The tissues of the Human Body, may be conveniently arranged under four heads, namely the Cellular, the Fibrous, the Membranous and the Tubular. In adopting this arrangement, we have been guided rather by a desire to simplify, than by any effort to be philosophical.

I. Cellular Tissues. We consider as cellular those tissues that are composed of small but perfect organisms, called cells. These are in some situations massed together, apparently without any uniting substance, as may be observed in the Epithelium in Pigment and in Fat. Elsewhere they are embedded in some gelatinous matter, varying in consistence, according to its purpose, and of this mode we have excellent examples in the Cartilage, as well permanent as ossifying. Some Cells float in fluid matter, and in it attain a higher organization than could be possible were they placed in any other material.

The functions of cells are numerous, and very highly important, not only in developing the nutritive fluids to which the body owes its strength, but in filtering away the destroyed matters that could not fail to prove injurious, were they long retained in the system. Whatever purposes they may serve while floating in living fluids, they cannot...
there cannot exist a doubt that their presence is essential to the perfection and vitality of those.
The blood, considered as a cellular tissue, and also endowed with life to a higher degree than any other, no doubt depends for its high nutritive power on the perfect condition and number of its blood discs. When changes occur that reduce these to a less perfect state, the blood loses its nutritive qualities, and the body wastes away and becomes dissolved. But the epithelium likewise is a cellular tissue of vast importance to the due protection of the body, as well as to its purification from poisons that are constantly produced within it. The importance of its functions however does not surpass in degree the beauty of its arrangement. In the glands it is assiduously filtering away the deleterious and poisonous bodily and urinary secretions, or pouring forth the fluids that dissolve and change our food into matter fitted to receive the endowment of vitality. In the ducts its cilia with mysterious and untiring activity drive on the secretions that are elaborated within their recesses. But whenever the delicate membranes that line the cavities or invest the surface of the body require especial protection, then the epithelium is...
piled up into a solid wall of defense. Let the frame withstand by unreasonable exposure to cold, excellent protection afforded by the fatty tissue, which forms a covering for the surface, while it fills up unseemly vacuities; at once preserving the animal heat and adding to personal beauty, the charm so delightfully expressed in the soft and rounded form of woman. Even the colour of the surface is due in some degree to cells, those secreting the peculiar pigment, while another variety of the same tissue affords a most necessary protection for that beautiful and delicate organ, the eye. Indeed, loss of the pigment in eyes would render vision confused and uncertain. In the form of cartilage, we meet with cells in a more permanent condition, perhaps, than in any other structure, and although some cartilage also contain fibres variously arranged, yet the ingredient that marks their nature is the cellular still. In this wonderful tissue, therefore, one sees the most varied qualities, suited as it is alike for the protection and the nourishment of the frame. But in the internal economy, we imagine that its value is highest. It cannot fail to excite our wonder if we consider for a moment the admirable provision that has been made by its intervention for preserving in a pure and perfect...
and perfect state the vital stream that nourishes and rejuvenates the tissues through which it flows. With the exception (and this even is doubtful) of perfectly dissolved albumen, cascine, fibrine, and gelatine, as also solution of sugar or lactic acid, which may be absorbed into the capillaries by direct transmission, no material of food is allowed to enter the blood without first passing through the ordeal of cell development. This seems like a watchful care lest any matter should enter when not in a state of complete fluidity. Nor is it otherwise with the effete matters that require to be expelled from the blood, for with the exception of pure watery matter, the same ordeal must be suffered by all results of decomposition before they are allowed to pass away. Are the Cells then, not the the guardians of the organization? Certainly, careful in the performance of their duty and equally fitted for its due performance.

