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HUMAN ENERGY

BY

ALBERT ABRAMS, A.M., M.D., LL.D., SAN FRANCISCO

1914



Med K8459

INTRODUCTION

The author's new physico-diagnostic methods are not theories but physico-clinical facts. They have been repeatedly corroborated by necropsy, skiagraphy, at operations and by histological examinations. The laws of physical science are universal and apply equally to living organisms and so-called inanimate things.

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This iatrophysical conception demonstrates the trend of unifying the various forms of force under one great principle.

The electronic theory demonstrates the electrical nature of matter. Radio-activity is a universal property of matter.

In disease, the rearrangement of the electrons is associated with the evolution of energy which is either neutral or endowed with a definite polarity.

The author's stomach reflex is employed as a delicate physiological test for the presence of this energy.

PERCUSSION OF THE LOWER STOMACH-BORDER.

A correct interpretation of physico-diagnosis predicates an understanding of the author's method of delimiting the lower border of the stomach in apposition with the abdominal parietes and this is only possible with the subject in the *erect posture*.

The principle involved in the elicitation of the stomach reflex of Abrams is as follows:

In the norm, a tympanitic sound is elicited but if the tone of the gastric musculature is augmented the walls of the organ become tense, thus putting the air or gas in the stomach under increased tension. For the latter reason, we have the physical elements necessary for the transition of a tympanitic to a dull sound.

Until a better acquaintance with this method is attained, a healthy subject must be selected with moderately thin abdominal walls and in whom a tympanitic sound is demonstrable by percussion over the entire abdomen.

The stomach shows a varying state of tonicity; it may be normal (orthotonic), increased (hypertonic), diminished (hypotonic) or absent (atonic).

In troduction

For the foregoing reason, in executing the electronic reactions an individual with known stomach-tonicity may be employed as a testsubject. In the latter instance, the energy is conveyed from the patient by means of an insulated copper-cord to the stomach-region of the subject.

For esthetic reasons, the subject may be screened from the patient.

The subject must stand on a flooring of unvarnished wood. Carpet interposed between the latter and the feet of the subject is not objectionable.

To increase the tone of the gastric musculature sufficient to elicit dulness, two simple maneuvers are available:

1. While the patient or an assistant directs either pole of a barmagnet at a distance of about 4 inches from the presumable location of the lower stomach-border, light percussion is executed from below upward until dulness is elicited; this is the lower border of the stomach and its position should be marked with a dermograph.

2. During the time energy is conveyed from the heart-region of the subject to the stomach-region by means of an insulated cord of copper as shown in Fig. 7, execute percussion after the manner cited in the first maneuver.

Finger-finger is preferable to instrumental percussion but those unskilled in the former may avail themselves of the plexor and pleximeter as shown in Fig. 6, which have been specially devised by the author to substitute maladroit percussion.

The lower border of the stomach having once been determined, one may proceed with the electronic test. The stomach reflex is easily exhausted and one must ascertain in the course of the examination if it is still present by conveying energy from the heart or by the use of the bar-magnet.

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HUMAN ENERGY*

IATRO-PHYSICAL AND IATRO-CHEMICAL PERIODS OF MEDICINE.

At one time in the history of medicine, the period of medical mysticism, physics and chemistry were invoked to explain the actions and functions of the body and to reconcile the dogmas of physics and chemistry with empirical methods in the treatment of disease.

The iatro-physiochemical doctrines endowed with exclusivism failed to survive the lapse of time.

Recent researches which I have made bearing on the question of human energy seem to emphasize the importance of the laws of physical science in the investigation of disease and the physician is constrained to correlate his data with this new knowledge.

THE MODERN KNOWLEDGE.

The forces found in the living body correspond with those which govern the inanimate world and the theory of

^{*}Abstract of an address by Dr. Albert Abrams, of San Francisco, before "The American Association for the Study of Spondylotherapy," at its meeting in Chicago, Sept. 30, 1913, and repeated with demonstrations before the "Chicago Hospital College of Medicine," Thursday evening, Oct. 2, 1913, to the medical profession of Chicago.

A special work dealing more specifically with this subject will be published by the author early in the year 1914. Numbers in parentheses (not italicized) refer to the pages in SPONDYLOTHERAPY where the subject has already been discussed. When the numbers in parentheses are italicized, they refer to the pages in Progressive Spondylotherapy, 1913.

vitalism (178) has been abandoned. Physical science by reason of the universality of its laws dominates practically every phase of medical research.

The circulation of the blood is a matter of hydraulics; the changes of gases in the lungs and tissues correspond to the physical theory of gases and heat-regulation conforms to the physical theory of heat.

Aseptic surgery and anesthesia are chemical contributions to our storehouse of medical knowledge. The "Cell Theory" and "Cellular Pathology," embodied the conception that the activities of an organism are the sum of the activities of its component cells which were regarded as the most elementary form of organized substances incapable of further reduction other than by mechanic or chemic means.

