. Thus, the human body, possessing an organization the most complicated and beautiful, though vitality has done its utmost to accomplish perfection in its formation—how frail! how delicate! How easily the chords which waken its action, though tuned in sweetest harmony, are unstrung! How harsh the discords of erring morality, how melancholy the plaintive tones of an intellect destroyed, and oh, how sorrowful, when all its songs have ceased, to see so sweet a harp, so sweetly tuned, silent, *forever!*

An apparently wide difference, in the properties of animal and vegetable structure, consists in the different kind of pabulum employed by each in the actions of vitality. Animal bodies use for their nutriment, such elements of their structure as are presented in bodies already organized; while the vegetable derives its nutriment directly from the earth. This distinction is not so wide, perhaps, as would appear from the simple fact stated. The fact, that while in

the embryo state, all animals and vegetables are *alike* nourished by organized pabulum,—the seed containing within itself, beside a germ, the pabulum by which, the primary manifestations of vitality are supported—shows, at least, that there does exist a tendency between the two kingdoms, to approximate towards a unity of vital conditions. It would seem, to denote the possibility that those conditions of existence, in their more mature development, which appear so diverse, may in fact, be so, in great measure, only, in outward appearance.

The difference between these kingdoms in nature, cannot consist in any material difference in the elements assimilated by them. The elements which the animal finds in the vegetable, are precisely the *same*, which that structure had presented to its germ, while undergoing those processes of vitality, which resulted in its organization. Hence, the animal kingdom, in its whole extent, contains *only* such elements as are to be found in the vegetable. These elements, however, no doubt, differ in each animal, from those in any single vegetable, being culled from many different structures. If the elements of the animal tissues, therefore, are found in the vegetable structure, they must exist in the earth also, where the vegetable finds its elements. Consequently, the peculiarity of the animal in not deriving its element directly from the earth, instead of indirectly, through the medium of other organized structures—cannot be considered a deficiency in the earth of the elements of animal tissues—but as indicating a want of adaptation in it, to the convenient application of such elements, to the wants of animal existence.

Hence the difference in the manner of applying the nutrient material to the animal, and vegetable, may be regarded rather as a matter of convenience to the animal, than as a matter of essential distinction between it and the vegetable structure. This difference, however, has led to the conclusion that nothing but organized structure can possibly fulfil the conditions of animal existence. And thence the conclusion that something more mysterious, more exalted exists in the process of vitality, as exhibited in the animal, than in the vegetable kingdom, as well as something radically different; because, it is supposed, matter must undergo a double organization before it is fit to become part of an animal body; once in entering into the shape of a vegetable, and again in the transition from a vegetable to an animal structure. But there is no evidence, that organized structure alone, is fit to become the pabulum for animal bodies, except the fact that such structure is invariably used for that purpose. This merely indicates that such structure is the only *convenient* medium of presenting a pabulum to an animal body. Infinite Wisdom deemed it most convenient to implant vitality among the crude matters of earth, that through its operation, organized structures would result, such as would supply the necessities of the more exalted organized bodies, exalted, not in *organization* but in *function*.

Those parts in the animal, which correspond to the roots, and their radicals in vegetables—for the purpose of facilitating a more perfect relation between it and the world of matter surrounding—are ar-

ranged in a manner differing from these, in the relation which their position assumes towards the rest of the structure. In the vegetable, the absorbing surface is external and diffused, so as to be capable of acting upon a large surface, and selecting nutriment from a great mass. In the animal, on the contrary, it is situated internally, so that whatever is applied to it must be taken into the body.

The impracticability of presenting a huge mass of inorganic material, containing the elements of the structure, sparsely disseminated, to such an absorbing surface, is evident ; while the concentrated form, in which such elements are presented in organized matter, obviously points out that, to be a convenient and suitable source from which to assimilate them.

