1858.

"On the different modes of Dying."
by
William Morthets

A rapid account of death due to influences operating primarily on the circulatory apparatus, the pulmonary functions, or the cerebral, defective in details, but quite satisfactory as to the general outline.
In conformity with the established laws of the University my gentleman presenting himself as a Candidate for the Degree of "M. D." agree to produce a Thesis in obedience with this I propose to direct attention to a subject - the importance of which can scarcely be questioned. First, from the important and direct bearing it has upon the appropriate and successful treatment of disease and.
is effectively "pointing the tendency to death." I will therefore, in my earnest endeavours to furnish you with such material as may be reasonably expected from me, seek what are called "the end results of my efforts successful Will be required in the superior judgment."

I am proud to have attempted the "different modes of dying" i.e., "the different ways of death," by which the phenomena of life, or perhaps more correctly, the vital functions of the human economy are extinguished. I have endeavoured to collect and examine a few preliminary observations which I believe will beneficially influence the subject more intelligible. I am perfectly well acquainted with experience that all men, after a longer or shorter period of their existence must eventually die - and although this is the inevitable result of man's life, one would not have it to be the same with men. In one instance death may result instantaneously and without
up recently my probable cause during life on another the process is effected gradually—by day and by night may retain his intellectual faculties up to the last moment. On the contrary may be intoxicated, and totally insensible to all external impressions. In several hours, consequently, may be the fatal issue. Seeking the quick radiation to recur, me and naturally irrevocably to accompany the mechanism and the laws of these mysterious differences. In following out this inquiry we can I barely fail to recognize that life is essentially connected with the continued circulation of the blood. So long then, 

If as the blood circulates through the system life (Cg.AHic) is maintained. When in the contrary form any cause, or cause, the blood is prevented from circulating, life necessarily becomes extinct. Unquestionably it seems to make an investigation of the different ways in which
the circulating fluid may be permanently arrested before we can both fact-
ally determine the "different modes of injury". Nature has constructed the
body so ingeniously, well & beautifully that all its functions shall be duly
accomplished and maintained. First, it has provided it with an extensive
hydraulic apparatus consisting of the heart and blood vessels. Secondly, it has the existence of
a pneumatic machine constituting a considerable portion of the body
and controlling essentially the lungs. Lastly, we have the respiratory system
by which these organs mentioned are respectively influenced. It con-
sequently follows that, unless each of these systems is in optimum
al operation, that the circulation will be interrupted, and death
necessarily result. The functions performed by the heart, lungs,
and brain being then of such major
importance, they may with justice
be considered of the highest importance.
The Lord
The phenomena of "flying" will vary remarkably according to the intestinal legends of the my mother. In all organs. Beau-Berart was the first person who spoke of death the beginning at the head, that the beginning at the head, heart and lungs beginning at the lungs. Although it has been assigned by several authorities, that this nomenclature is unsatisfactory, and that it is a more scientific principle, yet it must be allowed that it does not sacrifice advantage. In note that the heart may propagate through the system. Two conditions are necessary: First, like the contractibility of other muscles, it can only be continuously sustained by a supply of arterial blood to its root. Secondly, a certain faculty or called force of contraction is required. Having thus briefly addressed to the heart's action, I next proceed to investigate.
The phenomena of death by suffocation is due to the loss of the proper stimulus by which the natural surface of the heart is supplied, so that entirely abstracted a much larger number of cases occur. This is beautifully exemplified by the occurrence of sudden death from lemonade and water. The circulation fails, because there is an insufficient supply amount of blood directed to the chambers of the heart, not because it was less abundant of its force of contraction. The contraction of the atrium and ventricle subsides in two ways:

First: By increasing the elasticity of the tissues, and immediately after death from suffocation of the heart, be the heart empty, in nearly 2, and contracted.
Illustrated by altering to another experiment. I am to transfuse the blood of one host. Occasionally when every other mode of assuring our patient has been unsuccessful, and the postulistic wishes the circumstances abstract from the pain of a living person and subject it into the vessels of the apparently dead person, we know that such a proceeding is not unfrequently attended with decided success in restoring the suspended functions and preserving the animal life. It must consequently be clear that the introduction of this fresh host will be of no possible avail, in a case where the heart had failed to contract upon the horse which had previously reached it. The phenomena which accompany this mode of acting, the pallor of the lips, and countenance, vision becomes embarrased, the bubles diminished, diminution in the size and volume of the pulse cold, motionless, insensibility. Imprisoned with these.
These symptoms are not infrequently

have nausea, vomiting, restlessness,

back pain, tachycardia, and transient delirium.