"Cellular Pathology," does not emphasize in accordance with the "*Electronic Theory*" (115) the ultimate atomic divisibility of matter and I shall later exploit this theory to suggest the inauguration of a new diagnosis and pathology which I shall respectively neologize as "Electron Diagnosis" and "Electron Pathology."

The time is fast approaching when the activities of living cells will find explanation on a physico-chemical basis and when the biologist shall know the laws that govern cellgrowth with the accuracy of the scientist knowing his laws. It will be then that prevention and cure will be questions of scientific accuracy. As physicians we dare not stand aloof from the progress made in science and segregate the human as something apart from the other entities of the physical universe. Our differentiation of matter is largely morphologic. Whether the object of our differentiation is a human or a germ, we are only dealing with a congregation of vibrating atoms which in their varied combinations are the basic constituents of all that exists. The Modern Knowledge

There are three physical entities:

- 1. Matter,
- 2. Energy,
- 3. Ether.

The *electron* or *corpuscular theory* which most fully accords with modern investigations concerning the physical basis of the material universe conceives matter to be made up of molecules; molecules to be composed of atoms and atoms to consist of electrons (*116*). The electrons or corpuscles are charges of electricity. The atoms of matter are individualized masses of positive electricity diffused uniformly over the area of an atom, spherical in shape and one two-hundreth millionth of an inch in diameter.

Throughout the spherical mass are some eight hundred minute particles of negative electricity all alike flying vigorously about, each repelling every other particle yet all contained within their orbits by the mass of positive electricity which constitutes only about one *per cent*. of the atom's mass.

The number of electrons in an atom are proportional to the atomic weight of the element. When the crowding of the electrons becomes excessive as in radium, thorium or uranium, the atoms become radioactive owing to collisions between the electrons, some of which are constantly shot away (116). Radiation refers to a change in the velocity of an electron which causes ripples in the surrounding ether. Whenever the velocity of an electric charge is increased, diminished or changed in direction, Roentgen rays, light and all other radiations result.

As I shall show you, practically all atoms of matter are radioactive, assuming that the streams of radiations also consist of ethereal vibrations as well as flying particles.

The following data may be summarized concerning electrons:

1. The electron is the smallest entity known to science and is a thousand times smaller in mass than the smallest atom.

2. It is a sphere of positive electrification enclosing a number of negatively electrified corpuscles which counterbalance the positive electricity of the enclosing sphere.

3. The electrons are characterized by the uniformity of their vibrations. This is demonstrated by the sharpness of the lines of light making up the spectrum of an element. These lines originate from the vibrations of electrically charged systems and if the vibrations of different atoms were not attuned to each other, the spectral lines would be blurred and diffused.

4. Light and other radiations are dependent on disturbances in the surrounding ether (209) caused by a change in the motion of the corpuscles.

We refer to perpetual motion as impossible, yet the whole universe is nought else. Matter is only an effect of a definite kind of motion.

During the revolutions of the electrons, thousands of millions of times per second, an electro-magnetic field of energy is created but the rhythmic changes in the field of energy thus transmitted by the ether have thus far eluded all instruments for their detection and study.

Everything in nature is in a state of perpetual motion and the latter is continually changing from one velocity to another.

The power to change the state of motion of a body is ENERGY. The total energy contained in matter depends on the extent to which it can be changed. Energy is the universal commodity on which all life depends.

All forms of energy whether derived from heat, electricity, magnetism or gravitation are interconvertible and represent practically different varieties of motion. Energy, like matter can neither be created nor destroyed.

The energy in all matter is enormous and it has been estimated that one gram of hydrogen possesses sufficient energy to raise one million tons through a height exceeding three hundred feet.

Electrons are only electricity and nought else is in existence but electrons.

In gases, electricity is conducted by free corpuscles flying bullet-like and with velocities often approximating 100,000 miles per second. In liquids, the conduction is only about an inch an hour.

In metallic conduction, the atoms are relatively fixed and their only power is that of vibration. Certain corpuscular aggregations will hold in an unstable condition a few more corpuscles than exactly suffices to balance the surrounding sphere of positive electricity. The atom thus constituted is negatively charged. Others hold a few less corpuscles than suffices to balance the positive electricity. This leaves the atom positively electrified.

If these two types of atoms are free to move and they unite and neutralize each electrically, we have chemical union.

HUMAN ENERGY.

The present age marvels at man's conquests of the forces of nature. Yet, this age of energy can only be triumphant when man can know and then direct and control the more important forces within himself.

Epoch-making discoveries in science usually date from the discovery of a sensitive mechanism which reveals some phenomenon of the atomic world.

The radium emanation has been detected by the electroscope.

The latter is a million times more sensitive than a spectroscope yet the latter will detect the millionth of a milligram of matter. The delicacy of Einthoven's string-galvanometer has established the principles of electro-cardiography.

