

ATKINSON (W.H.)

REPORT

ON

DENTAL PATHOLOGY

AND

SURGERY.

Read before the American Dental Association, August, 1870, by

W. H. ATKINSON.

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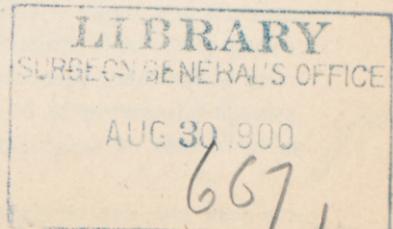
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REPORT ON DENTAL PATHOLOGY AND SURGERY

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PATHOLOGY.

Pathology in the large sense includes all functional activity, whether of an healthy or diseased character. In the differential sense it has been restricted to the latter.

All apprehension of difference of health and disease is but the perception of the phases of production, destruction, and reconstruction of bodies and processes, in equation of presentment in health, and predominance of or tendency to overbear this equation, or balancing of processes in disease.

The constitution of a body, out of which arises the possibles in temperament and diathesis, must be understood to enable an observer to recognize harmonious and inharmonious play of plan and process in the functions of forming and maintaining in place the primates of which the body or process is composed.

Bodies are formed, fed, and worked upon a plan, by a process, for an end or purpose, whether they be planets, plants, or peoples, in mineral, vegetable, or animal modes of presentment.

Differentiation.—Without orderly arrangement of points of likeness and unlikeness in bodies and processes, we can have no intelligible standard of differences.

All the observations capable of being made without optical instruments are coarse and ambiguous; and hence the classification of bodies thus discernible is vague and unscientific, as the text-books of natural history abundantly prove.

Since the perfecting of the microscope, naturalists have broken camp on the old battle ground of ~~germs~~ and species, and transferred their opposing onslaughts to that of class and kingdom.

The characteristic of ~~germs~~ and species has ever been un-

genus

genus

meaning and occult, but that of class and kingdom is even less conclusive and less clear.

The cataloguing of any character of sameness, likeness or unlikeness involves a process of perception, which is itself the product of the mechanism of sense, by which that which perceives elaborates the sentient process.

Essential or necessary conditions are posited at the avenues of sense as guards against error and misjudgment resulting upon the misunderstanding of any part or the harmony of the entire and complete process of perception of fact and philosophy.

Aberrant-action of any sense, or conjunction, or ellipsis of one or more senses, vitiates, obscures, aborts or prevents the mental conclusion. The complete conclusion of fact and philosophy, or the demonstration, as it has been called, can only occur by wedding the territories of matter and mind.

That this may clearly appear, it is only necessary to state—mental labors or events occur in *consciousness*, and physical or bodily events occur in *space*.

How shall we untie without cutting this gordian knot, of bringing together in consentaneous harmony these as yet parallel lines, infinitely projected and hence rigidly indifferent? The categories of primates in consciousness and physics may be thus annotated or tabulated, viz :

Consciousness has as basis or ground, mind, spontaneity, force.

Physics has as basis or ground, matter, space, effect.

The wedding of all these seeming indifferents in the territory of *time* completes the conditions of individual existence. *Existence*, then, being the mutual saturation of three positives and three negatives, namely: mind, spontaneity, force, and matter, space, effect, may be regarded in finite or infinite degrees.

Individual *ex*-istence as an infinite is incomprehensible; but as an infinitude of infinitesimals composing the universe in the great sense, is the only rational basis of reality of bodily presence.

All bodies must come into existence out of the unpro-

nounced oceans of force and form, in accordance with the limitations of these in the type upon which they are built.

This involves necessity of production and maintenance, which simply means creation or procreation, growth and nutrition. This last word nutrition involves the idea of change in the constituents of the body or bodies that elaborate function. And just here is the point in which all the past has been more or less at fault in interpretation of the where, the when, the how of function.

