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BY
J. W. Rives

OF
Tenn.

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CHARLES W. SMITH,
BOOKSELLER AND STATIONER,
NASHVILLE, TENN.
Death.

It has wisely entered into the views of Providence, that every thing, or the existence of all organized bodies should be temporary; that each body undergoes a change, an incessant change, so to speak. Both the animate and the inanimate part of creation are in this predicament. The most minute aggregate of matter; so also the largest material bodies, appear only destined for certain periods of continuation in the present existence. For on looking at our own earth, we see that countries are continually depopulated, and perhaps totally destroyed by encroachments of the sea, and various eruptions; whilst on the other hand, from similar circumstances other countries are produced, therefore the appearance of the earth at present is very different from what it was once, and that after the lapse of an age, the appearance will be different from what it is now. Among the many and also
the various objects around us, we see—pushing away, is the human family; they also not alone are moving onward; nor are we do not need any farther example of this than everyday occurrence, for it matters not how earnest in our pursuits; or how successful in carrying out enterprises of great value to fellow men; with honor, esteem, and enjoyment to ourselves, Death comes and interrupts it all. Our part is finished; but the work causes not the world goes on. This great and wonderful change the greatest that can happen to any of us and which is sure to happen to all of us; for such is the lesson taught us by those who have have just preceded us. Nor is this better realized and brought home to our conscience than when those with whom we are intimately connected by ties of kindred; or by association in business, or position are called away. Then it is seen: the reality, the nearness, and the certainty of such
we change... The first we will notice of the human family is in childhood, which is full of life, and all the joy and pleasure is but the impulse of a moment; then minds untaught, talent unknown. The next note we take of him, he has ripened into maturity, or manhood, with his mind educated, and his talent so powerful and superhuman-like as to cause motions to sweep from his interior language; but before many years shall have registered their member upon the book of time.

We take notice of him again. Now he is old and feeble, and the once proud heroic, and manly form is now suffocating with old age, worn out with the toils of this life—his race nearly run. Ever long the machine will have worn itself out, the exhalents flag, and he slopes to rest: like a clock worn out with working time.