The breathing becomes irregular, labored,

and eventually gasping, convulsions

generally occur, repeated once or twice

before death results.

Another form of death that commences

at the heart but quite contrary to

the one previously alluded to is that

in which the stimuli of the

heart's action is not defective but

when there is a total failure of con-

tractile force in that organ. This

has been appropriately denominated

as "death by asphyxia." Death

occurring in this way is frequently

observed to result from the adminis-

tration of certain poisons which

operate insidiously by paralyzing

the heart's action and thus effec-

tively preventing that organ from re-

serving the blood through the system.

In the peculiar case of chronotactic action in the

above statement I proceeded to the

The
I wished to find out the result of this experiment, the effects of which were so different to what I anticipated. Having obtained some poison from the toxin on that evening, I decided to use it for the purpose. I administered twenty grains mixed into an emulsion with olive oil to a rabbit. During the first few minutes, the animal remained perfectly quiet; it then became restless, commenced to walk about, and appeared rather confused. This treatment continued until twenty-five minutes after the poison had been administered, it was put upon its haunches, with the anterior extremities and muscles of the neck and thorax into convulsions, with the convulsions, of the latter contracting spasmodically. Shortly afterwards it became almost at ease, with shutting and opening its eyes alternately, the heart beating, which had previously been rapid, now became weaker and slower. The respiration, which was natural before, became accelerated. These effects, however, lasted...
Gradually passed off, and the animal deceased subsequently. At the expiration of an hour and a half, I administered the same quantity of mercin as on the previous occasion, and carefully watching the animal for an hour and a half, I observed no other effect than that which resulted from the first dose. Not being satisfied with this, I proceeded to inject twenty grains into the cellular tissue, believing that this would effectually stop the flow of blood, and the animal now still remained two hours after the injection had been employed and presented an unremarkable appearance. A slight motion was observed, and an effort made to stretch the skin, but I thought at the time to kill it. On opening the thigh immediately after death the heart was destined with fluid blood. I was unable to detect any marked difference between the wounds contained in the left and right
Life of the heart, it presenting the venous character in the left and
right cavities of the respectively. This experiment together
justifies me in arriving at any positive conclusion. I consequently
proceeded to a second experiment in which I employed the vitreous
body of a mule. As the pulp of two brains
were thoroughly triturated with with
a small quantity of water the I
injected into the审核 arthritis about
the neck it operated so suddenly
that the animal expired a few
minutes after the operation had
been completed. During the few
minutes the animal furnished, it
presented no symptoms to which
my attention was directed. On
opening the thorax immediately
after death, the heart was observed
to be distinct, and a carefully cutting
into the left auricle and atrium,
the blood pressed the venous
cavities and corresponded
exactly to that contained in the right auricle and ventricle. This experiment led me to conclude that the left cavities of the heart do not contain arterialized blood in animals on whom death has been occasioned in the manner described. The third experiment I performed I again employed the Valde Beur Ill-alalab, and arrived at a similar result as before. The most likely factory, and I presume the most probable way of explaining the occurrence of venous blood in rather blood presenting the venous character in the left cavities of the heart is, that the experiment I used must suppose the power of exciting an unknown influence upon the chemical composition of the blood by which the colour is affected and consequently unhealthy.