The physiologic mechanism which I employ for detecting human energy is the living stomach and which may be designated as "gastrometer."

It is essentially a *stomach reflex* which I have discussed at length (316, 321, 584, 123, 145, 146, 147, 153, 163). In accepting the reaction of the stomach-musculature as the basis for our varied deductions, we are employing bioplasmic matter, the most primitive and sensitive substance for exhibiting the phenomenon of vitality. The pupillary response to light is an energy-contraction not unlike that under consideration. A frog's muscle is now used for recording wireless messages (148).

I have referred to the sensitiveness of the electroscope. The latter is less sensitive than the stomach reflex. The stomach reflex will detect the rays emanating from radium at a greater distance than will the electroscope.

Modifications in the tone of the stomach when the region of the latter is exposed to the various forms of energy are demonstrated by *percussion* and *tracings* (167, 169, 170).

Percussion, however, is more easily executed. Much difficulty will be encountered at first in eliciting the dulness of the stomach.

It must be recalled that the stomach is immersed in an atmosphere of tympany, therefore the percussion-blow must be *localized*, otherwise the vibration of surrounding tissues will mask the dull or tympanitically dull area of the lower border of the stomach.

The best results are secured by finger-finger percussion;

one finger acting as a pleximeter and the other finger as a plexor.

After this manner one can appreciate the resistance of tissues percussed (palpable percussion).

To localize the percussion-blow, the second finger (usually employed) acting as a pleximeter must be held rigid with the ungual phalanx slightly raised (Fig. 1).

1



FIG. 1.—The upper figure represents the correct position of the finger when used as a pleximeter. The cross indicates the part of the digit to be struck by the other finger acting as a plexor. The lower figure indicates the incorrect position of the finger in eliciting dulness of the stomach.

If the latter precaution is not taken and the terminal phalanx rests on the abdomen, the blow will be transmitted to the contiguous area and the tympanitic tone elicited will obscure the stomach-dulness.

When difficulty is encountered by the method of percussion indicated, one may employ the method already shown (511) or one may use an ordinary glass rod which is held at

the same angle as the finger and then percussed. For those unskilled in finger-finger percussion, the plexor and pleximeter shown in Fig. 2 have been devised by the author. Light blows with the plexor yield the best results—a sound almost woody in character when the lower border of the stomach is attained.



FIG. 2.—Plexor and pleximeter for the use of physicians unskilled in fingerfinger persussion. The dark area in the pleximeter represents a small quantity of wax. The latter eliminates all adventitious sounds likely to disturb the elicitation of stomach-dulness. A light blow yields the best results and when the lower border of the stomach is attained, an unmistakable woody sound is audible.

It is best to first define the lower border of the liver (Fig. 3); next define the lower border of the stomach by aid of the conducting cord. Observe that when energy is conducted from the heart to the epigastric region the liver-border may be found lower for reasons cited (150).

After the conveyance of an excess of energy which occurs in disease, the lower border of the stomach is *retracted* (Fig. 3).

The dulness of the stomach may be accentuated by having the patient firmly fix with his hand the lumbar spines to suppress their vibration (80).

Human Energy

The stomach reflex (gastrometer) is exceedingly sensitive although the latter varies with the tone of the organism. When its tone is impaired and its sensitiveness is in consequence diminished, I convey the energy from the individual examined to the stomach-region of another individual, with a stomach-tone of known sensitiveness. When the stomach fails to respond promptly to the action of energy, it may be made more sensitive by definite maneuvers which I shall demonstrate later.



FIG. 3.—Illustrating method of conveying energy from the heart to the stomach-region. Continuous line, lower border of stomach; dotted line, retracted stomach-border; broken line, lower liver-border.

I have specified the energy of the human organism as anthropodynamic because it is a specific electronic energy. A nerve-impulse resulting from the action of a stimulus liberates energy stored within protoplasm. Heretofore, the only evidence of the liberation of energy was the electrical change; the wave of negativity. This energy was supposed

to be electrical but this is disproved by the measurement of its velocity.

Atomic differentiation as I conceive it, is only a question of vibration-frequencies and each atom is endowed with a specific rate of vibration. Colors are the effect of particular frequencies of vibration.

The stomach does not respond (as revealed by dulness) to all degrees of vibration (206). I set in action at some distance from this patient a tuning-fork with a vibration-number of 256. Note that dulness of the stomach at once ensues, but observe that the dulness is at once dissipated when the negative pole of a bar-magnet is held in proximity to the stomach, whereas the positive pole presented to the organ maintains the dulness. In consequence of the fore-going we must conclude that the vibrations are positive.

The nerves of taste and smell must be endowed with specific electrons which are only attuned to different vibration-rates hence the differentiation of taste and smell like the differentiation of color (203).