The wheels of weary life at last stilled still. The renovation could only be affected by the
substitution of new for the worn-out machinery. With respect to the animal part of creation, both the animal, and vegetable have but a certain period destined for their existence. This period varies exceedingly, some living but a few short hours; or are no sooner ushered into existence than their race is run, whilst on the other hand there are others that appear to live for centuries. But besides this period, every animal or vegetable is liable to be cut-off long before this period arrives, being exposed to violence of every kind, not only mechanical violence, but the destructive operations of a thousand causes, and to disturbances from the operation of the circumstances which are necessary to their existence. One animal is destined to devour another, and myriads of insects are constantly destroyed in storms. Therefore, the limit which providence appears to have placed to every thing is curtained
It has been said by some philosophers that looking at man one would be led to the conclusion, he would last forever. That at first sight such a machine as the human body unless destroyed by external violence of some kind, would appear capable of lasting for ever; but we think there is nothing in the appearance of this machine which could lead one to suppose it could last to eternity. What we know of nature can be learned only from experience and it would be as correct to say, because it is summer, it will be summer for ever, or because it is day it will be day for ever, unless we have contrary experience, as it would be to say that man appears capable of lasting for ever. All men must die; but at least not all die alike. Death is certain, life nothing more uncertain. A little practice in the words of a hospital or experience in the sick chamber will suffice to teach the
student of medicine that the ways of extinguishing the flame of life are various. In the one instance the threat of life is suddenly snapped and the passage from life and apparent health perhaps, to the condition of euphoria is made in a moment; in another the dissolution is slow and tedious, and we scarcely know the precise instant in which the scheme changes is made. Often maturity has been rapidly attained, cleverly or rapidly supervenes, therefore when the growth has been slow and the attainment to maturity longer, the period of declension is proportionately postponed. In certain of the lower animals we have what has been termed very appropriately, cell life; that is each cell is considered to have a distinct life of its own. Hence a microscopist cell may die and be reproduced without the organism of the individual suffering, and so little is the
organism affected by injuries of a part that when the animal is cut into pieces, each piece may undergo a distinct development, so as to form as many separate beings. In higher animals this is not the case; for death and reproduction of every part of the frame is taking place in the function of nutrition. Nutrition or nutritive assimilation in the language of Ateleon is the action by which every part of the body, on the one hand appropriates or assimilates to itself a portion of the blood distributed to it; and on the other hand yields to the absorbing vessel a portion of the material that previously composed it. The precise mode in which nutrition is accomplished is not accurately known, it not being a microscopic object. The source of all nutrition and growth is the blood. Each element of my particle comprising, leaves, muscles, &c., seems to have the power not only of attracting...
material from the blood; but of causing them to assume its structure, and to participate in its vital properties. This apparently from similar materials, nerves from nervous substance, muscle muscular substances, and it is even thought by some that morbid substances have the assimilating power. But besides the impairment—and change of composition to which all parts are subject in the discharge of their natural functions; an amount of impairment which will be in direct proportion to their activity or physical action, they are liable to decay and degenerate of their particles as Dr. Carpenter clearly showed, that every particle of the body is formed for a certain period of existence in the ordinary conditions of active life. At the end of this time which if not previously destroyed by outward force it degenerates and is absorbed; or dies and is cast out: the simplest example
that can be produced of this is in the hair. An eyelash which naturally falls out without pain, is one which has lived its natural time, and has died, separated from the living. In its bulb such one will be found different from those that are still living in every period of their age. It is only when organs that are intimately associated with each other, and whose association is essential to the life of the whole, have their functions interrupted, that the cessation of their functions, and general death follow. Death taking place in the minute parts or cells has been termed Molecular death of whole body. This is the last we...we will form our few lines. But before we take up a few of the various causes of death, we will refer to some of the physiological signs preceding it. For some time immediately preceding dissolution of the human body there is
usually a peculiar mixed expression of countenance or a compound of apparent mental and corporeal suffering, which has given rise to the term agony, this however depending on the lesion of the Respiration, Circulation, or of the Cerebral Function. The word agony applied to this condition of the individual means in many languages, a violent strife or contest; that its acceptance has been so extended as to embrace what have been termed the pangs of death. This expression, however, biologically speaking, instead of being a state of mental and corporeal turmoil and anguish, is one of insensibility. The peculiar sound on inspiration; the nose is pinched up, the eyes are sunken, the temples hollow, ears cold and constricted. Skin of the forehead is tense, lips pendulent and cold, with the eye-ball in this condition slightly elevated. These symptoms and various others we might mention, of approaching death, instead of being evidences of suffering, are signs of the
brain having lost all or almost all sensibility to impressions, although from the moment that
respiration, and circulation permanently cease, the body may be regarded as unquestionably
dead. Vital properties remain in some of the organs, the presence of which is an evidence that
vitality has previously, and recently existed.

The vital properties which persist after the animal has become dead to surrounding objects, are those
that belong to the organic class. The most marked evidence however of the continuance of a vital prop-
erty after death is in the case of muscles, which can be made to contract powerfully by the applica-
tion of an appropriate stimulus, even for an hour, or two after death. Absorption is said to have
occurred after death, and the hair and beard to have grown, to a certain extent, this is done in parts that
are nourished by imbibition; but the apparent elonga-
tion of the hair or beard is owing to the shrinking.
of the integument: Death is the necessary, total, and permanent cessation of those functions, by which life is characterized. This cessation may happen at all ages from accident or disease. A few, however, cause gradually to live through the effect of ages alone, hence a minute distinction has been made into that kind of death, which is produced by the gradual wear and tear of the organs, one that which cuts off the individual prematurely. The former is termed by physiological science or Natural Death, the latter Permanent or Accidental. These differ considerably, and require a distinct consideration.

Natural Death

The natural period of life is different in different individuals. It varies according to appreciable and unappreciable circumstances, the original constitution of the individual, habits of life, the locality in which he may reside.
We notice that whilst some countries are remarkable for the longevity of their inhabitants, others surprise us by the short period allotted them.