The difference, then, between the animal and vegetable, in respect to the pabulum employed by each, exists in appearance only—and the distinction between them, in structural appearance, and the location of organs, implies nothing essentially diverse, but exists only in reference to the functions and destiny of the body, *after* it is organized. The animal is provided with a stomach, which shall not be cumbersome by bulk, or situation, to impede locomotion and prevent variety, in relations between the body and the external world, in order that it may fulfil a peculiar destiny. The vegetable is destined and designed to furnish the means of subsistence to the animal. It, consequently, is furnished with outspread roots, and fixed durably in the ground that it may be able to assimilate, by a *constant* exercise of its vital properties, such material from the earth, as will be requisite to afford nourishment and conveniences, to the animal kingdom.

The more *obvious* distinctions, which exist between the more perfect structures of the two kingdoms, in their functions and sensible qualities, after their formation has become perfect, by means of vital action, deserve a passing notice. And this, more especially, as these distinctions appear so marked, that they have been thought to imply a corresponding difference in the characters of the vital actions which organize them. In the human body, as already remarked, vitality is tasked to its utmost, to produce a complicated and perfect organization. And when, in it, voluntary motion, and evidences of thought are perceived, it should, by no means, be concluded that the character of vitality, in organizing the animal, and its character in organizing the vegetable, are different ; but only, that its powers are taxed to a greater extent in producing the animal—which results, in its forming certain structure, in it, which are not found elsewhere ; and this is strictly true. Certain organs and instruments are found in the animal, which are not found in any vegetable, and it would be a libel on the wisdom of nature, to suppose that peculiar organs should be formed, and there not be a corresponding peculiarity in the nature and functions of the animal instruments of locomotion and thought, as formed in the human body, consequently it thinks and moves. They are denied to the Oak, and, *of course*, it remains stationary, and without intellect. Just so, certain tissues, and vital processes, existing in the Palm, enable it to become the most stately of all trees—but being denied to the

simple Moss, it must remain the humble parasite. The distinction is not in the *character* of the vital processes, but their *extent*, and complication. If the Oak could think and move, like the human being, without possessing other organization than it does—or if the humble Moss, with its simple tissue and conditions of vitality, could rival the Palm, possessing variety and complication of tissue, then, indeed, it would be reasonable to suppose that there must be some distinction in the intimate nature of vitality itself. But the law is universal, that where there is a difference in the number and *perfection* of tissues, there are always differences in *function* to correspond; while no differences in function or properties can exist, without such difference in structure. Consequently, the conclusion is irresistible, that there is nothing peculiar in the *character* of vitality, anywhere, which stamps upon its products in one instance, pre-eminence over others in other circumstances; but its character and conditions are the same in reality under all circumstances, consequently, any peculiarity in pre-eminence of structure or properties, existing in one compound—as in the human body—not found in others, cannot be attributed to any difference in the radical character of the actions of life forming it, from those producing all other organized structures.

There are certain complications and properties, belonging to the human body, which render it necessary that a peculiar reservoir should be provided within it, to receive the necessary elements of its structure, in order that the various tissues may have their pabulum presented to the actions of life going on within them. The system of blood vessels is such a reservoir, and the blood itself is a pabulum containing the elements of all the various structures. The object of the circulation of the blood, is to present the whole mass of that fluid in detail, to each of the tissues, when each may select its proper elements, through means of its vital operations, and the remainder of the fluid pass on to be assimilated elsewhere.

It was intended to enter into detail on the complications of vitality as displayed in the human body—in their generalities—but as they are not essential to the understanding of the laws of life operating in it, or indeed elsewhere, it is deemed best to decline the undertaking at present. If it should appear that the remarks on Vitality, already submitted, are favorably received, it will then be time to finish this subject, and also to submit some reflections on the subject of the Production and elimination of the seed, the germ, and spermatozoon—the conjoined effort of all the tissues forming a Compound Structure—and, finally, to remark concerning the phenomenon and causes of decay and death, in the world of organized matter.

## PART II.

### CHAP. I.

Man, Characterized by the Functions of his Body; not by its Elements or Vitality.  
—Mind—Its Characteristics and Powers—Cannot depend upon the Body for Existence, or Duration.—Character of it, in connection with the Body, not known.