II. Fibrous tissues. With the exception of the more dense epithelial structures (Hair, Teeth, Nails) the cellular tissues that have just been noticed, grow but little in size. It is just the reverse with fibrous tissues. In them the rule appears to be great firmness and strength, the exception being seen in auricular tissue which from its peculiar purpose has no more...
more loose arrangement. The Tendons and Ligaments as well as the fascias and fibrous investments in general are constituted of bundles and plates of white fibrous tissue. In the former, where great resistance is their arrangement is parallel, while in the latter, their intricate interlacement constitutes expansions well fitted for retaining in situ the various organs they invest: the neural cords and the small ligaments that connect the adjacent borders of the vertebral laminae are composed of yellow elastic tissue, so called from its physical qualities. We need say but little here, in regard to these tissues. Their fibres are understood to be perfectly solid: in the white they are small and parallel but almost inextensible, endowed with great strength. In the yellow, their diameter is, on an average, somewhat greater, they are furnished with considerable elasticity, they split and entwine, and are scarcely affected with reagents. One circumstance in regard to fibrous tissues is however well worthy of mention, namely, that they are less liable to be affected with disease than any other.

III. Membranous Tissues. As they appear in the body, scarcely any of the so-called membranous tissues are simple in structure, but consist of a protecting epithelium, a basement membrane, and a
a supporting network of capillaries, nerves and areolar tissue. Yet it is the existence of the Basement or Primary Membrane that determines their nature. Under this head are comprehended the Skin, its prolongation onwards as mucous membrane, the Tenons and Synovial membranes. But as all secreting organs communicate either with the cutaneous or mucous surfaces, the extent of these is immensely increased by the intricate accumulation of the glands. It is particularly worthy of observation that the membranous expansions (including their glandular prolongation) are more liable to disease, and more frequently affected by it than any other textures. We here speak of them as compound organs.

IV. Tubular tissue. Disregarding the ordinary terms usually applied to muscular and nervous tissue, they have been included under this head. The Tubular tissue consequently may be reckoned as four in number, namely the Muscular, the Capillary, the Absorbent and the Nervous. Of these the three first are wonderfully alike in ultimate structure. Muscular fibre as it is usually called is of two distinct kinds, the first or voluntary, under the influence of cerebro-spinal nerves, the second or non-voluntary, partly under the same influence, but chiefly under that
that of the sympathetic system. The differences in
spint of size are very considerable, but the component
parts are the same in both. They consist of two in-
redients, namely a tube or containing part called
Sarcotomea and a soft matter within it called
Sarcine. It is true that in the voluntary fibre the sarcine
has a definite and very beautiful arrangement, while
in the involuntary it is apparently in a granular
state, but except in a few details of minor importance
they are actually the same. The Scapillaries are also
tubes, and contain fluid blood which is usually flowing
rapidly through their cavity; they are also contractile
and acknowledge the sympathetic as their nervous
system. Their analogy to the involuntary muscular
fibres is very remarkable indeed. Both alike consist
of a delicate membranous tube presenting elongated
nuclei in its wall, the distinction being in the regular
shape of the muscular tube; both are contractile under
the influence of the same nervous system, and finally
both contain a nitrogenized matter nearly the same
in chemical nature. This analogy is interesting and
highly worthy of the most careful consideration. Not
less perfect indeed is the resemblance of the absorbing
tubes to those of the Capillary blood vessels; their
membrane presents the same nucleated appearance.
Their size is considerably greater, however, and in this respect the analogy may not be considered perfect. All their contractile power is great, and even higher than in the capillaries. The nerve fibres also are composed of a tube and contained matter: the former called neurilemma, the latter neurine, and in regard to this structure, the presence of an unusually large proportion of phosphorus may yet be of some importance.

Such are the tissues then of which the human body is composed, and of the changes that affect these tissues under the influence of disease it will now be our purpose to treat.