Mr. Tourneur of France says, that the age respecting all animals ages, is five times the period they require to mature from birth; this would give men about ninety years; but as he lives quite unaided, three score years and ten is nearer the truth of his days on earth. It does not seem that the natural period of life has differed much in post-glacial periods; for the Old Testament writers, the days of our years are three score and ten, yet is their strength, labor and sorrow, for it is from ear to ear we fly away. Blumenbach asserts that by an accurate examination of numerous bills of mortality, he ascertained the fact that a considerable proportion of Europeans reach their eighth fourth year; but few exceed it. Whilst according to M. Eveleve, in the insalubrious regions of France,
in France, nature begins to retrograde at from twenty to thirty and fifty years in the usual term of existence. Not generally the aged individual sinks silently to rest, totally unconscious of all that surrounds him, and in many instances he preserves his sensorial powers to the last, and is capable of locomotion, until to oppression or disturbances of action of one or other of the vital functions, during sleep it becomes the sleep of death. The great characteristic of this kind of death as pointed by Bichat, in one of the best of his excellent productions, is that animal life, terminated long before organic life. The animal functions which connect the aged with the objects around being annihilated long before those that are concerned in nutrition; however, in other words, takes place from the circumference toward the centre; whilst in accidental death the annihilation of the functions begin in the centre.
and extends towards the circumference. This kind of death, regarded in the best-shep charac-
 terized by a peculiarity, in which the powers, partly from their lessened sensibility, increasing, the difficulty of restoring the sensitive system, become incapable of the office, and the individual, therefore, works no more.

Accidental Death

This term has been employed by some physiologist to include all kinds of death happening to the individual before the natural term. The cause consisting in some accidental organic lesion, which arrests the vital movements before they would stop of themselves. This kind of death varies exceedingly from that we have been considering; the individual is perhaps in full possession of all his faculties, his organs have been previously, to all appearance, in the most favorable condition for the prolongation of life; and his death instead of natural, and unperceived by the
individual himself, is usually preceded and violent. All forms of sudden death commence by the interruption of one of the three great vital acts: Circulation, Respiration or Innervation, one of the three functions ceasing first; the others die in succession. We first refer to death of circulation.

Circulation

It will be sufficient for our purpose to remark, that life is inseparably connected with continued circulation of the blood. So long as the circulation goes on, life, organic life, at least remains; but circulation being stopped, life is presently extinct; and our investigation of the different modes of dying, resolves itself into an investigation of the different ways in which the blood may be brought to a stand. There is ample provision made in the construction of this essential function. In the first place we have an extensive hydraulic apparatus distributed throughout the whole frame, consisting
of the heart and vessels leading to and from the heart, second, there is a pneumatic machine, forming a considerable part of the thorax, which is the lungs and their cases or pleuræ, in which the lungs are lodged. This apparatus being the great renovator of the blood, and lastly, we have the power by which this machine is made to work, this being vested in the nervous system. Each of these continuing to act, or the circulation stops, and life comes to an end. The functions they perform are called vital functions. Their main organs, the heart, lungs, and the brain, are denominated vital organs. In the propelling of the current of blood by the heart, and that it may continue propelling it, two things are necessary: first, there must be a certain power or faculty of contraction; secondly, there must be a sufficient quantity of stimulants in its chambers to be moved. Therefore we have two means in which death may begin at the heart. First we
notice that form of death caused by the close
supply of blood cut-off from the heart, the best-
example of this, are those in which it is a conseque-
ence of sudden and profuse hemorrhage, as the breaking
of an aneurism. In this the circulation fails, not
because the heart has lost its power of contraction
but because blood does not arrive in its chambers
in sufficient quantity. It is said one may be
obviated of this, as on the examination of an animal after
death from a sudden loss of blood, when opened
the organ is not dilated and full of blood; as it
would be if it had ceased to act from a want of
power to contract upon its contents, but it is empty
or nearly so contracted. The next form begining
at the heart, is the opposite of that in which we
have spoken referred to. Here we have no deficiency
in the proper stimulus to the heart's action; but
we find a total failure of the heart—its contract,
as in the case of poisons, for there are certain substances
said to have the power of supplied to every part of the body, will speedily produce death. Upon examination of this, each chamber of the heart is found to be full of its proper stimulus upon which it has been unable to contract.

