



THE BASIS FOR TEACHING NOMENCLATURE—TERMIN- OLOGY AND EDUCATION.

BY W. H. ATKINSON, M.D., D.D.S., NEW YORK, N. Y.

(Read before the Joint Meeting of the American and Southern Dental Associations, at Louisville, Ky.,
August 31, 1888.)

"The light of the body is the eye: if therefore thine eye be single, thy whole body shall be full of light. But if thine eye be evil, thy whole body shall be full of darkness. If therefore the light that is in thee be darkness, how great is that darkness!—MATT. vi. 22, 23.

TO comprehend the possibilities and probabilities in functional activities in normal and abnormal instances of growth and nutrition of the bodies subject to these changes, it will be necessary to apprehend the coming into being and behavior of, no less than the degrees of susceptibility to, incoming energy by which strength or weakness of these factors or subjects of function are endowed. In fact, the manner and degree of endowment of functional power is the only proper basis for classification. Function means movement,—in condition or of place; condition signifying relation of part to part, and place of being to being. Personality of the identity and the medium in which it exists must be determined to lay the foundation of change capable of being perceived and examined for characteristics by which to discriminate the changes of body in mass and the molecular and volitive changes, the aggregations and correlations of which produce the more obvious mass-motions pertaining to the individuals and the masses of bodies under examination, so as to congruously catalogue them in class, order, genus, species, and variety.

Entities and the media in which they subsist are now attracting more general attention than at any former period. But these studies are so overloaded with the former bad classification as to cripple our efforts to get at a satisfactory comprehension for the starting-place of the doings of these bodies in a habitat without which they do not appear to sensuous perception.

The mycologists call this habitat "culture-medium," but they do not stop to investigate the intrinsic massing of primal elements (atoms); the appeasing of the hunger of which, sufficiently to afford lodg-

ment and support for the ferment bacterium capable of propagating the molecular changes which constitute the feeding of the ferment-body by the fermentable medium,—be it a fibrinous, albuminous, or hydro-carbon form of digestive activity of the medium,—is effected. From the time of Jenner, this question of well or poorly elaborated medium has been more and more pressing for satisfactory solution by the leading physiologists. Jenner noticed that only a part of those who milked the cows afflicted with “the pock” were infected so as to have the ferment set up the fever in the juices of the flesh, which was the culture-medium for the micro-organism without which the pock-fever did not appear. He further took note of the fact of the immunity from infection of the variolus virus which these people enjoyed. But he did not seem to follow out his reasoning upon the *non*-appearance of the pock in the rest of the milkers.

Had he taken this into account, would he not have been led to conclude that those who did not take the fever had such a well-elaborated medium as not to afford lodging or support to the infection with which they came in contact in milking equal to those who took it? Infections, impregnations, and contagions are only capable of “taking” where a certain degree of ripeness of protoplasmic churnings have developed affinities in the magma of “infectible”—“pregnable,”—or susceptible bodies so as to effect new combinations in the molecular mass, which is then the “culture-medium” in which the seminal impacts work out their fermentative or putrefactive mission.

Where the awakening and engagement of bonds of affinity in atoms takes on the fermentative form of molecular metamorphosis old molecules are broken up and new ones of less or greater complication occur.

Thus more stable or less stable molecules are formed in which the urge is quieted in a greater or less degree than it was in the fermentable body in which the (boiling) fermentation took place. So that these are less susceptible to incoming impact on the one hand, and on the other more easily aroused to new activity in the more complicated plasmic mass which they form under typical guidance, of cosmical, planetary, or individual radiant and irradiant impact into ether, air, vapor, water, colloid, and solid bodies constituting the lay-out of the field of our study of function (doing).

The order of functional procession is: 1st, Cosmic; 2d, Planetary or Earthy; 3d, Aerial; 4th, Combustive or Fiery; and 5th, Aqueous or Watery—processes, the interpenetration and mutual modifications of which are so occult as to render it difficult of apprehension and statement so as to meet the demand of materialistic scientism.