The energy evolved from the human is as characteristic of the human as the energy evolved from the lower animals is distinctive for the lower animals.

Furthermore, one man differs from another man only in the sense that his electrons show varying rates of vibration. The diamond, lampblack and charcoal are all practically identical in composition. Oil of roses and coal gas have the identical composition (4 atoms of hydrogen and 4 atoms of carbon), yet the mephitic odor of the one and the delightful odor of the other is merely a question of rate-vibration.

Now the attunement of the organism shows a physiologic rhythmicity at different periods of the day and furthermore this attunement is modified by disease and temperament. These facts have been established by tests made with Galton's whistle (Fig. 4).

You will observe that by modifying the tone of my voice, I can elicit varying nuances of stomach-dulness. The response of the stomach is so sensitive that it faithfully records the dots and dashes from an ordinary transmitter operated at a considerable distance from the subject (Fig. 5). The gastrograph (167) was employed for making the records.



FIG. 4.—Galton whistle. This consists of a steel tube in which air is caused to vibrate. The note produced by it becomes higher as its length is diminished and ranges from 6,481 vibrations per second to the highest perceptible tone-limit.

In atomic differentiation we must also take into consideration the POLARITY of ENERGY. The oils of orange and cloves have the same chemical composition—16 atoms of hydrogen and 16 of carbon—yet each has its specific odor and taste. I now expose the oil of orange to the abdomen approximating the stomach and you note no change in the percussion-sound of the latter.

However, if I carry out the same maneuver with oil of cloves, the tympanitic sound of the stomach is at once con-

verted into dulness and furthermore the dulness is maintained by the positive pole of a bar-magnet and is dissipated by the negative pole, hence the polarity of the energy is positive.*



DASHES FROM TRANSMITTER	
Recorded by stomach	

FIG. 5.—Dots and dashes from a transmitter recorded by the contractions of the human stomach.

ENERGEIAGENIC CENTERS.

There are definite areas of the body which are constantly discharging energy and the energy thus discharged differs in *polarity* in the two sexes.

Fig. 6 represents the centers of energy in a male and Fig. 7 illustrates the centers in the opposite sex.

Both figures are marked by+ (positive), -(negative)

^{*}Opposite poles of bar-magnets directed toward the stomach dissipate the dulness of the latter whereas like poles multiply the intensity of the dulness (153, 154).

Energeiagenic Centers

and O (neutral) signs, indicating the polarity of the energy emanating from different regions of the body.

The discharge of energy with reference to the extremities only occurs at the tips of the fingers and toes.





in a female.

Common to both sexes in the norm there is:

- I. A positive (+) discharge from the arteries.
- 2. A negative (-) discharge from the veins.

3. A neutral (O) discharge from the 7th cervical spine and positive discharge from the 1st lumbar spine.

4. A negative discharge from the regions occupied by the kidneys.

The *epigastric area* discharging neutral energy is limited to the central line of the abdomen and extends upwards to a distance of about 5 cm. above the navel.



FIG. 8.-Normal energeiagenic centers in the back common to both sexes.

From any of the foregoing centers one may conduct the energy by means of an ordinary flexible *insulated* cord (approximately 80 cm. in length) of copper, or aluminum wire.

Insulated aluminum wire is the most effective material for conducting human energy.

The metal tips of the conducting wire in contact with the fingers must be insulated. Placing one *tip* of the cord (which must not be insulated) to any center of energy and the other tip in contact with the stomach-region or several

Energeiagenic Centers

inches away (if the energy conveyed is of sufficient potency), an immediate dulness of the stomach is elicited and by aid of the bar-magnet one may determine the polarity of the energy during the flow of the latter.

It is wise to first determine the lower border of the stomach by aid of the energy from the heart. This is done by fixing one end of the conducting wire to the heart-region and the other end to the region of the stomach* (Fig. 3).

In a male and female subject, dulness of the stomach is evoked from all areas of energy shown in Figs. 6, 7, and 8.

I wish to direct your attention to a new OCULO-GASTRIC REFLEX which likewise differs in the sexes. Looking through a red medium, stomach-dulness in the male is only elicited when the *right* eye is thus employed, whereas in the female gazing through red with the left eye produces dulness.

The influence of color on the tonicity of the organs has been discussed (199, 200).

One may measure the intensity of conveyed-energy by:

1. The intensity of stomach-dulness.

2. The distance which the tip of the cord approximating the stomach-region will produce dulness (*i. e.*, whether the tip must be in immediate contact with the abdomen or several inches away).

3. The duration of dulness.

4. The degree of stomach-retraction.

The last method of estimation is the most convenient and reliable. Thus, one may gauge the energy of the heart, the testicles, ovaries, etc. (166, 188).

^{*}By interposing an insulating material between the floor and the feet, the transmitted energy is incapable of eliciting the stomach or any other visceral reflex.

In other words, the individual must be grounded (earth-connection).