The order in which death place here is as follows:

The heart failing to propel its blood, the encephalon and gangue matter of the medulla spinalle no longer receive the necessary impulse for the continuance of their functions; they therefore cease to act; the nerve mighty to Respiration. The air from the nose or mouth enters the respiratory organs, or lungs. The entrance of air into the lungs may be cut off in various ways, by hanging, drowning. There are two ways in which death—may be said, to be connected with the lungs, first mechanical obstruction of the air to the lungs, as in hanging; or in
any other way, in which the air is cut off.
Secondly when air is breathed into the lungs which contains little or no oxygen, yet can be inspired for a while. The order of death is as follows. The mechanical phenomenon cease, to thus the cessation of chemical phenomenon succeeds.
This owing to the supply of air being cut off, the blood, not experiencing the necessary con-
version in the lungs, soon stagnates in the pulmonary capillaries; but the heart may continue to beat, owing to the residing air in the minute ramifications of the bronchi, but this soon ceases in consequence of a defective sup-
ply of blood. The nervous centres die, and other parts in succession. There are many instances of
this on record, which have occurred to persons
exploring caves or caverns, and many places where there is a deficiency of oxygen. We also have death
from extreme cold, which may fall under this head.
This occurrence however rare in this part of the
of the country, although occasionally happens to
those individuals who are intoxicated and lay
out all night during the very cold weather, we
have a case of this kind occurring no great ways
from this city during the extreme cold weather we
have had for several days. This occurs for the most-
part in countries where there are settlers. It produces
stupor coming on slow, at the same time very like
the person is totally unconscious of its affects until
every organ is the power, or under the influence
of this powerful agent, and they yield to its
mighty influence, so it is, we meet with much
difficulty in arousing them from their lethargy,
very often failing. In speaking cold we are led
to say something of cold water producing death;
of this we might cite to several case of death
produced by this agent. As in the harvest fields
or on funeral during the extreme heat of summer.
where the individual undergoes great fatigue, and becoming very thirsty, is apt to drink an over-draught of water, which is apt to be moderately warm, which fills his stomach to distention, his system becoming relaxed, he yields to its influence. Now as the tubercle would say, it was owing to the coldness of the water; but this is untrue; for, believe it would be impossible for a man to drink cold water enough at one time to hurt, therefore we think it not owing to cold water, but to the amount of warm water he is apt to take.

Lastly we will refer to doubt from insensibility.

This may occur in the gray matter medulla spinalis, or in the encephalon. By severe injury done to the head, or by worst attacks of apoplexy producing loss of insensibility, his sensorial functions first cease, and the individual is deprived of sensation, volition, and mental and moral.
manifestation respiration may continue, owing to the reflex nervous system being secondarily affected only; but it becomes progressively more irregular and laborious and ultimately ceases. The order of death is as follows: the interruption of the brain's action destroys first that of the voluntary, and then that of the mixed muscles secondly. The mechanical phenomena of respiration cease, and then the chemical phenomena cease. This is followed by cessation of the heart's action, owing to the united loss of nervous influence from the brain, to this succeeds the loss of general circulation, and lastly that of functions of nutrition, secretion, calorification. In conclusion, an easy death is what all desire. The closing scenes, whatever may have been the pains, in most ailments is of this of this character, in the beautiful mythology of the Ancients, Death was the Daughter of Night and sister of Sleep.
Among the Ancients, also death was generally depicted on tombs as a friendly genius, a.

sleeping child, winged, with an inverted torch resting on his arm, and in his hand a wreath, with an inverted torch, or as Love, with a melancholy air, leaning on an inverted torch itself a beautiful emblem. In more recent times death has been portrayed as a beautiful gentle-