"Death by Asphyxia" is of frequent occurrence in Tryph L. Abbey.
Well accordingly if the patient will die by the way of ashenia — viz. by going symptoms, most be carefully avoided and the vital signs exhibited early to the requisite stimulants. "Death by ashenia" and "cremisi" is frequently expressed by the term Syncope — because the ultimate internal phenomena being nearly identical in each and probably because the result in each being the interruption of the circulation. Another point of difference is apparent between them. In "death by ashenia" the functions of the nervous system are suspended as consequence of the failure of the blood which should be conveyed to the brain to the heart. This is illustrated by the effect of strychnine. For example a patient is more easily syncope-d when he is while sitting up than when in the supine posture — and when painting does occur...
it is undesired with the greatest facility by placing the patient horizontally upon the ground, or
more advantageously by placing his head slightly lower than the
level of the body. In death occurring instantaneous or by asphyxia
the role of phenomena are exactly
ikut the nervous system is
primarily affected and through it, indirectly the heart, since
mental emotions occasionally
operate in this way, such as ex-
cessive grief by lightning and
electricity, the two life by suddenly
rallying the heart's action.
In this case, may be mentioned
while occasion death in a similar
manner.

I was proud to consider "Death by
Insufflation" resulting from an ef-
fluent deficiency of force, or of
its substitute, or the exclusion inadequate
in the circuit of the system. 

Mali 20 me interesting experiments
To Bicks, and to animals, and
the information from varied leads
us to a more ready, factory comprehension
of what is (unfortunately) too frequen-
tily exhibited in the Human Species.

We ascertained that Bicks, when
totally deprived of food and drink,
reached a progressive, though slight,
marked diminution of temperature.
The diminution does not in much
show itself, a fall of their maximum
heat as by an increase in the diurnal
variation, which we ascertained to
recur even in the normal state.

A slight variation (diurnal) of
the body, appears usually to take
place, irrespective of external
heat, which, if any, who carried
on close enquiries, upon himself,
in Gayland, arrived at the conclu-
sion that the body was warm-
est in the morning, and coldest
at night. For example, he as-
certained the mean temperature
in the tongue to be 98.72° at

at
7-0 A.M. Which was recommenced at 12 P.M. to 27.92° - the nitric
principle unquestionably corresponds with the Neural condition of change
in the quantity of carbonic acid
inhaled. The Maximum being about
three) before and after noon and
the Minimum before and after
Midnight. According to the ex-
periments of Schrader &c. on the
human subject. It would appear
that the nitric absorption inhales
by day as much deced to that inhaled
by night. 1 1/2 to 1, and this
difference does not seem to be affected
by sleep or wakefulness. It is
frequently associated with a difference
in the excess of generating heat. In
the Stealths, show that there
is a like Neural variation in
the temperature of birds and the
majority of cold. We have perfectly
well experienced with this fact
that there is a greater difficulty in resisting exposure to cold.

*cold*
Between Midnight and early Morning, Flies at any Sufficient during the Twenty-four Hours. Professor Lockhart observes that the Sineke the Atmospheric Tides attain Their Maximum and Minimum at about four o'clock of the Day; for these Air Tides in the Circumambient Atmosphere are well a

in the Circumambient Ocean, and there will there are also changes in the electricity of the Air and the Magnetism of the Earth. From 8 to 10 A.M. and P.M. the Barometer is at its Maximum Height, the Electric Tension is at its Maximum Tension, and there is also the greatest Maximum Variation east of the Magnetic Needle at the Same Hours. From 4 to 5 o'clock A.M. and P.M., the Barometer is at its Minimum Height, and it is also the Electric Tension. The Respiratory Movement, and of course the Activity of the Circulation is likewise in Connection with these Hours. About 4 or 5 o'clock
in the morning, with a minimum temperature of minimum electric tension, had minimum height of the barometer. There is also a maximum consumption of gas.

Further, in 1832, I had ascertainment by repeated inquiry, that claps generally come up about half an hour after a fete, and restless night. And what is remarkable, the statistics of deaths in York show, that the chances are in the proportion of 3 to 2 that the last clap—the 'clap of death'—will occur at that fete.

It can be easily questioned from the similarity of the phenomena, that 'fadnitzl' with its resultant depression is the immediate cause of death in various diseases of civilization—as in 'straws' disease.