In the present investigation concerning the Theory of Human Existence, it has already appeared that man cannot owe his pre-eminence of character to any peculiarity of elements of which his body may be composed; for such elements are the same as are found in the inanimate kingdom of vitality, and are derived by it, directly, from the unorganized body of the earth, and other elements surrounding, and upon it. Neither does it arise from a superior character of vital organization; for vitality, in its essential conditions, is an unit throughout the known world: and though its conditions are *infringed* upon in the formation of numberless structures, yet *radically* they are always the same, and the minor modifications which it undergoes are the result of a deterioration, a degeneracy of action.

Now, if the superiority of man cannot be found in the elements of his structure, nor in the molecular actions, which arrange, modify, and subject such elements to the influences of vitality, where does it exist? The primary office of life, is to produce an organized structure; and this office is fulfilled by the direct operation of vital actions. The secondary office is to produce such structure with properties capable of causing it to assume certain specific relations with the world of matter at large, and become the instruments of certain agencies. *This* office is not fulfilled by the actions of vitality, directly, but by the actions or functions of the structure, *after its formation*. The structure itself, however, being the result of vital action, *its* functions, or *primary* offices, are said to fulfil the *secondary* offices of vitality itself. [Part 1st, Chap. 2d.] It is therefore in the *function* of the structure, and not in the production of it, that those actions are to be found which characterize it. Now, the functions of a structure will differ with its complexity and multiplicity, and perfection of organization, and the circumstances under which it is placed. A structure can have no special function, when the structure is not adequate to it. A compound not possessing in itself, an organized structure, which has a peculiar function, cannot be expected to exhibit such function. [Part 1st, Chap. 5th.]

Between the animal and vegetable kingdoms, there are many differences. The animal has a stomach, and a peculiarity of pabulum, but these are found not to be radical differences, but merely distinctions in form and appearances, for convenience sake. Hence, so far *these* distinctions go, the differences of functions between the two cannot be remarkable. But, in addition, the animal is found to possess one structure which is nowhere found in the vegetable kingdom. Consequently it must cause a radical distinction between the two kingdoms, in function, so far as *its* properties are manifested. That distinguishing structure is the Nervous System; and upon close examination, it will appear, that all the other great and wide apparent differences between the two organized kingdoms of nature, are such as are adapted to furnish the conditions to this structure of exercising its peculiar properties, with the greatest possible freedom.

The peculiar functions of the nervous system throughout the whole animal kingdom, as evinced to the senses, are to produce voluntary motion and thought. This is known to be the fact, because wherever there exists a nervous system, in a body in health, motion, alone, or conjoined with thought also, is existent; whenever it is absent, neither the one or the other, as originating in the body, are ever observed. It is not designed to trace the developement of the structure and function of the nervous system, throughout the whole range of animated nature; noting its first effects in the automatic movements of the lowest of the animal creation, then its more advanced progress in the instinct of some of the higher animals, and, finally, its perfect developement in the human body; being there suitable to become the instrument of all the complex and sublime workings of the human mind. Nor is it contemplated to draw a line of demarcation, between the instinct—or possibly it may be the reason—of some of the higher of the brute creation and the human intellect, and define their differences. But the object is to seize upon the mind as it exists in the human body, and examine some of its chief characteristics and powers, in order to determine its true character and destiny.

What is the character of the connection between mind and body? The glandular system is the result of vital action, like all other organized structures, and it has its function, which it performs regularly while in health. Through its operations, secretion is performed. The absorbents, also, perform their function, and absorb; and so of all the several structures of a body. In some way, they have a natural duty or function, which they perform. Now, through the instrumentality of the nervous system, we have the phenomena of the Mind. Is the manifestation of the mind also a *function* of the nervous system, growing with its development, strengthening with its exercise and increase, and perishing eternally with its destruction?