Raw whatever degeneration may be, there is no doubt that it always has a strong tendency to destroy the animal frame, and render it unfit for the functions of life. Different men will of course hold different opinions as to what this change of degeneration really is, and therefore in order that the opinions of no one may be meddled with, we have taken our own opinion on the matter. Degeneration then, is supposed to be of two distinct kinds, namely, constitutional (that of the blood) and local (that of the organs); and again these may be considered as chemical and mechanical. First then
than of the Constitutional degeneration. The Blood
that is constantly flowing through the vessels of the
system is like a great tide carried through a de-
caying land, feasting and invigorating the soil from
which it washes the impurities that contaminate it,
while it supplies in abundance the nourishment
that is so much required. This vital stream however,
cannot when more carefully considered, be com-
pared with anything else to be found in the
external world; it is more wonderful than all
other things. The food that we take and the air we
breathe are elaborated into Blood; the food is either
life, the air does not stop, but the Blood is
living and renew the decaying life of the whole
frame. But the Blood sometimes degenerate from its
pure state, and then the parts that depend upon it
for their support soon decay and the living structure
becomes dissolved. A few remarks on the causes that
promote this diminished vitality of the Blood
may not be without profit. The popular idea
is that it arises in a great measure from what
is called hereditary vitiation which becomes further
developed by bad food and bad air; and indeed
the popular mind is well satisfied with this defini-
tion, and believes it to be good and correct, and
so
so we suppose it is, although it does not at the first glance appear distinctly what bad food and bad air really are.

The Creator has covered the surface of this fair earth with plants and animals from which the food of man may be easily derived. Moreover it seems to have been decided from the very first in what way especially that food would prove most nutritious and invigorating to the frame and in this way our ancestors seemed to have a very proper idea as to the best mode of preparing food as well as a very just conception of what constitutedbad and improper food. Now although the facts are sufficiently known we are still anxious to go further into the matter. Taking what on all hands was agreed to be suitable and proper nourishment, Chemists have endeavored to explain the constituents that form its most useful part. Mulder and Liebig have advocated as their opinion the necessity for the existence of a particular animal principle which they called protein; it is curious to think they could differ about its composition, and which they said must exist generally with both sulphur and phosphorus in every substance that was
was to build up the Human Frame.

We immediately seized on the idea as a most excellent explanation of what good and bad food must consist. Protein existed in the Albumen and Casein of Plants as well as animals, and these with other substances of much better understood composition were sufficient for the full nourishment and healthy maintenance of the Human Race. To certain Indeed was this Protein argument (how appropriate the name) that relative which was found not to contain protein, was also by direct experiments made in France, proved to be insufficient for the nourishment of men. Protein was now a matter of everyday familiarity.

Chemists even manufactured Protein. For our own part we were immensely satisfied, for it was now evident that food which had become partially decomposed could not nourish the body, since either the protein was decomposed or at least its proper combinations were disturbed. But alas! Mulder and Liebig have outlined their early notions. Protein has fallen into contempt, and is now even sneered at. All the notions held about it have done good and it appears that state food of all kinds probably from having undergone change by...
by which the nutritive principles are decomposed is injurious to the blood and likely to cause its degeneration. But the Human Laboratory is not capable of converting food beyond a certain degree, it must receive it nearly ready for assuming vitality; and so there may be degeneration of blood not from bad quality but from deficient variety.

After all, the popular knowledge about food seems wonderfully accurate; and if wanting in depth, at all events is the very affected by the disposition to multiply words without any great increase of understanding. But had air been wonderful effect on the blood; and here Chemistry may depict us more. It is found as the result of experiments carefully made, that a full grown man throws off by the lungs, during 24 hours a quantity of Carbonic Acid Gas corresponding to about 10 ounces of carbon; this is a remarkable fact. It is also ascertained that the presence of Carbonic Acid in the blood exerts what is called a parasitic influence on it and renders it incapable of nourishing the tissues through which it flows; and this observation applies equally to all emanations from animal bodies, whether living or dead, and to the gaseous results of decaying vegetable. The...
cannot expect them, that Human Being crowded together in low damp dwelling can escape such contaminating influences as those to which they must be subjected. In regard to the mode in which Carbonic acid affects the blood, much is yet to be learnt; the following facts may perhaps assist the explanation. Carbonic acid has a density of fifteen hundred and twenty four, and the accumulation of so heavy a gas might change the physical quality of the blood most materially; specially it must be remembered that although this substance