And it appears to me extremely probable that there are many cases, in which the depressing cause is only
++ Tyrening as a Fuel
of a temporary nature and in which the artificial application of heat timely and judiciously employed might prolong life, up to it has bated off. Just as the maintenance of artificial respiration is advantageous in cases of narcotic poisoning, the reverse also, torture by asphyxia, by the fact, that if the form of these is which no specific from can be discovered after the recurrence of death. The beneficial results of the administration of alcohol in these conditions, and the comparatively large amount in which it may be administered with impunity, may in all probability be explained on this principle, it operates on the healthy to give a stimulus to the nervous system, and that it maintains the calcifying process cannot be doubted. If the beneficial effects appear to depend upon
The facility with which it is taken into the circulation by an act of endoamniotic imbibition, provided the special absorbent powers dependent upon the peculiar fluxes of the cells of the villi. As in saltpetre. From what I have endeavoured to set illustrate, it would appear that the phenomena accompanying "death by starvation" are analogous to those resulting directly from the agency of cold which stagnates all the vital operations of the body. "Death by Starvation" is considered to be the being intermediate between "death by Anemia" and "death by Asphyxia." death occurring by the way most necessarily gradual. When the supply of food is obstructed, the body consequently no longer nourished from without and fed only by absorption from the system, it gradually diminishes in quantity.
While its quality deteriorates. Multitudinous with this occurrence, the muscles of the body gradually become enervated, and inhibited and the contractile power of the heart is weakened. From this concurrent cause its movements eventually cease. Accordingly, on examining the heart after death, the following it is found to be materially disturbed with blood and only slightly contracted—appearing essentially from death and abstinence, from death and abstinence, from death and abstinence, from death and abstinence, from death and abstinence, from death and abstinence, from death and abstinence. Certain diseases of the heart result, and prevent the introduction of aliment into the stomach. Increase implicating the stomach itself and preventing the action of food, expectorations of the nasopharynx begins. Generally, interfering with the asphyxiation of the food—all these fatal the manner. Vomiting, in connection with the occurrence of death by
"Science." There proved to be the word "Death by asphyxia" in what is not subsequently thought to be absolutely termed "Death by asphyxia." This latter term (ig-ning, literally, the suspension of all pulsation and circulation) and it might consequently be referred to any kind of death what foree. The term is hence must therefore admitted to be extremely unapplied to the Moth of asphyxia, which can present itself. For I mean death resulting from the non-vitalization of various fluids, anemia the result of the suspension of the respiratory function. Bichat spoke of this as death beginning at the lungs. "Death by asphyxia" or "aspiration" may be produced in different ways, by drowning, by hanging, by strangulation, by choking, by suffocating, and lastly by phlegmatic.
The fatal effect in two entirely different modes. In one the occurrence of death is preceded by no struggle, and this is attributed to the shock, instantaneously produced on the functions of respiration and circulation. In the other, the shock is produced by the introduction of reserpine or strychnine, and the animal is then said to be "asphyxiated." In the latter, the circulation continues for some time after the asphyxiation has been interrupted. The animal makes unsuccessful efforts at inspiration, struggles, and successive portions of air are expelled from the lungs by a convulsive effort of the muscles of respiration. The unorganized thoracic muscles circulating through the train, as it were, to inactivate the venom (as if a poison) upon a delicate organ, and the result is death. Naturally
Term
In anticipated diminution of various energy affecting the entire system by which the circulation is weakened feeble and the animal breathless expires. On examining the brain after death, we find it highly congested with black blood. This affection has been referred to as phrenic congestion and I believe it is the reason why the term may not be substituted for it with equal propriety. Include to "prophetic as to Reiner". The recognized difference in the accompanying thermometer may laterly entirely account for the difference observed in the fowls of persons who have been drowned. The probable causes of recovery after such misfortune also depend upon this difference. In the first place, according to which I believe, balance of the countenance is almost invariably obscured and the features are comparatively speaking little
Attired. In the latter, the countenance presents a different aspect; it may frequently appear distended, and wide. The nostrils and the passages are dilated. At the same time, the tongue may be protruded. The neck and the muscles of the neck are raised with terrific start; the eye falls from their sockets. The pupils are generally considerably dilated. The forehead beclouded. The capacity of the abdominal cavity is diminished in consequence of the diaphragm being pushed down, and the elimination of carbonic acid is prevented. As the phenomenon and post-mortem appearances are almost identical to those resulting from hanging, no special reference requires to be made with regard to it. Interesting what is perhaps important in the medical and legal point of view—The presence usually of a mark round the neck, and when the person is
Subjected to considerable violence, for example when he has walked on a public execution and particularly when the resuscitation embolism takes place, the trachea and tracheae are not infrequently surrounded from entering into the lungs for mechanical obstruction of the trachea and larynx from without. By "waking" the air is effectively prevented from extending into the lungs for mechanical obstruction of the trachea and larynx from without. This is exemplified by the embolism of a foreign body, as in the case of Paget's disease. If the trachea is incompletely filled by clotting at the mouth and nostrils, with excluding the admission of air, infants are not uncommonly asphyxiated in this manner. From "explosion," from "explosives" or "irrespirable gases," frequently發生.
accidentally. Then for instance
the atmosphere is to thoroughly
contaminated with the fumes of
sulphuric acid as to be inconstant
but with the safety of man-
animals immersed in this un-
diluted gas breathe almost im-
mEDIATELY from its effects — life
will be extinguished before drowning
the animals made to resubmerge
the whole body except
the head immersed in carbonic
acid. Then death occurs from
the inhalation of this deadly
noxious gas. The features
generally remain placid, the
eyes open and brilliant. The animal
heart is maintained for a consider-
able time, and the body attains
its flexibility for some time after
death. The skin or body has not been
exposed sufficiently long to intermingle
life — the breathing becomes effe-
tive, and oppression of respiration
the pulse quick, the face
flushed, the eyes...
prominent and working in their pockets, the tongue becomes swollen and the saliva flowing out of the mouth. The anatomical character of this "death by exposure" may be briefly considered before entering into the pathology of this mode of dying. When the body of an animal that has succumbed in the manner, is examined immediately afterward—The left chamber of the heart, the left ventricle, contains a small quantity of dark blood, while its right cavities greatly extended. The pulmonary region, the pulmonary region, and the whole venous system are engorged with blood of the same character. The pathology of this mode of dying was perfectly imperfectly understood before the French. Theories were suggested for the surface of embalming the similarity of death. It was of opinion that the presence of the lungs...
Resulting from the cessation of the contraction and expansion of the heart, a mechanical obstacle to the further transit of blood through them, and that death was occasioned from obstruction of the circulation in the lungs, although it must be admitted that the doctrine which he suggested was partly right at the same time it is doubtful that he laboured under an erroneous impression in supposing that the current of blood was absolutely and instantaneously arrested (able to a mechanical effect). It ensued and all its accompanying phenomena will occur, when atmospheric air is entirely excluded, although the lungs continue to perform their functions exemplified in persons who breathe with difficulty and it was distinctly observed by Goodwin in his essay on the connection of life with respiration, that the unmucinated blood traversed
The lungs, and entered the left auricle, and ventricle of the heart, but he was of opinion that the blood proceeded no further. He stated that artificial blood is the only stimulant that can excite the contraction of the left cavities of the heart, and that when unaltered blood arrives in them, the organ becomes paralyzed, and no blood being conveyed to the brain, those mentally results. Have the theory which you have proposed been correct "death by exposure" would not materially differ from "death by asphyxia." Since according to them in reg it to find the left cavities full of blood in "death by exposure," while however they are not.