Nothing is more evident, than when a force, in Physics is dependent for its existence, upon the structure and action of a machine or engine, that such force can never exceed the utmost power of the machine itself, that it cannot show evidence of an ability to operate

with more power, than the engine has power to impart to it. Neither in the exercise of a particular function, can the exercise of such function be greater or more powerful than the capacity of the structure, which is the agent in the operation. The secretion cannot be greater than it is possible in the nature of things, for the gland to secrete. Neither can there be more absorbed in a given time, than the absorbents can take up. Such propositions are self-evident; any assertion to the contrary would be ridiculous.

When phenomena arise, and it is found the causes to which their occurrence have been attributed, are not adequate to their production, such causes must be relinquished, and some other sought after. Now, the nervous system is not adequate to produce all the phenomena, of which the mind is capable of being the instrument. We see evidences of the power of the mind while in connection with the body, to perceive and comprehend more than can be presented to it through the nervous system. It is, therefore, greater than the nervous system itself, and consequently cannot depend upon it.

It is known from experiment that the mind is *capable* of receiving impressions, while in connection with the body, which cannot be presented through the naked and unassisted powers of the nervous system.

The unassisted eye can present to the mind, in a drop of vinegar nothing but the round, glistening, homogeneous liquid; but bring to, the assistance of the nervous system, artificial aid, view the same liquid through a microscope, and the mind will then perceive it to foam with the restless activity of numberless animated bodies. The senses of man, acting through the powers of the nervous system *alone*, could never have perceived the hidden glories of the heavenly worlds; but assisted by the aid of the telescope, it is enabled in some measure, to appreciate the grandeur of the universe, *and its own power!*

Not only is the mind capable of thus *perceiving* more than its unassisted instrument, the nervous system, can present to it, but after such perception of things, hidden and beyond its utmost ken, as operating through its natural earthly instrument in its utmost perfection, it can retire within itself and *conceive* of all its impressions, thus artificially received, and reason about them. This indicates that it is by no *violent* or *straining* effort, that it grasps knowledge, which, *apparently*, is beyond its natural powers of comprehension. So far as experiment has gone, it has seized readily, the sublimest and most intricate facts. And the more distant the knowledge, the more disconnected and removed from the powers of the human body, the more sublime and expansive has it appeared, and more *congenial* to the powers of mind. And when, at length, the boundaries to human knowledge do appear, and the *instruments* of the *human* mind have been taxed to their utmost, and all the devices and ingenuity of the man's cunning have been exhausted, the *immortal* mind, spurred on by the impulses of the soul, so far from being sated or wearied by the knowledge it has attained, sends up its longing cry for still more knowledge.

Such boundaries are not boundaries to the *power* of the mind, but are prescribed by the imperfection of its instruments.

The mind, then is not the result, nor the instrument, of the nervous system, but the nervous system is the imperfect instrument of its manifestation. It is not *less* than the nervous system, but *greater*. The nervous system is not adequate to the production of all the phenomena of mind in the human body. Consequently the mind cannot depend upon it for existence; it can act independently of it, and in more perfection without it. It may therefore exist independent of the body, and does not perish with it.

Why it is connected with the body is not known, only so far as it is evident, that, in order to fulfil its destiny, it became necessary that it should be brought into relation with matter, and—to accomplish this, it was necessary that it should act through matter. This, of course, involves the idea, that the mind is immaterial; for, if it were not, where would be the use of its operating through matter to get at matter? But being immaterial, it could not be brought into relation with matter, except through the instrumentality of other matter. Its immateriality can never be directly demonstrated by man, as his instruments of demonstration must, of necessity, be, themselves, material.

With regard to the connection of mind itself, and its instrument, nothing is known. But that it is peculiar and extraordinary, may be inferred from the fact of the great complication of agencies and conditions, by whose operation this instrument is formed. Viewing the subject subordinately in its instrumentalities, it would seem as though the whole world was created to furnish the conditions of the existence of the mind in the human body, through the instrumentality of the nervous system, that all things exist for the perfection and complete development of the nervous system in man.

The narrowness of the sphere in which the mind is obliged to act, in connection with the human body, compared with its evident powers and desires, indicates that this body is not its fit instrument, and that this world is not its own home.