is not in the true sense of the word an acid in its gaseous form, yet in all probability when in contact with fluid, it may become sufficiently powerful in its acid tendency to influence the decomposition of the blood in order to eliminate a base with which it may combine. And if this idea be correct with respect to the action of Carbonic acid, how much more powerful might the vital fluid be influenced by the slow irritation of Sulphuretted and Phosphuretted Hydrogen gases. There is one kind of vitiated atmosphere indeed that acts with wonder-

ful power on the Human blood; this is an atmosphere loaded with alcoholic vapors.
In what way it is injurious has not hitherto been explained, but certain it is that the blood must suffer great detriment in regard to its vital properties. The bodies of those who have suffered this poisonous atmosphere are not always deficient in good appearance, but frequently seem to be endowed with great strength and activity. Yet when disease once gets firmly seated in them, they melt, and are rapidly destroyed.

The causes of degeneration in the blood appear to be various. Hereditary Prejudications may exert some influence, but we are disposed to attribute much greater importance to improper food, vitiated air, and in some instances exposure to cold and moisture while the body is but imperfectly protected from their injurious influence. The influence of hereditary Prejudications would seem absurd, did we not see so many evidences of a corroborative kind to strengthen our belief. When it is considered how very minute the particle must be that is deposited by the male in the and developed by the female into a child, it is scarcely credible that all the properties of the father should exist in it; nay that the very passion in his blood should be transmitted to his offspring.
and after lying dormant for years, should at last become developed in them with no less perfection than it had in him. Indeed the very thinking on this subject bewilders the mind, and wastes the energies that might be much better employed in some other way. We are quite willing to believe in hereditary predisposition as a mystery, but at the same time it must be confessed that there does not exist any possibility of understanding how it is at all possible. In the blood we may now attempt to discover the results of physical agents of degeneration. In its healthy state the blood contains an immense number of yellow discs that are understood by some to be cells, while by others they are only thought to be nuclei; on the perfect condition of these, the vitality of the blood seems in a great degree to depend. There are also globular corpuscles existing in smaller quantity, which again are thought to be the sources from which the blood discs are derived. The fluid in which these corpuscles float, and which constitutes the remainder of the blood, is of a straw colour and possesses the property of coagulating when placed under circumstances favourable for that change. Now it is a fact worthy of mention that
that either in all, or at least in a great majority of diseases in which degenerations of the tissues take place, the blood discs are altered in their number, in their appearance, or in both. The exact purpose that they serve in health is unknown. Of course they have been supposed by Liebig to be the agents by which the animal heat is sustained in the performance of their function, the conveyance of oxygen to the tissues, and the conduction of Carbonic acid back again from them; but this view like many others of wonderful ingenuity, has fallen in the estimation of some, and been treated even rudely by others, who had nothing in any degree equal to it, to prepare in its place. Such is the fate of the greatest discoveries, when aged or unfashionable, and now the Alkaline Phosphate of Soda convey the oxygen and Carbonic acid apparently to the entire satisfaction of those who at one time were quite enthusiastic on behalf of the blood corpuscles.