Be what enlightened us on the subject by the well-conducted ex-
periments - since Le Las RATE - factually demonstrated, that the non-activatedized blood not only reached the heart, but the force expelled by the contraction of that
Began to every component part of the body, through the arteries. The blood went to the following experiment, he applied a ligature to the trachea of a live animal, and made a small opening in one of its large arteries. Presently the fluid escaped commenced to leave its arteriole and issue in the venous character. Let it continue to flow and the action of the heart, was marked by conclusion and consciousness. The result of the experiment led him to the conclusion that no obstruction is presented to the blood in its passage through the lungs. Let that belief remain unaltered and located as a force upon every individual part to which it is conveyed by the arteries. Primarily upon the nervous system, and secondarily through the muscular arteries upon the muscular resistance of the heart itself.
After the war
Allowing Bichat's Theory to propose a certain amount of truth. It had met with several of its doubts. That there are too well-ascertained facts which up to this theory would be inexplicable. First: The concomitance emptiness of the left auricle and ventricle of the heart and secondly: The instability of the apparently responsible functions of the heart, resisting to the demands of artificial aspiration. It would be extremely difficult to understand how the air could enter the venous blood stagnating in the capillaries of the heart. So, May I presume he [C] that, in hydrophobia, 2:1. give himself of the unsound principle of Bichat's doctrine, i.e., supposing that the blood uprising to stagnate in the capillaries of the lungs in consequence of whose blood no longer becoming arterialised and that the left empty cease.
to contract being principally to the deficient supply of blood from the lung. These experiments moreover go to show that the circulation of venous blood through the arteries is not directly a respiratory influence or location but is capable through much (less effectually) than arterial blood of supporting in a certain degree the irritability of the heart muscle. A muscle will cease to contract when the supply of blood is entirely cut off, then when the same muscle is supplied by venous blood through the arteries the primary and essential cause of death by asphyxia appears to be the difficulty which the oxygen becomes in finding its way through the capillaries of the lung, and that the absence of the failure of the circulation—bodily or the heart—gives the stimulus afforded by the venous blood may partly contribute to make the movements.
of the heart. It appears to me that this theory is the most correct one and is perfectly consistent with the phenomena while I have endeavored to detail. These remarks include what I have to say upon the pathology of death by suffocation. Death by suffocation is common, particularly in the labors of peace occurring as the result of disease. It occasionally results from those modes of interior suffocation. They are not of infrequent consequence of accidents, followed by the location of the atlas, as an os of vertebra. Numerous varieties of more chronic diseases may be mentioned in which the inclination to death by asphyxia is obviously the