## CHAPTER II.

The duration of mind—its immateriality and infinite capacity.

There can be no human idea of death, except in connection with the idea of organized bodies and the processes of vitality, producing and sustaining them. Neither can there be any conception of annihilation, but in connection with matter in some form. Now, the Mind is not dependent for its existence, and powers, upon the existence of organized structure, and molecular actions of vitality operating within it; consequently, it cannot die. And also, so far as any evidence goes, which will bear on the subject, it is immaterial,

not composed of matter, consequently it cannot be annihilated. It therefore, so far as the human intellect can possibly reach, is immortal. The human mind possesses no landmarks by which it can possibly conceive of any period to its existence, or any mode of its termination. *Human* beings, therefore, must concede the mind to be immortal, for they can conceive *nothing else*, in regard to its duration.

The evident tastes and longings of the mind, are also collateral evidences of its character. It loves to dwell on conceptions which stimulate the infinitude of immortal topics. In connection with the body, it is known that it cannot conceive of space, duration or any other element of the Universe, in any other way except through the body, either directly or indirectly; consequently, when it attempts to conceive of things as belonging to eternity, it at once finds itself comparing together *finite* things, and soon discovers its inability to accomplish its desire. Still the desire is the same, and it quickly discovers other means to satisfy itself. It loves to dwell on *vagueness*, conceptions of things without *knowing* their bounds, or rather without the ability to know them—*indefiniteness*,—things which may be seen, heard, or felt, in fact, or in imagination, but whose beginning or termination, it cannot comprehend. Ideas, dimly seen, yet not *seized* by the mind—and *inapplicable*—are viewed by it with satisfaction, as *possibly* containing something of unearthly meaning and power.

He who first conceived of the "Music of the Spheres" had a mind just ready to burst asunder the links of mortal bondage, and assume its natural and untrammelled properties. Who has not listened to that music with ear intently bent—presently it catches the low, subdued, and almost silent melody, yet ever varying, but constant, so sweet, so perfect, so heavenly, that though the ear is *strained* to catch its melody, it fills the soul with ecstasy, by the fullness of harmony.—Here the mind receives the idea, so congenial to its powers and aptitudes, and becomes so enamored, that it hears the melody, but is obliged to refer to imperfect human organs in order to gain the divine conception, and though the *human mind* is filled to the very fullest of its capacity, the *divine mind*--the part which overleaps the powers of the human body to convey to it perceptions worthy of its activity—but too well appreciates the fact, that though such conception of melody as could be appropriated by the mind in the body has been received by it, yet much remains behind which it cannot appropriate. And here is the beauty of the conception; not only the beauty of the harmony, which in imagination the mind may hear, but the conception that but part of the song has been heard; how surpassing sweet must that part be which it *cannot conceive of*.

And generally, those things which are most remote from the immediate sphere of human action, as they unfold themselves to the thoughts, or senses, inspire the mind with emotions of delight. Among such is the starry heavens. The mind expands and finds congenial subject of contemplation in the heavens at night, when the Moon's pale beams light up the earth in beauty and adorn the sky, and when

the *great* stars only ornament the wide blue vaults with the resplendency of their light; or when without the Moon, *all* the *little* stars take their stations in the great broad void of space, and look down so silent and calm upon our little home. It delights also in contemplating the Ocean, and the wide spread Prairie, the lofty Mountain, and the great Forest—these are vast and magnificent and congenial to its natural desires. In Oratory the mind is best pleased with the eloquence of him who will place great and vast conceptions before it. It seeks such topics and is grateful to him who furnishes it such enjoyment.

This all shows that the body is not its fit instrument—is not adequate to its powers. And the reason why it does not endeavor to indulge in immortal sentiments more than it actually does, is not for want of desire, but because its instruments are mortal and finite, and it is a constant strain to them to attempt such exercise, and they become fatigued—also, on account of the constant activity about the body, the mind is almost constantly interrupted in some way, through the ordinary senses—and so much is this the case, that it has to become accustomed to carry on its operations in spite of such interruptions.