Function is the performance of process, whether that be mental or material, and each must partake of the other to constitute it function at all. So it becomes apparent that all of science and philosophy depends upon the appearance and disappearance of oneness and diversity throughout the whole range of cognizable being and not being, or existence and non-existence of presence, or in other words the metamorphoses occurring in planets, minerals, or plants and animals, in the multifarious process of feeding and being fed, from world to bathybius the extremes of hardness and softness between which anthropology makes its advent to explain the whole.

In the main the differentiations that mark slightest dissimilarity of a diatom or some infinitesimal body has engaged the attention of naturalists and microscopists, thus tarrying in thinnest matters of detail, and spending whole lives in building up unimportant differences into impassable barriers to all but those who were able not only to follow but transcend these wonderful hair splitters.

Why should the asserted identity of appearance under the microscope of an air bubble and a globule of mercury be a stumbling block in the way of the veriest novice, only that superficial observers have laid down a superficial authority which dominates so many who are essaying to study microscopy from books?

The power to differentiate is evidently an endowment of mind, and the mind is the concurrent result of all means of perception; is the full play of all the senses in normal action.

The senses acquaint us with the qualities of things. That

is to say, resistance is the primal necessity to the sense of feeling.

Solution is the prerequisite to taste, fineness of division or volatility to smell, vibration to hearing, and impact of light to sight, each retaining the essential condition of contact specialized in accordance with the differential necessities of each mechanism to metamorphose touch into idea, thought, opinion, belief, and knowledge by which we become informed upon the various subjects which engage our attention.

If, then, as is now apparent, we can only exercise complete powers of body and mind by being in possession of them, and also having a consciousness of that possession to enable us to exercise them in specific direction, how absolutely necessary is it that this exercise voluntary and spontaneous be untrammelled, regular, full and free in every department, and in the entire rounding out of demonstration of indisputable knowledge! Every effort at systemizing the greatest and minutest differences with which natural science has thus far been favored has fallen in the main far short of this clearness of demonstration, and hence we are and have been overloaded with mere detail and crudities, that will continue to obstruct true progress so long as these remain uncanceled and unarranged.

And now let us propound the basis upon which the future structure of natural science must be built to attain the clearness sought: 1st, crystal; 2d, cell; 3d, body; out of which the three kingdoms or domains naturally take their origin, and upon which they are firmly set. To understand the mineral dominion, *crystalosophy* must be the field of study. If we would comprehend the vegetable domain we must make a differential study of *cellosophy*. Both of these are necessary to introduce us into the domain of *corpusculosophy*, which defines the measure of endowment of the animal.

Crystalosophy, *cellosophy*, and *corpusculosophy* constitute the tripod upon which natural philosophy may now stand erect as their embodiment and assertion in the complete dominion of matter and mind as interdependent necessities of substance and force.

Investigators of natural phenomena may be divided into two distinct classes of observers, namely, the *exclusives* and *inclusives*.

The *exclusives* have held the field from the earliest times, and still hold it in all accepted teachings of the books and the schools.

The *inclusives* have been so few and obscure as to have been overslaughed or ignored in every age; the exclusives appropriating their labors and clipping them of their real significance and greatest use by differentially cataloguing them as their own.

The two great examples of exclusives holding control of the domain of natural philosophy are nominated physicists and vitalists, neither allowing the other the credit that each lays claim to, hence the irrepressible conflict of the war now waging between them, only to be settled by the *inclusives* taking the field and showing the necessity, utility and harmony of both aspects of this unity in diversity displayed in physical and vital phenomena.

"Observers" are limited by their *powers*, and "investigators by their *means*."

If we would clearly understand this, we must be able to define and propound both "powers" and "means."

The ultimate power of observation is nothing less than consciousness, hence our consciousness will be clear and definite, or clouded and indefinite, in accordance with the completeness or incompleteness of our mental machinery.

In the strict sense, then, this machinery is a "means" of consciousness, but not the only means; for appliances and apparatus belonging to optics and mechanics are also essential "means" by which our "powers" are increased and made definite in extent and certainty.

Orderly arrangement of observations, then, may be said to constitute investigation when legitimately compared.