Some think that the blood discs are the means by which fibrine is produced from albumen, and as usual various arguments have been advanced in favour of this and similar views, but there is really no one in guessing away at what
what in all probability will never be made any
plainer than it is at the present time. In all
Diseases of degeneration, we have already
remarked there is some change from their usual
condition, and this change generally a diminution
in number as the most remarkable occurrence, and
in Bright's disease the same cause seems to operate.
In these diseases the albumen is indeed remark-
ably increased in quantity, while at the same
time its quality seems inferior to what it is in
perfectly healthy persons. The result of this
improper state of the Deger-Sanguinis appears
to be exhibited in the deposition of Tubercular
matter in vascular organs, or the draining away
of albuminaceous matter by the kidney. The leuc-
opieces must surely have been reduced to the
state of albumen while the food on account of
the deficient organization has not supplied the
place of those that have been melted. We believe
after all that the diminution of blood corpuscles
is most likely owing to a reduction in their
chemical composition; an incipient attempt
on the part of chemical forces to overcome the
Vital affinities; this being favoured by the
imperfect nature of the Changes that take place
in the food during digestion. In purpura and in scurvy, the Blood Corpuscles are reduced to a granular condition, and the coagulating matter becomes extravasated; this certainly is structural degeneration but it must arise from chemical changes that take place in the blood; the food may have been sufficiently plentiful, yet it may or may not have been vitalized from the presence of some peculiar ingredient, that hinders its conversion into blood. Now the examples that have been adduced seem to point very strongly to reduction in the quantity of corpuscles as a constant accompaniment of disease impairing the nutritive properties of the vital fluid, and therefore this reduction ought to be considered as the degeneration of Blood, or at least the only degeneration with which we may become acquainted by the use of our senses. There is no use of applying to Chemistry for aid in researches of this kind, for Albumen or Pithine nearly in a condition of putrefaction would furnish the same analysis as similar substances of perfectly nutritive quality. Before passing on to the degeneration of the tissues it may be as well to review the causes that must probably act in establishing that of the blood. I. The Presence of
of some subtle ferment in the body, by which
even in the course of years such changes may be
affected as may at least render the blood more
liable to degeneration. Such is Hereditary Mediocrity.
II. Deficiency of the proper proportions of albuminous
and oleaginous matter in the food, but more par-
ticularly deficiency of the latter, which not being
in sufficient quantity to employ the Pancreatic
and biliary fluids that are secreted during digestion,
permits these fluids to exert their energy with
vindue force upon the albuminous matter of the
food, and so render them all the less fit to assure
the living state. III. Immersion in ainitiated air
which, although it may not act very rapidly, will
not the less surely produce a diminution of vitality
in the fluid through which it is constantly permeating.
It must never be forgotten that in organization one
fixed law seems to rule predominant. For whatever
purpose any process may be established in the human
system, that process is persisted in until it becomes
absolutely impossible for it to be longer carried on.
For whatever purpose any organ is designated for
that purpose does it struggle on until vitality has
ceased either in it alone, or in the entire organism.
The Blood is sent to the Lungs for the renewal of
its life by contact with the great atmosphere around. From it ought to be derived pure oxygen gas, so that the Carbonic Acid may be displaced, and an oxygenating agent supplied for the consummation of the final change on the destroyed tissues. I must, again, be remarked that the blood is sent to be properly aerated; if this change does not occur in a suitable degree, then the blood does not promptly return from the lung: it delays a while in order that every possible advantage may be derived from the air such as it is. In this way alone may be explained in some degree the sluggish transmission of blood through the lungs; yet perhaps a more perfect explanation may be afforded by other causes. An atmosphere loaded with impurities will certainly produce a more injurious effect on the blood, and although it may not immediately show its power, yet in the course of time the evil influence will develop itself not the less strongly that it has been delayed. The elements of the living fluid may resist for a time the decomposing agency of impure air, but how can they be constantly steeped in it without at last yielding and undergoing change? We do not pretend to explain the exact action of Alcoholic vapour on the elements of blood, still
still we call to remembrance the fact that alcohol will coagulate albumen outside the body and why therefore should it not at least make the attempt within it? We know again, that alcohol is a solvent of some fatty matters and that it contains another compound, ether, which will dissolve any fat. Why should not then the fat that ought to serve for the organization of albumen be rendered totally unfit for its purpose and so nutrition become almost destroyed.

Even independently of any decomposing influence on the blood, alcohol by loading it still further with carbon and hydrogen of which it will difficulty rid itself when in ordinary quantity must greatly impede the nutritive function. The decomposing agency of Carbonic acid, and of sulphuretted Hydrogen has been already noticed and although the explanation of their action thus advanced is perhaps in a great measure true yet they also may act in some other way still more involved in mystery. In concluding this brief sketch of degeneration in the blood we think it right to express our conviction that it is always a chemical change tending to a reduction in the complexity of the compounds that exist in it.
it, and consequently tending in a very high degree to the production of unsuitable oily matter. The change, that occurs, are certainly much more worthy of the name of fermentation than of any other.