Another index of energy is the degree of descent of the lower border of the lung (472) by conveying the energy to the 7th cervical spine.

The physician reasonably skilled in percussion may utilize the heart or the lower border of the liver as indices of conveyed energy (150, 184).

In this patient, by conducting the energy from his epigastrium to his 7th cervical spine by aid of insulated aluminum wire, his pulse can be inhibited.



FIG. 9.—Calbrated tube of glass with connecting cord for measuring the intensity of energy-discharge.

Another method, not mentioned, for measuring the intensity of energy is based on the principle that the further away the tip of the end of the conducting cord is from the *source of energy* eliciting stomach-dulness, the greater is the energy-discharge. For this purpose I employ a calibrated glass-tube (Fig. 9) through which the wire passes and which is gradually withdrawn until the energy-discharge is no longer able to produce stomach-dulness. Thus in the average male, dulness of the stomach from energy derived from the left psychomotor region is rarely elicited if the end of the conducting cord is further distant than *one-quarter* inch from the region in question.

SYMPATHETIC IRRITATION.

The epoch-making work achieved by Dr. E. H. Pratt, with relation to the orificial reflexes prompted me to devise some diagnostic method whereby one could recognize *sympathetic irritation*, provoked by some anomaly of the orifices (rectum, urethra). In the norm, there is a discharge of energy from the 7th cervical and 1st lumbar spines. From the former situation the area discharging energy extends on either side a distance of 3 cm. from the spinous process; in the latter situation (1st lumbar spine), it extends a distance of 2cm. from the spinous process on either side.

In sympathetic irritation from orificial or other lesions implicating the sympathetic, a discharge of *neutral energy* may be obtained in the entire region of the dorsal vertebræ at a distance of 5.6 cm. on both sides from the spinous processes. In other words, no energy-discharge is elicited until the end of the wire attains a point 5.6 cm. distant from the spinous processes and this discharge is obtainable equidistant from the latter throughout the dorsal region.

DISCHARGE OF ENERGY WITHOUT CONDUCTORS.

There are many individuals notably temperamental ones, whose mere presence will evoke the stomach reflex.

Let such a one, if a male, point his left finger at the region of the stomach of the subject and the stomach will immediately dull. A temperamental female will achieve the same object with her extended right finger.

Let either one touch the 7th cervical spine (228, 469) with either finger and after the lapse of several seconds there

is decided retardation of the pulse of the subject which in some instances amounts to temporary inhibition.

In executing this experiment a subject with a feeble pulse should be selected.

The results of such an experiment are best determined by sphygmography (Fig. 10).

I have already discussed psychic energy (190).



FIG. 10.—Illustrating the effect on the pulse before and during the time an index finger is placed at the 7th cervical spine.

The transmission of thought is only possible when one side of the brain is put out of commission. Several maneuvers have been suggested for this purpose (190, 192), but the latest and simplest maneuver is to place the fingers of the left hand on the left psychomotor region or the fingers of the right hand on the right psychomotor region.

Individuals who show no spontaneous discharge of energy may be made to discharge the latter by standing on an insulating substance (rubber, glass) or by placing on the head any red material so as to include both psychomotor regions (192).

Here, it may be mentioned parenthetically, if you desire to prevent the escape of energy from a neurasthenic, you may do so by a strip of yellow across the head so as to include both psychomotor regions.

This strip of yellow prevents the discharge of energy from *all* of the energeiagenic centers and in no wise interferes with the reception of energy from the environment.

Do not subject this simple expedient to theoretic criticism until you have given it a trial.

Individuals who spontaneously discharge energy or those

Discharge of Energy Without Conductors

insulated after the manner cited may, by applying the finger at different vertebral spines (where visceral reflexes (7) are discharged) provoke the reflexes in question.

Here is a subject on whom this can be demonstrated.

You will observe that when this physician placed his finger at the 7th cervical spine, he elicited the heart reflex of contraction (199).

I shall now ask him to place his finger at the 5th dorsal spine and you note that the stomach becomes tipped (demonstration by percussion).

At the latter vertebral point you open the pylorus (588, 82) and the stomach empties its contents into the duodenum.

Dr. Patrick O'Donnell, who has achieved fame as a Roentgenologist, like many others doubted the correctness of this observation but he has repeatedly demonstrated by skiascopy and skiagraphy, the correctness of this clincophysiologic phenomenon. The latter will be demonstrated by the fluoroscope (demonstration by Dr. O'Donnell).

The "Royal Touch" and the laying on of hands for the cure of disease may be regarded as mythical by those who are ignorant of the visceral reflexes and the potency of human energy.

It is asserted that external applications do no good for the reason that there is no cutaneous absorption.

The latter plays only a minor *rôle* in the foregoing method; it is chiefly a matter of eliciting reflexes.

On this hand placed in front of the stomach-region, I shall rub an indifferent liniment. Observe as a result an immediate elicitation of the stomach reflex.