The order of impressions becoming completed consciousness or knowledge must be known before we can by possibility differentiate legitimacy from its opposite.

This order will be more clearly apprehended by explaining a diagram representing the several stages of mental labor, from inception to culmination of the process, by which alone we can possibly know!

EXPLANATION OF THE DIAGRAMATIC SECTION OF A HUMAN SENTIENT CENTRE.

outer

A sense of deficiency (need) represented in the diagram, in the centre, by an ellipse, induces the mind to throw itself into an aspirational attitude, this induces "inspiration," represented by a dot at the top of the diagram in the outer space; when it impinges upon the mental sphere it comes in a direct line toward the centre and indents the periphery of the mental sphere, setting up waves which are equally propagated on either side of the point of incidence of the inspiration, which proceed around the entire sphere until they meet, crest to crest, at the opposite point of the sphere or section; the rebound of the waves causes them to retrace the territories just traversed, and when they meet at the point of starting they emerge as "feeling," symbolized by the wavy curved lines seen in the centre of the concentric spheres of the figure. "Feeling" makes its advent into the next concentric sphere, and passing a similar gestational activity, traverses the plane of its labor and emerges as "idea," represented by an arrow-head with the point of the shaft to which it is attached.

In like manner of incidence and gestational activity, the mental process is continued, the completed idea emerging in the next concentric sphere as "thought," represented by an arrow-head and shaft, with one pair of plumules near the posterior end of the shaft.

Thought, passing the metamorphosis of mental gestative action, becomes "opinion," as it emerges into the next sphere toward the centre, which is symbolized, like thought, with the difference of having two pairs of plumules on the shaft of the arrow.

Opinion, passing another stage, becomes belief upon its emergence into the next space, and is now born into that degree of mental conviction denominated "belief," and is represented or symbolized by an arrow, with three pairs of plumules on the hinder part of the shaft.

By a continuance of the mental impulse, belief now becomes in its turn resolved into "overpowering perception of truth" or knowledge in the innermost of the spheres, and is symbolized by a complete sphere in the centre.

This describes normal mental labor; but many who are distressed with the painful sense of "deficiency" are not able to convert or have it converted into "sufficiency," by passing regularly through the necessary stages. Deficiency and sufficiency are the extreme states or conditions of mental acquisitions, and are representations of emptiness and fullness of the mental receptacles.

When "aspiration" is irregular or feeble, the "inspiration" that is sent to satisfy the desire strikes the mental sphere obliquely, and thus propagates the gestational waves unequally, and hence if they are able to produce "feeling," it will be so one-sided as to prevent its becoming metamorphosed into a regularly formed "idea," so abortion of the inspiration takes place, or if it have vigor enough even in its irregular personality to beget a "thought," "opinion," or "belief," it is sure to be a miscarriage, preventing its being born into "knowledge."

Feebleness of "sense of need" always is followed by a feeble aspiration which fails to impregnate the sphere by inspiration entering the plane of feeling with a sufficient impetus to continue to completeness of the evolutionary process, in becoming alternately the differential stages of knowledge in feeling, idea, thought, opinion, and belief.

mainly

It is this feebleness of conviction, of deficiency (ignorance), that has ever stood in the way of the masses, learners and teachers, and the whole world of would-be scientific men, and caused them to tarry in the meager acquisitions of the past; resting satisfied with mere reiterations of loosely and ~~innately~~ accepted affirmations and gratuitous pronouncements of vagaries for explanation, rather than earnestly doing the mental work requisite to their understanding, or intelligently accepting past or present demonstrations of truth and philosophy.

Whether mind precedes body in order of existence, or body mind, need not much perplex us, as we must study them together as we find them, to make any progress worth the effort.

We know that the body comes into existence by a serial order of gestational processes, upon a definite plan, and that the mind becomes educated by the inception and repetition of mental exercises.

The bodily machinery wears out and falls into decay, so the mental mechanism becomes incapable of recalling past experiences, which is called forgetting.

A mass of soft iron, while constituting a link in the magnetic circle, is a magnet of power proportionate to its quantity and the strength of the charging current; but the instant the chain is broken the iron is non-magnetic as before.