A manifestation of power is always effected through the agency of instrumentalities, and it will always be in accordance with the capacity of such instruments as become its agents. The instruments of the human mind vary in perfectability in different cases, consequently the powers of the mind would be represented differently. Although the actual power of the mind, abstractly considered, may be the same, or if it does differ in different instances, such difference may be very distinct from that which appears in its manifestation through human agencies. It is easy to conceive that though a mind may be of very moderate capacity as manifested through the human body, it may derive its character from a very inferior instrument, while it may in fact, be superior to another, which by reason of a superiority of instrumentality may appear more powerful in its human manifestation.

There are reasons for supposing however, that mind, in original capacity, is an unit—of equal power everywhere, and *that* difference in its character which is manifested through the body, depends upon variety in the character of its human instrument.

Perhaps there are no two human bodies alike in all those particulars of construction, which have a bearing on its capacity as an instrument of the mind. They may differ in the quantity, and development, and outward as well as internal conformation, of the brain—the great nervous centre which is supposed to be the special structure among those forming the body, set apart to operate as the instrument of mind. Bodies may also differ in the construction and arrangement of those parts more remote from the immediate influence of mind, but which still indirectly exert an important influence upon its manifestations, by means of their action on the brain, in the way of nutrition and stimulation,—such is the system of blood-vessels and

those parts of the system which preside over the general nutrition of the blood, and through it all the structures of the body.

It is not unreasonable to suppose that these manifest differences in the mind's instrument, and the modifying circumstances attending its condition, might cause all the apparent diversity in mental phenomena, and power. As a general principle, it is known, that the indications of a powerful mind increase, with a fulness and perfection in physical development of the brain. The presumption therefore is strong, that such indications of vigor and comprehension, depend upon the perfection and strength of the instrument of the mind, and not upon the original and disconnected power of the mind itself. Just as the regular manifestation of the force of steam, must depend upon the instrument through which it is to be employed. Such *manifestation* cannot exceed the strength of the engine, though the power operating upon it, may be much greater.

This does not, it is true, prove that mind abstractly is every where *equal*, but it exemplifies the fact, that the character of its manifestations through the human body are not just criterions of its power, either abstractly or in specialities—and this is one step in the progress towards such proof.

The fact, that mind may every where, in all situations, in the human body, (where there is no question of its existence,) be brought to an equality of comprehension, fairly evinces that its intrinsic and natural powers are the same. Although there may be difference in original conception in different minds, in some, conceptions being greater and more magnificent, than in others—yet, as *conception* depends for its perfection, directly upon *perception*, and *this* depends upon the perfection of the brain, and organs of sense,—the mind's instrument—original conception does not depend for its character upon the abstract power of the mind, but upon the character of its instrument—consequently greatness of conception does not depend upon a peculiar greatness in the innate power of the mind itself but upon the *perfection* of its *instruments*.

Comprehension, is the element in which mind displays its unity of character and power. Let time, pains and explanation be employed in every instance, corresponding with the differences which will be evinced in the character of the mind's instrument, and the comprehension of a conception, which may take place in one, will be found to obtain in each. There is a difference in the power of conception in the human mind, because there is a difference in the perfection of its instrument. But there is no difference in the *power* of comprehension. Any mind may comprehend every thing that another can. The power of conception depends upon the instrument of mind alone, exercised in *perception*, while the power of comprehension depends upon the innate scope of the mind itself. But the conception must be itself presented to the mind through its human instruments. Consequently there will be the same difference in the readiness in which two minds will comprehend an idea as there is in the character of their instruments, provided the same means be employed in both instances. But in the instance of comprehension unlike conception, the two ele-

ments which are employed to accomplish it, exist in the body—*intellect* itself, aided by the *senses*. In conception it is originally *matter* which operates on mind through the medium of the senses. Matter is a unit in its operations, without resource or intelligence,—hence, conception varies in power, not in accordance with the variability of the influence of matter, for it has no variation, but in accordance with variety in the perfectable character of the mind's instrument. In effecting comprehension, however, mind, which is the primary influencing principle, (after the mind has been trained humanly through means of human agencies of course,) by its resource and variety of plastic influence, finally overcomes the barriers of imperfection in mental instrumentalities,—being strained with greater exertion in one instance than in another, accordingly as such instrumentalities are more or less perfect—finally accomplish the task of equalizing the difference in mental instruments, and places all minds upon a level in the fact that all may completely comprehend every thing which any one can.