By the latter maneuver, frictional energy was developed.

I constantly discharge a large amount of energy.

You know that the region for exciting the depressor nerve is between the 3rd and 4th dorsal spines (472).

If my fingers are placed at the latter region for several seconds, the lower border of the lung will ascend (473).

You already know what can be done with a giant magnet in visceral attraction and repulsion (156, 184, 203).

With this magnet, I cause the liver to descend.

If I now charge this liver with the positive energy of my left hand and attempt to attract the lower border of the liver with the positive pole of the magnet, there is a rise in lieu of a descent of the liver on the principle that like charges repel.

There is a work by Buchanan on "Therapeutic Sarcognomy," which is a marvelous treatise in the matter of deductive reasoning. For the latter reason, it can never gain any scientific distinction. Buchanan, however, subjectively evolves many important truths concerning human energy which he specifies as *Nervaura*. *Thoughts are things*. With Dr. O'Donnell's aid I shall show you that pschyic energy concentrated by aid of a large lens on the 5th dorsal spine will cause the stomach to tip and discharge its contents (bismuth) into the duodenum.*

Those of you who doubt the important $r\hat{o}le$ played by color in physiology and pathology, give attention to the oculo-gastric reflex (440) to be observed in this patient.

The patient declares that any purple color creates nausea.

Observe that when she gazes at purple, after a lapse of several seconds, the stomach assumes a vertical position such as is noted in nausea (443).

All forms of energy are interconvertible and there is a constant circulation of energy in nature.

Here is a subject who discharges no energy, yet if he takes

^{*}One of the observers remarked that the appearance presented by the stomach could be likened to the flow of water from an inverted pitcher.

Discharge of Energy Without Conductors

electrodes for several minutes in either hand from a moderately strong galvanic current and then directs his fingers at a distance of many feet from another subject he can elicit in the latter the stomach reflex. This ability to discharge energy will continue for several minutes. A like effect may be noted with the energy from a magnet (148) or the energy from an electric lamp.

Human energy passes out of the body in straight lines and is partially deflected by a magnet.

It can be refracted by aid of a double convex lens.

If the hands are wet no energy is discharged and dry hands discharge more energy than moist hands.

Similarly, less energy is discharged in humid than in dry air.

One may charge a Leyden jar with human energy by placing one hand on the outer coating of tinfoil and the fingers of the other hand to the metal knob. The jar thus charged contains an energy which is neutral.

By attaching an insulated aluminum or copper wire to the knob the energy may be conducted for hours from the jar and the energy thus conducted may stop the pulse when the end of the wire is applied at the 7th cervical spine or, if conducted to the upper abdomen, it evokes the stomach reflex. Touching the knob with the fingers discharges the jar and no more energy can be conveyed from the latter.

The energy output of an individual is modified by many factors.

Alcohol is one of the greatest depressors of the vagus.

By aid of the spondylopressor (9, 34, 51, 74) you can accurately gauge the depressing action of alcohol.

Note that before receiving an ordinary glass of whiskey, the pulse is inhibited (by pressure at the 7th cervical spine) at $3\frac{3}{4}$ kilograms. Immediately after ingesting the whiskey,

it takes 6 kilograms of pressure to inhibit the pulse but after 15 minutes, the pulse is inhibited with a pressure of 1 kilogram.

The effects of *anesthetics* on energy may easily be determined.

A few inhalations of chloroform or ether will inhibit the output of energy but if to the ether or chloroform, oil of orange is added, I shall show you there is little or no effect on the energy output.

To Dr. George Jarvis, credit must be accorded for having solved the problem why oil of orange is beneficial as an addition to ether in anesthesia (82).

PHOTOGRAPHIC ACTION.*

In studying the photochemistry of psychic energy it was found to vary in different individuals. In those who spontaneously discharge large quantities of energy by placing a very sensitive film (inclosed in a black envelope) and interposing a medium which resists the penetration of psychic energy, one may practically always obtain an impression on the film. These impressions I have neologized as *psychograms*. At the present time the impressions are so faint that they cannot be illustrated in this work. It is reasonable to hope, however, that further experimentation will achieve better results.

Time of exposure depends on the subject discharging psychic energy. The most satisfactory time varies from 30 seconds to 5 minutes.

^{**}My experiments do not refer to mentoids (thought forms or bodies). Yamaguchi refers to a woman having the mental faculty of autohypnosis, who was requested to hypnotize herself and strongly suggest to herself a word spelled in Japanese letters. She did and remained hypnotized during one hour. Sensitive dry plates held near her head, upon development, revealed the negative of the word spelled in Japanese.

Photographic Action

The discharge may be augmented by placing a strip of red material across the head and the action of the psychic rays on the plate may be intensified by interposing between the forehead and the plate a strip of aluminum. The material for obstructing the rays may be a thin layer of shellac or the insulating tape used by electricians. The shellac may be painted on the forehead or envelope (prior to the introduction of the film), and similar disposition may be made of the tape.