We now pass to regeneration of the more solid part and once for all several great principles may be stated, that will materially tend to elucidate the subject. First must be remembered that contact with perfectly healthy blood is absolutely necessary for the growth development and maintenance of perfectly healthy tissue. If there can be no doubt that the preservative influence of the blood is due to the vital endowment it possesses, an endowment not at all understood, and in no degree capable of being explained in any other way than that it is the breath of its Creator. II Whenever this preservative influence becomes lessened by its vitality becoming diminished, the tissue immediately exhibit their proneness to return to their elementary condition, this being the result of chemical affinity. III The degree of decomposition suffered by the tissue will be great in proportion to the receiving power of the blood; in small and may of course take place in any degree. Still the
The degree of degeneracy is usually not great.

As in the development of alembic within the bodies of the herbivora, starchy matter by passing through the condition of Lactic acid may become oil, and that oil may finally assume new elements and constitute nitrogenous substances, so in the reduction of Nitrogenous tissue, the most natural retrograde production will be oil as well as some compounds, nitrogenized, and if still further decomposed, perhaps Carbonic Acid, Sulphuretted Hydrogen or other simple arrangements will result.

VII. Although in the mind vitality is generally associated with something possessing a solid form, yet this must be considered merely as a prejudice, while by a very little consideration it is evident that the only difference between solids and fluids is the superior power of cohesive force, when compared with repulsion in solid matter, the fluid state being due entirely to the existence of equilibrium between cohesive and repulsive power among the particles of matter.

In voluntary muscular fibre, the highly nitrogenized sarcine becomes reduced to the composition of oleaginous matter, thus constituting fatty degeneration of that tissue. The contractile power of the muscles so affected is of course greatly diminished.
diminished. Cases are few and as of course must be the deduction; yet if we were to permit ourselves to theorize on this matter, the phlegmatic rather than any other temperament would appear to be obnoxious to this change, inasmuch as the vital influence is less strongly directed to the muscular system. As to giving any reason why such a muscle as the Sartorius should be affected in preference to others in the same limb, it would be just as impossible as to account for peculiarity of temperament itself. In the heart we have a most excellent example of the same sort of degeneration taking place in involuntary muscular substance, and particularly of its evil effect. No doubt, many cases of sudden death may be explained by referring them to fatty degeneration of the heart. Obstruction to the current through the coronary arteries might afford some reason for this result of diminished vitality, but sufficiency of cases is still wanting to establish the cause. The condition most frequently observed as the cause of aneurism is certainly of the nature of fatty degeneration as is clearly proved by the diminution of contractile power seen to exist at the part affected. Of the degeneration in nerve tissue little can be said, although the mechanical variety
Variety of degeneration is perhaps that which it especially tends to. After death, there are in some cases of softening of the brain a number of purple cells filled with granular fat; these are probably the result of subdivision taking place in the various nerve fibres and the neurone assuming the granular form while a considerable portion of the nerve substance is reduced to the molecular state. It is not improbable that in this situation the capillary vessels themselves may exude degenerase into the cerebral substance, and so account for the granular appearance occasionally observed on them. The whole circumstances of the brain are so puzzling that we are not willing to rush an opinion.

In further removed any particular tissue is from the circulating tubes, the slower do changes take place in them; and so in cartilage and fibrous tissues the changes are very slow. Still when they do occur they are of the same nature, reduction to the granular form in the first instance and perhaps absorption and removal of the fluid matter by the Capillaries.