The instrument of the mind in the organization of Franklin, was more than ordinarily perfect, in consequence his conceptions were extremely magnificent and correct, and the same of Isaac Newton. Yet, men whose physical construction is such that they would scarcely dream of a truth possessing the magnificence and grandeur of those promulgated by these philosophers, may possess minds which fully comprehend all these men taught, and appreciate and gloat over the knowledge with all the satisfaction of its original promulgators. The *grasping* power of the mind in the former instances are superior, because of superiority of instruments; but the actual body, the length, breadth and depth—the scope, and containing capacity of mind in every instance is the *same*, so far as human experience can teach. How easy to conceive, when these mortal instrumentalities of the mind and soul, this earthly house of our Tabernacle is put off and destroyed, and other, and different instruments are appointed to them, “eternal in the heavens;”—how easy to conceive, how it is that the greatest may become least, and the least here, be so provided for that they may become greatest!

So far as the human intellect can conceive, mind is an unit in capacity, and in fact.

### CHAPTER III.

General Remarks about the Soul—The instrumentality of the Mind in the Brute's Body and Soul—General remarks on the whole subject.

It has already appeared, incidentally, but clearly, that the human mind is an instrument both of the body and soul: of the body in Time, and of the soul, both in Time and Eternity.

The organized body, and some of the characteristic features of the mind have been treated of. Concerning the Soul, there is great indefiniteness in the idea of its precise characteristics. Consequently a lengthy attempt at an exposition would only add to the mystery. As soon as what can be known, with reasonableness or certainty, is stated, on any obscure topic, it is then becoming to cease, for farther remark cannot increase the light, therefore if it do any thing, it must mystify, what actually is known.

The character of the Soul has already been described, as consisting of the sense of *appreciation* of *conceptions* or *knowledge*, and a desire for it which arises from such appreciation. This is the peculiar human manifestation of the properties of the soul, in connection with the mind in the human body. Such appreciation extends to morality as well as miscellaneous knowledge. It is this, which is the striking peculiarity of man. Love of knowledge for its own sake, a just appreciation of right and wrong, aided by conscience, and satisfaction derived from the origination or comprehension of grand conceptions, are all peculiarly *human*. No brute was ever known or seriously believed, to enjoy the contemplation of magnificent scenery—and the pleasing emotions of the soul which such scenery originates, by reason of grand conceptions constantly arising in the mind, suggested by it. Brutes cannot appreciate such scenery or delight in such contemplation, because they have no soul.

Brutes however have a mind, and instruments of a mind just as the human body, but both are of an inferior character. The brutish mind in no instances exhibits evidence of a capacity to accomplish more than merely the direction of the body in such a manner as shall conduce to its bodily existence and (sometimes) comfort for the time being. Through its operation the body seeks occasionally the titillation of its bodily senses, of feeling of sight (perhaps) hearing, smelling and tasting, and these are all *animal* enjoyments. And here it may be remarked, that organ, which is perhaps least used by the brute creation in pursuit of sensual pleasure, is most used by the human beings as an instrument of the mind for the feast of the soul;—it is the eye—all the other organs are more under the influence of the brutish passions than this.

Now whether the brute mind is immortal as well as the human is doubtful. Some reasons would seem to indicate it, while others are

in opposition to the idea. The question is however, entirely unessential in the present enquiry and will not be discussed.