I have endeavored to obtain similar pictures of the bones of the hand.

The results thus far have not been satisfactory but there is reason to believe that further efforts with new developers may eventually be successful.

The hand is placed on the film or plate and covered with a sheet of aluminum. The fingers of one hand touch the center of a large lens (in focus) which is placed directly over the object to be photographed. The time of exposure depends on the individual discharging energy and is usually about 5 minutes. The quantity of energy discharged may be augmented by wearing a strip of red across the head and insulating the feet by aid of rubber, glass or shellac.

The HUMAN AURA so adequately portrayed by Dr. Walter J. Kilner in his work, "THE HUMAN ATMOSPHERE," is evidently only a discharge of energy.*

My investigations show that the aura may be augmented in area and density by concussion of the 7th cervical spine (164).

^{*}In a letter received from Dr. Kilner, the latter makes the following observation; "Your opinion that the aura is only energy emanating from the body corresponds entirely with mine, only I have expressed it in a different manner. I have tried to see it on the dead body but have always failed to do so."

The utilitarian of the future will not permit human energy to go to waste.

Permit me to show you how it may now be utilized in TOPOGRAPHIC PERCUSSION.

The heart and aorta discharge energy. By means of an insulated cord to the stomach-region, note that when I approach the borders of the aorta and heart with the other tip of the cord, an immediate dulness of the stomach ensues.

After this manner demarcation of the organs discharging energy, notably, the right border of the heart, is comparatively easy.

SEXUAL POLARITY.

The present tendency is to refer all phenomena to a sexual basis and the odd and even numbers are regarded as the mathematical sexes.

Anatomy has heretofore been invoked to differentiate the sexes.

If I appeal to the electronic theory, there can be no absolute differentiation.

Humans are mere aggregations of electrons and there must be transitional forms of humans just as there are transitional forms of metals and non-metals.

It has been suggested by Steenstrup, that sexual characters are present in every part of the body and that every cell in the body has its definite sexual significance.

The electrons characterizing masculinity and femininity are so grouped that definite areas in a woman provide a sexual stimulus for the male and definite areas of the latter for the female.

The law of sexual attraction, "that every male type has its female counterpart with regard to sexual affinity" appears to me to be based on the definite law that, "Like poles repel and unlike attract." Sexual attraction and repulsion must obey this law.

Weininger,* referring to the fertilization of some seaweeds, speaks of the lines of force between the opposite poles of magnets as no more natural than that which irresistibly attracts the spermatozoon and the egg-cell.

In the attraction between the inorganic substances, strains are set up in the media between the poles, whereas in the living matter the forces are confined to the organisms.

When the spermatozoa approach the egg-cells they overcome the force exercised by light, hence the chemotactic is more potent than the phototactic force.

Sexual adjustment cannot abrogate the laws of the universe.

The adjustment of differences in potential in the sexual sphere are as inviolable as when iron-sulphate and caustic potash are brought together; the SO_4 ions leave the iron to combine with the potash.

Attention has already been directed to the differences of polarity in the sexes.

We must first make clear what I have differentiated as the MALE and FEMALE TYPES of POLARITY.

First localize the PSYCHOMOTOR AREA (384).

If the subject (female) touches the left psychomotor area with the *tips* of her fingers of her left hand (Fig. 11), the stomach reflex ensues and one may demonstrate dulness of her stomach. This is the female type of polarity.

The male type of polarity is the opposite of the female type; dulness of the stomach only ensues when the *tips* of the fingers of the right hand are placed on the left psychomotor area (Fig. 12).

*Sex and character.

A male facing a patient (male or female) produces stomach dulness by touching the left psychomotor region with the fingers of his right hand.

A female similarly located with reference to the patient (male or female) can only produce like dulness by touching the right psychomotor region with the fingers of the right hand.



FIG. 11.—Illustrating the female type of polarity. Only the tips of the fingers should touch the psychomotor area.



FIG. 12.—Illustrating the male type of polarity.

The female type of polarity characterizes the normal sexual life.

At the menopause this type disappears, provided all sexual feeling has been lost. In two instances where the ovaries had been removed, the male type of polarity was present but the latter could be reversed to the female type when ovarian extract was administered.

It would seem that the sexual apparatus is merely a vehicle for the elaboration of an internal secretion which by its action on the electrons of the body endows them with a distinctive polarity.

Male and Female Types of Polarity

There are typical and atypical men just as there are typical and atypical women, and humans will eventually be subjected to a biologico-physiological differentiation of positive (+), negative (-) or neutral (O) polarities. Color as I conceive it represents different electrical charges (203).

In the case of woman whose ovaries were removed, her male type of polarity could be changed to the female type by placing a strip of yellow material over her right psychomotor area.