Did the iron or the current constitute it a magnet? Neither alone, but both in conjunction!

The mass of mind now extant, alas! is analagous to the soft iron, only capable of clear mental perception when in connection with some other mind whose exercise has given it the requisite strength to communicate the current.

Without the power of consciousness, no touch, taste, smell, sound or sight can be interpreted into sense or understanding. So it is plain that reason and unreason, sense and non-sense, are but the matchings and mismatchings of events in the territory of consciousness.

And herein lies the difficulty of propounding the results of observation and investigation in the territories of matter and mind.

Instead of acknowledging that they are interdependent, we have assumed that they were distinct domains that might persist independently.

We might as well affirm that respiration, circulation, and innervation could be separately maintained.

All organization is the result of alternate domination and submission, or compromise of dominion of two tendencies,

namely: centripetality and centrifugality, or togetherness and apartness.

The full dominion of the former in planetary substance results in crystal; of the latter in ether. The full or complete dominion of togetherness in the territory of consciousness results in knowledge; that of apartness in diffuse feeling.

Rapidly passing from one of these states or extremes of tension to the other, without noting the intermediate stages of physical or mental progress, has given rise to the doctrine of cataclysms or floodings, in which all traces of stages of togetherness and apartness were obliterated, and a new order instituted in accordance with the whereabouts of the observers when they gave attention to the status in which they were.

This doctrine, without the shadow of support in nature, has withstood progress to such an extent that teachers to-day dare not depend upon their own convictions to verify the truth of the propositions they essay to investigate, but cringingly ask "what the authorities will think," or "in what book the proof may be found?" As if authority and book were anything but the repetition or the record of the mental labor necessary to the demonstration.

Tidal-waves, upheavals and explosions have been cited as proofs of cataclysm as the order of natural planetary progress; each and every one of which is substantial testimony to the opposite doctrine of regular, serial, order, in the occurrence of planetary processes.

In what, then, does our power to observe, investigate, and to differentiate consist? Manifestly, first, in possessing the power; and second, in exercising it in accordance, not only with the laws upon which it is itself constituted, but also in agreement with the laws and conditions of the subject of observation or investigation.

As the world progresses, ought we not, then, to be better and better prepared to solve, piece by piece, the problem before us? How shall we proceed to conserve helps and banish or surmount hurts to our progress?

In accord with that already stated, our first need is a correct mental philosophy to enable us to acquire the power of knowing when our queries are satisfactorily answered, so that we may rise above the adverse magnetism of those teachers who dwell with emphasis upon a single state or department of the labor of explaining the solution of the problem by varying the statement and in endless repetition, until we are engulfed in the maelstrom of voice without significance; till from very weariness we are forced to acknowledge that to be clear which is not explained, but rendered yet more intensely dark!

The veriest skepticism is preferable to such a state!

Mercury and carbonic acid are examples of bodies capable of passing from the vaporous to the crystalline state or condition by the management of pressure alone, so that crystal, soft-solid, waxy, fluid, liquid and gaseous bodies may be exhibited of these substances running up and down the scale of togetherness and apartness without cataclysm, flood or lines of demarkation of these differentiations, which are thus found to exist but in degrees commensurate to the pressure put on or taken off at the pleasure of the investigator, or the spontaneity of natural production! *Pragmatic pathology* includes all the progresses and regresses in the constructions and destructions of the individual (separate) domains of crystalosophy, cellosophy and corpusculosophy, an exhaustive observation of whose processes will bring within the pale of consciousness all the possibilities of matter and mind.

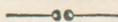
In a former report it was asserted that the human kingdom was built upon the destructions of the mineral, vegetable and animal kingdoms, by correlating them on a higher and finer order of arrangement in the human as their predestinate ultimatum.

In like manner the pragmatic pathology includes all the former phases of solidal, humoral (or fluidal), neural and cellular presentments of this predestinate (or completed, pronounced), pragmatic pathology; the study of which will

reduce to scientific certitude all that was of authority in the former pathologies, and effectually reconcile the discrepancies that have kept the territories of consciousness and physics perpetually asunder.