This is a bottom, occasionally in a considerable period preceding their fatal issue. And the accompanying phenomena were very similar to those observed when the struggle is of short duration, without these circum-

Circa 1840
It was the affected patient excelling himself in the science of letters tying 'The Narrow Life' of which he continually complaining. After it becomes urgent, elevating his shoulders, dilating his nostrils, and languidly hanging into action all the muscles that are auxiliary to respiration. That the blood circulating is imperfectly circulated. We let ourselves be the cause of its absence. While the counterfeit present is to the liquidity of the lips, skin, and eyelids. If the port-wine appearances will be precisely similar to the which I subjected to a serious occasion. These appearances are supposed to be seen more constantly possible in the head to the face after sudden suffocation, due to the recurrence of sudden death, not signifying. When produced, the cedulation of the blood is invariably retarded in entirely & prevented.
Amount of air
"Death due to bronchitis in disease may occur, from edema of the sub-
mucous and the tissue of the lung-
bronchial inflammation (and its effects)
of the mucous membrane lining that
structure, it may result from the
existence of "fibro or villous mem-
enbra" on the trachea and
bronchial tubes, such as are unusually
developed in that intractable dis-
ease well known by the name of
Croup. Disease affecting the sub-
tissue of the lungs themselves,
proof fatal in this manner by
inflating them incapable of re-
cieving the requisite air is
established by the occurrence
of pneumonia and pulmonary
abscess, it may proceed from
the constriction of the bronchial
tubes in consequence of insuffici-
cence of excessive atonal stimulation
or irritation, as in bronchitis.