But of the changes that occur in tissue, none are so well marked as those that occur in glands; no other organ are so well adapted for exhibiting these.
thoracic change. Glands contain the Mucous, the cellular, and the tubular tissue in great perfection, while the existence of fibrous tissue in many is perfectly certain. In those glands that are the active sources of fluid secretion and most of all in the liver, kidney, the epithelium sometimes becomes loaded with fat instead of the secretion that ought to fill them. When the secreting cells become loaded with oily matter, the results may be manifold. It is quite obvious that the proper secretion can no longer be eliminated by the small vessels placed in the glands for the purpose of filtering them out and that one of the first results will be congestion of the vessels which supply the organs, since they are not properly unloaded of their contents as they ought to be. Congestion leads to direct transudation of a portion of the fluid contained within the capillary blood vessels, and in this way the albuminous state of the urine may be accounted for, the serum that transudes containing a considerable quantity of albumen. But nature does not lavish her store of nourishment where it cannot be required, and consequently in a very short time the blood ceases to be sent in such large quantities to glands that do
do not perform their proper function in the animal economy. Besides this great acting principle of nature, there is also another influencing circumstance, that strongly affects the result. Oil fills the cells as we have already said, and still it continues to be thrown into them; now there is no doubt that pressure exerted by this oily matter has the ultimate effect of causing mechanical degeneration. The capillaries through many of which, for reasons already mentioned, blood has ceased to pass, contract and leave an appearance of white fibrous tissue in the gland, and help to give it that characteristic appearance described as granular degeneration. The kidney and the liver have been particularly mentioned as the organs in which fatty degeneration was most likely to occur; yet perhaps in all glands the same results might be observed. The epithelium lining the secreting membrane has always in a state of health a granule or two of oil within its vessels, and over-accumulation of the same matter constitutes the degenerative disease. Glands are very vascular organs, and where should nature attempt to get rid of effete matter if not by them. The lungs indeed are not the seat of fatty degeneration, by then their function is the elimination of gaseous and of fluid matter.)
matter. Yet they have their own variety of degeneration, the tubercular matter which may be considered as the result of inflammatory change in the coat of the vessels allowing the transudation of their fluid contents.

But tubercular deposit is also observed in the organs of the body, these being chiefly glandular; however, the results are the same, namely diminished perfection of their function and after a time by pressure on the capillaries, the tubular and fibrous tissue a resolution of these into granular matter, and finally their rejection from the body in various acts of decomposition or their retention in it until death takes place. The cancerous degeneration is remarked for its rapid growth in certain instances, and no doubt this rapidity is facilitated by the melting down of the surrounding tissue by pressure. Perhaps also by the absorption of the granular matter derived from their reduction into the cancer cells that are in full activity. The distinction of cancer from tubercle, if this idea be correct, will consist in the simply mechanical action of the latter and parasitic nature of the former. As they mayPathologists are always finding that some anomalous occurrence renders many of their ideas useless.
in explaining the phenomena that occur, and so perhaps it will remain from deficiency of knowledge as to the change occurring in the blood; in the blood indeed we think it scarcely even doubtful that all changes of degeneration first occur before their results are manifested anywhere else, and this points more and more to the importance of attempting extensive experiments on air and atmosphere with the view of preventing accumulation of diseased matter in the system. As we may the activity of the poisonous ferment may in a variety of instances, be too powerful to be resisted, and in this matter it is worthy of notice that when the change in the blood has gone to a certain length it can never recover but must inevitably perish. In explaining the degeneration (especially the mechanical form) of the tissues in glands we had selected them as the best examples from their containing all the tissues that were first enumerated. The explanation of mechanical change in them is perhaps true to the letter, but it is to be feared that however ingenious the theories about the occurrence of peculiar deposits may be full dependence cannot be placed upon them. However unwillingly, we are compelled
Compelled to acknowledge that as yet, the most
part of the kind of Pathology is but an accumu-
lation of facts.

As a final conclusion it may be observed
that in disease there is always a tendency to
chemical reduction in the fluids, to mechanical
reduction in the tissue. Congestion of blood may
appear instead of bile. Uric acid instead of urea,
the former being less perfect as a secretions than
the latter less perfect as an excrentions secretion.

The uric acid again in those disposed to it excess
is not unlikely to meet with soda, perhaps derived
from the bile, with which the Boli cholelith stone may
be produced. The tubular and membranous tissue
and the fibrous may be reduced to the granular
state, and so the most highly organized structure
may be reduced and destroyed by subjecting to
pressure combined with reduction of vitality in
the fluid that ought to invigorate them.

Robert Orr Laighton