That the blissful reign of the pragmatic pathology may soon prevail, it is necessary that it be understood and taught by as many as possible at the beginning of its pronouncement.

I account myself fortunate in the happy opportunity that our young, fresh and nearly untrammelled profession presents for the introduction of the latest, highest and best discoveries of law and process; no less than the triumphant vindication in practice of the new method of securing the reproduction of carious and necrosed bones repeatedly brought before this body in my former reports, and exhibited in detail to many who are present.



DISCUSSIONS ON DENTAL PATHOLOGY AND SURGERY.

REPORTED BY THOMAS O. SUMMERS, A. M.

After the reading of his report, Dr. Atkinson continued as follows, illustrating his subject by well executed diagrams:

That I may be clear, I feel bound to say to you, that not a word in that report is mine, but it is taken from the fount of inspiration which wells up within me. When it is fitting you'll get the rest. Are you able to bear the truth? You know what our Savior said to Zebedee's children, "Are ye able to drink of the cup that I shall drink of, and be baptized with the baptism that I am baptized with?" Like all fools, they answered "We are able." Now I am not so far gone as that. Remember I am speaking to your hearts and consciences, as well as your intellects. I am going to vindicate the great Architect of the Universe.

We have, 1. Dermatozoa. They have simply skin and contents; endowed only with touch. They have feeling only. Their nature is savage. Their idea of divinity is power, *force*. Their marital relation is "touch and go"—indiscriminate. 2. Next we have articulata, which have tongues. To touch they add taste. They associate by two senses. Nature, barbarous; custom, clanish. Reigning religious idea, *fear*. Marital relation, *inconstant*. 3. Vertebrates. This is not brought about by cataclysm, but is a serial development—the rocks are as human as you. This class is the Rhinzoa. Three senses—touch, taste, and smell. Semi-civilized. Political idea, a republic. Religious idea, *Jehovah*. Force and fear are the reigning elements. There our friends, the Jews, stand to-day. Marital relation, polygamy. 4. Ottozoa. These have four senses—touch, taste, smell and hearing. Their political idea is democratic and republican. Religious idea, Paternism—God the Father. Marital relation, monogamy. 5. Ophthalmozoa. They have five senses. They add sight to all the rest. Here music and color comes in. Political idea, republic. Religious idea, Immanuel—God with us. In their marital relations, their affections are ahead of their intellects. Here conjugality is the leading idea. Marital slavery is swept away by the besom of destruction and love, for the Lord is with you.

That means health of mind, body, soul and spirit. Its *ghost*, La Place, said, "he had dissected many and many a subject that he might find the soul." Why he is not begotten yet, let alone gestated and brought forth. We turn from the light and say it is as dark as hell. Now we have three foundations on which to build. 1. Crystfosophy. They say *a* crystal is dead, that they belong to the Azoic period, which was perfected before the vegetable. 2. Cellosophy. 3. Corpusculosophy. This last has nitrogen in it.

We have gone slowly in medicine, simply because we have been dominated by past stages of development and processes of destruction. We have given credit to teachers for knowing more than they really do. Now you have heard me laud the saturated solution of the chloride of zinc, used to stop necrosed action in bone.

Now when I say I have something of a *new love*, you will say I am not consistent with the doctrine I teach—that I am not a *monogamist*.

But I deny this charge.