Man may now be contemplated as he is—a being comprising in his whole, an organized body, a mind and a soul:—Of the latter, it may be said as a passing notice, that inasmuch as it evidently acts upon the mind as a cause of action, as the body does—like the body also, it is probably *distinct* from the mind. The peculiarities, the powers and attributes of the whole three, have been studied and it is plain to see which vindicates in man his pretensions to superiority. His *peculiarity* is established in the fact of his *possessing* a soul, while his *superiority* is impressed upon him by the *manifestations* of his soul.

It is easy to perceive how man may exceed even the brute in brutishness. He possesses a mind of more than double power; not only to supply his animal wants in common with other animals, but also to supply the demands of the soul which are far superior and greater in extent. When man forgets his humanity, forgets the presence within him of the divine nature—when he turns his *whole* mind, to the gratification of his animal passions and pleasures, withdrawing from the employment of the soul that part of it which should be employed in its service—how fearful a being he becomes! Brutes have but their brute minds: beyond its dictation their actions cannot proceed. They are consequently in the character of their action, whether of rage, playfulness or any other of their instincts, always the same—but in man, when *he* allows *more* of his mind to become the instrument in devising expedients of action, in the service of his animal passions, than naturally is due to the species of *animal* to which he belongs—the resulting conduct is fiendish—is *more* than brutish, more than brutes, possibly in the nature of things, *could* enact.

It is needless to speak of the comfort and enjoyment of man, when his mind and soul go in harmony together, in the paths of goodness. Actions and words can tell the comforts of bodily enjoyment, but they cannot express the delight of an appreciating and full soul.

Delight and misery must not be measured by the mere intenseness of the sensation itself but by its character also; and the delights of the animal body even though they be admitted to be deeper in sensation, yet compared with the joys of the soul, enduring as the eternal pillars of God's throne, they sink into contempt. But, they are not greater than the joys of the soul: by so much as eternity is longer in duration than the transient years of man's life, by so much as the soul exceeds the body in grandeur of conception and exaltation of nature,—by so much as the divine is superior to the human,—so far do the pleasures of soul, exceed those of sense, and so far also do the miseries of the soul exceed the miseries incident to human life.

It is needless to pursue the subject farther. Enough has been said about man to fully illustrate the dignity of his character and to indicate the nature of his destiny. It is perhaps the part of wisdom now to stop and allow every one to pursue the subject to that termination which the constitution of his own mind would direct. If the author has said that, which will arrest the attention, and awaken new trains of thought, in minds which possibly might never have considered the

subject here spoken of—even though they should come to conclusions different from his own, he will be satisfied. If to those who are enquiring on the subject of Man's Nature, he has been so happy as to suggest a new plan of arriving at just conclusions on that subject—by presenting man as he is, and discussing the *elements* of his nature, singly, and endeavoring to fix upon those which characterize him—he has accomplished his object. If, to him who has been accustomed to undervalue the dignity of human character and place man in the category of the transient things of earth, he has presented trains of thought upon which he had not entered and been the means of delivering him from his error—he has been fortunate in his undertaking.

Man comes upon the earth an *animal* with inborn powers of which he is not himself conscious; he rises superior to all his fellows, he appreciates the earth and all its beautiful things; he stands *master of the Present*, but unmindful of it, he lets Time glide past his feet, ever in imagination, straining his vision upon the future; he sees rising up against the distant horizon, successive scenes of beauty and delight; green fields and pleasant undulating lawns; broad forests in all their majesty and grandeur, pearly brooks meandering their silvery course along, with their mossy banks all fringed with flowers. He speaks and in his soul he says—this is my own, my *native* home; all these things will I enjoy, and live here happy, forever,—yet when they come to him, he heeds them not, but always keeps his eye upon the future—presently these visions cease to appear; no more they rise up to gratify his longing sight; those which are yet before him rapidly approach, and he can see nought beyond but the outline of a great dread Eternity. Death hath entered into the world, and now he sees it approach. All his visions of endless pleasures melt away, and his heart sinks within him. Hope on downy wings flies off to heaven, its native home, and leaves the soul desolate. What *now* can fill the aching void within! The *Immortal Mind* gives *assurance* to the soul of endless life hereafter.