All these processes and the bodies thus brought within the range of sensuous perception are embodiments of power, the measure and the

modes of which mark their differentiations and mutations that constitute anatomy, physiology, pathology, metamorphosis, restoration and destruction, so important for us to comprehend and formulate as the only effective basis of study for practicalization of our chosen and adored calling in life!

In the human being any impact or effect capable of cognition by the senses may be the inception of polarization, depolarization, acceleration, retardation, or arrest of current in the elaboration of function.

As function is effecting of the purposes of being in currents and counter-currents involving demand and supply of the adequate energy, we are naturally led to the contemplation of "stato-motism" or polarization as the basis of cosmical, planetary, and personal movements.

Stato-motism in the cosmical plenum of molecular mass may be said to stand as the coiled tension or potential energy in mind and matter, ever ready and ever operating cosmical, planetary, and personal rounds of perpetual activities!!

Statism (stand-still) and motism (the go-on) are like the first postulate (the atom), capable of being fully comprehended only by a sort of fictional compromise in statement, as each has two aspects of presence like the atom, the name of which is no longer tenable when we closely study molecular constitutions.

So the emotism of solar fullness is a sort of statism until it springs into motism at the demand of planetary voidness as statism asking to be infilled with radiance, which now gives it motic character, and thus we readily see that our definitions are not finalities except as to statements of relation of numbers. These are eternal verities! Such as "the whole is the sum of all its parts"—to wholly understand a part its connections must be comprehended. A complete survey of all the connections of a part will lead in the end to a comprehension of the whole.

Let us then endeavor to follow the alternations of deficiency and sufficiency, or emptiness and fullness, of the receptacles in which the discriminative measures of power are stored, and learn that they are but infinitesimal repetitions of movements between cosmic fullness and planetary voidness in chaotic masses, by which all forming and feeding of individual bodies are produced and maintained. May we not readily see that a key which opens any department of the beautiful house we live in, will unlock, with the requisite modifications, the entire macrocosm of which it is an accurate microcosmic representation?

This key is a knowledge of the metamorphoses of prime elements in combinations and separations which are known as atoms.

Movements of atoms result in their change of place and change of character. In the first instance they are moved in mass in space and moved apart or nearer together without combination or coherence; in the second instance they are formed into new bodies by arousing inherent or communicated measures of affinity, or bonds of energy, by which they interpenetrate each other, and forming new bodies take the name of molecules. Of these there are two forms or sorts. The first is when the awakened bonds of combining power are in atoms of the same character; the second is where atoms of diverse nature are within the sphere of influence when their bonds are awakened. The first form consists of oxygen, hydrogen, carbon, or other primal gaseous body, which is now called nascent or ready to be born into the molecule, properly so called, of at least two diverse molecules of the first or preparatory order of holding together atoms of the same class.

The degree of strength of the grip holding elements in combination is the measure of permanency or evanescence of the body so composed.

A good example of this strongly held and loosely held element is shown in water H_2O and peroxide of hydrogen H_2O_2 . In the latter the extra equivalent of oxygen is so loosely held as to demand quiet and a temperature below 65° Fahr. to prevent spontaneous dissociation of the loosely held oxygen, leaving the water molecule of H_2O in the liquid state in the bottom of the chamber in which it is held, while the oxygen in gaseous form occupies the upper part of the chamber.

This is the *a, b, c* of function, and when exhaustively studied gives us the means of comprehending healthy and unhealthy modes of expression which are nominated disease in the text-books extant.

Instead of scanning down to the lowest and simplest forms of disturbance, which reveals the changes in prime and proximate elements, the whole system and its parts in regions and in organs have been made the territory in which have been sought explanations of the changes involved in physiology, pathology, and cure.

Physiology is the full and direct play of currents of affinity, thus producing strong and well-formed molecules, of which healthy bodies are constructed which operate all the functions with *ease*; while pathology is the minified, deflected, and split currents of combining energy, producing unstable and weak molecular mass, thus inaugurating *disease* in the very elements of the tissues and organs composing the functioning body. Anything which arrests retrogressive nutrient action and promotes progressive nutrient activity is a therapeutic agent or *cure*.