Now, sulphuric acid is the remedy for necrosis or caries of bone, from the chemically pure down to the compound aromatic sulphuric acid—the elixir vitriol, (SO₃, HO) of the shops. If I had heard that twenty years ago, I would not have believed it. It is based on the law of affinities in that diagram which I have just explained. I once had a case of necrosed spinous process of the second lumbar vertebra, in a female patient. By inspiration, for you know it is the inspiration of the Almighty that giveth us understanding, I touched it with sulphuric acid, and I had such a cure, that the surgeons denied that there had ever been any necrosis at all. I acted on that hint, and am now ready to pronounce it a *cure*. There is an affinity between the salts of lime which make the bone hard, and the sulphuric acid, (when the bone is deprived of its vitality), that it acts on all the lime deprived of animal life, and produces solution. The following expresses the reaction:

Phosphate of lime + sulphuric acid = sul. lime + hyd. phos. ac. $\text{CaO} + \text{SO}_3 \text{HO}, \text{PO}_5 = \text{CaO}, \text{SO}_3 + \text{PO}_5 \text{H O}$. Sulphuric acid does not act on cell life. I have had such marvelous results from this treatment, that I announce it from my head clear down to my *pyramidalis abdominalis*."

If you follow *this*, ugly cutting in the mouth is at an end. What are the forms of diseased bone to be treated in this way? One is when the solution of lime salts leave the mat-

rix of animal matter—*mollities ossium*. Another form of death in bone is necrosis, where a considerable territory is deprived of pabulum. Another, osteal ulceration or caries, where only the outside stratum of cells is thus affected, and there is an attempt at reproducing the solution of lime salts. In this case there is considerable swelling and drawing up like the *columnæ carneæ* of the heart, and you will diagnose it as *osteal cyst*. It is not *exostosis*. Now what do you do? Why puncture it and inject sulphuric acid. Protect the external parts. Make a little pocket so as to form a clot. With a little ingenuity you can accomplish this with a bit of rubber. Now don't go and inject three quarts in a person's mouth. Clean out the cavity, and get it as dry as possible with bibulous paper. Then take a hypodermic syringe and inject the sulphuric acid, drop by drop, and it will be drank up by the necrosed bone like syllabub. Then dress it with two parts tannin and one part glycerin on a little mat of cotton.

This treatment will do for any bone that is necrosed.

You can discover whether the bone is saturated in two or three days, or eight days at most.

To speak of the differentiation between the saturated solution of the chloride of zinc, and sulphuric acid. The latter has not so penetrating and multiplied extent of action. When the chloride of zinc is used, the capillaries collapse, and the blood regurgitates, and this goes on as far as the next switch of the capillaries with the venous and arterial radicals, and forms of the capillaries as far as the affinity is satisfied, the hydro-chlor. zincate of albumen, and where it is only strong enough to act as an astringent the reflow of the blood column will re-open the capillary and admit the fluid blood, and the red and white corpuscles, and the nutrient action is then established after its normal mode. It creates a foreign body. What becomes of this?

Dr. Carroll: "It is expelled."

Dr. Atkinson: "What does nature do with foreign bodies?"

sheet

Dr. Peebles: "It first dissolves them, then they pass through the tissues in the form of gas."

Dr. Atkinson: "That's nothing but expulsion. Can any one answer the question?"

Dr. Morgan: "Nature rids herself of foreign bodies in two ways. 1st. By direct expulsion. 2d. By encyusting them."

Dr. Atkinson: "That's right. Light has broken in on us all of a sudden. Now it is marvelous the toleration of interference of the superior maxillary bone. If this had not been the case it would have been destroyed long ago, for it has received such treatment at the hands of Dentists, as equals the horrors of Pandemonium itself. We have found out that nature either encysts or expels a foreign body. Now this depends on temperament, temperature, exercise, diet, light, shade and many other things which are a part of your life. Sulphuric acid kills all mineral life as this is a mineral acid, and the bone is renewed after its original pattern. I am sure the time is coming when we shall be able to redeem every diseased molecule, and know the processes of its original formation.

When the necrosed portion of bone has been sufficiently saturated, then wash out the cavity, and apply a little tincture of calendula. If there is an abscess which is not open, you can open it with a dressing needle, wash out the cavity, dry it with bibulous paper, and then put the sulphuric acid in it, and be sure you are not doing it for money, and you'll succeed."

A member: "What strength of sulphuric acid would you prefer?"

Dr. Atkinson: "That most preferable is pure sulphuric acid, when the disease is well defined. When this is not the case, use 1 part water, and 1 part sulphuric acid."