Pulmonary consumption which is
generally fatal by "as Thenia"
Occasionally tends to death by "Asphyxia". Pleurisy and Hydropnea interrupt the functions of the lungs by exerting pressure injuriously on the mediastinal masses and pericardial pouches of the heart, affecting the quantity of blood in the lungs may cause death by suffocation in twelve abdominal congestive maladies, such as ascites and ovarian disease by pushing the diaphragm upwards diminishing the capacity of the thoracic cavity terminate fatally in a similar way. As nothing of any consequence remains to be said in connection with "death by Asphyxia". I propose to direct attention to the last and as life important "Mode of Death" to which the human subject is liable. I allude to "Death by Orga". Occasionally certain pathological conditions of the lower chest which produce atropia, more or less profound, the
Patient is no longer sensible to external impressions. This sensibility is destroyed, sometimes instantaneously, and absolutely and entirely. Much more frequently, it is gradually affected. The respiration becomes irregular; slow, and shallow. All voluntary effort to the act of respiration is useless. Let motions continue without the application of reason. The resistance of the pleura is not yet overcome. To which the involuntary movements of the thorax are maintained. Still continues to be excited, (shaggy or else), by the stimulus conveyed to the diaphragm through the eighth nerve, and probably also by certain branches derived from the fifth. Eventually this important function is also interrupted. The chest no longer expands. The blood, as a necessary consequence, ceases to become oxygenated. And ultimately precisely, the same.
internal anatomical changes result as in death by suffocation. Organic life is extinguished in exactly the same manner in both cases. The essential difference difference difference difference between death by suffocation and death by coma consists in this: That in the former, the chemical functions of the pulmonary organs are first suspended and subsequently full circulation of the unboiled blood through the arteries desembles. The sensibility in the latter the phenomenon as witnessed are unused. The insensibility is first suspended and as a result of this the movement of the thorax and the chemical functions of the lungs are affected. The conclusion that arise is that the circulation of venous blood through the arteries in the one case is the cause, and in the other the effect of the insufficiency of animal life—death by coma.
peculiar differences interest attached to it as much as it may occasionally be effectively presented by resorting to a mechanical equivalent. Organic life may be maintained by the permanence of artificial respiration until the insensibility (which is transient) has subsided. And consequently the question to which depended on the insensible state referred to may be excised.

Dr. Benjamin Brodie took advantage of this principle and after shielded it successfully to animal larynx, while the influence of ventricle improved. He introduced some venom into the cellular tissue of a cat. After the inspiration of a certain sized the respiration was entirely arrested, and the animal gasped pateatly closed. But the heart continued to pulsate. The lungs were thus artificially...
Bounced about forty times in a minute. The bubble continued to beat irregularly. After the artificial respiration had been maintained, the bubble commenced to contract and dilate alternately upon the increase or diminution of light. While these phenomena were observed, the animal perfectly remained insensible and motionless—at the termination of an hour and forty minutes. The muscle was noticed to contract involuntarily, and the animal made an exerted effort to respire. After another hour had elapsed, it manifested for the first time signs of sensibility when incited and made efforts to respire continually. According to the artificial heating, it was continued, and after lying for a considerable length of time, it slowly restored, and commenced to walk about. The expedient 

Alluded to might be advantageous—by employed in the treatment of disease, but the mere circumstance withholding its application unsucceful—fail, is that in the magnetic cases, the injury of the nervous system which has produced the insensibility is irretrievable—"death by coma" is of frequent occurrence in accidents and by assault. Exceptions have to this rule, is occasionally observed when in instance the injury from injury caused by the more substance is instantly one and extensive to treat like a shock, and causing "death by electricity". Propriety of those causes other acute and chronic affection of the brain may cause "death by coma". All the different modes of death while I am called upon to settle available to rule in cases. Ce-exceptionally the physician can do—
to oppose the one, sometimes the other. Usually, there is a frequent
increase in the symptoms of the disease. This is particularly true when
the brain is the much affected, and when there is less the common-
directory of headache, delirium, and stupor. Occasionally, death occurs in cases, when
the lungs are extensively involved. Sometimes there is no evidence that
the kidneys, liver, or any other organs have been affected. The glands
appear to be minimally affected or not at all. These recognized dif-
ficulties in the tendency to meet
exercise an important influence
on the different remedies which
right to be employed in the
Treatment of disease. Some
remedies being strictly injurious,
while others are absolutely with
beneficial results. Practitioners
frequently commit mistakes.
by looking Light of this important
difference, and upon the same dif-
fERENCE I presume is to be explained.
The reason why Mr. Leigh, in his
views, and the objects we unjustly
the mode of treatment recommended
by another, because it does not
conform with his own. These ob-
servations conclude what I have
to say upon the "Different Modes of
devising" and I sincerely hope that
anything which I have allowed to
remain unsaid will be reached
for, and sought to light.