Magnetic attraction or repulsion is preceded by *induction*.

The latter refers to magnetization or electrification in a body by the mere proximity of magnetized or electrified bodies.

The induced magnetization or electrification is always of opposite kind to that of the inducing pole or body on the side nearest the latter and of the same kind on the farther side.

I have on several occasions elicited the same type of polarity in husband and wife. When alone each presented the normal type of polarity. Together, when the attraction of the wife was greater than that of the husband, the mere propinquity of the latter caused in the wife a reversal of polarity, *i. e.*, a male type of polarity by induction. Similar observations have been made on men who demonstrated a preponderance of affection for their wives.

Is affection only a question of polarity?

Can the sex problem be solved by the foregoing observations?

Can we predict sex by the type of polarity shown by the pregnant woman?

These are the problems which we must investigate.

They await demonstration by repeated observations.

Draw an imaginary transverse line from the anterior superior spine of the ilium to the *linea alba*. Midway between this line on both sides an area (approximately 2 inches in circumference) is found which discharges positive energy^{*}. This area changes when the ovary is dislocated. The total energy contained in matter depends on the extent to which it can be changed. Here change predicates functional capacity and if an ovary discharges no energy, its incapacity may be functional or due to disease.

Is HOMO-SEXUALITY (sexual inclination toward members of the same sex) a mere question of polarity?

My limited observations incline toward the latter opinion.

Several homo-sexualists whom I examined demonstrated the *female type of polarity*. In not one of these individuals could I change the polarity by administering the different extracts of the testicle.

If however yellow material was placed over the right psychomotor area or the latter was painted with some yellow solution (gamboge), the polarity could be reversed to the normal male type.

Up to the time of writing two homosexualists in whom this maneuver was tried no change in the sexual feeling was noted.

Sexual differentiation is never absolute. There is a permanent bisexual condition, however vestigial and rudimentary.

If I suggest to an individual in an hypnotic condition that he is a woman and endowed with some of her attributes, I can reverse his polarity to that of the female. I have

^{*}Determined by dulness of the stomach when a connection is established between this region and the epigastrium by aid of an insulated cord of copper.

frequently reversed this polarity by suggestion even in the non-hypnotic state.

If I approximate a male plant to the epigastrium, a dulness of the stomach ensues and one can determine that the energy discharged from the plant is *negative*.

Like experiments with female plants demonstrate a *positive* discharge of energy.

If a strip of yellow is placed on the right side of the plant, the polarity of a female plant is changed to that of a male plant and a male plant to that of a female plant. By keeping the yellow strip on the right side of a male fern for several weeks, it presented all the characteristics of a female fern.

If one end of an insulated conducting cord is placed at the meatus of the penis and the other metal end (insulated except at the extreme tip) in proximity to the stomach ,the latter becomes dull on percussion and there is a retraction of the organ in proportion to the energy discharged from the penis.

In individuals with strong sexual power, this retraction was as much as 3 cm.

In cases of IMPOTENCY the energy discharged is not sufficient to elicit the stomach reflex.

From both *testicles*, there is a discharge of positive energy.

If one of the testicles is made functionless in consequence of previous disease it yields no discharge of energy.

In the child before the advent of puberty no sexual polarity by my method* can be demonstrated.

^{*}Vide methods of determining male and female types of polarity.

DIAGNOSIS OF THE SEX OF THE FETUS.

This is one of the possibilities of the future based on the determination of the polarity of the subject.

The determination of fetal sex at one time advocated has been abandoned as unreliable.

It was based on the supposition that a rate of 120—140 in the minute of the fetal heart-beat indicated the probability of a male fetus whereas a more rapid heart-beat was indicative of a female child. The variability in the fetal heart-rate makes the foregoing untenable.

The discharge of energy from the tips of the fingers varies in both sexes. In the male subject the fingers of the right hand discharge negative energy whereas the left hand discharges positive energy.

This is reversed in the normal female; fingers of right hand, positive energy; fingers of the left hand, negative energy.

These types are reversed in *left handed individuals*.

These types are not demonstrable in either sex before puberty.

These types are usually maintained in *ambidextrous* individuals.

These types are usually lost at the menopause and in elderly males.

In *syphilitics*, no polarity after the method to be shown can be demonstrated.

In the norm if a *male* extends the fingers of his *left hand directly on a line* with the exposed epigastrium of another individual (male or female) at a distance of one or more feet, the stomach reflex (as elicited by dulness) may be demonstrated (Fig. 13). This dulness is maintained *only* during the time the fingers are extended.

Diagnosis of the Sex of the Fetus

The latter dulness can only be provoked by the female when the fingers of the *right hand* are extended.

In those incapable of discharging energy, some red material placed across the psychomotor areas (192) will excite the discharge.

In the prediction of sex, the pregnant woman extends first one and then the other hand in the direction of the exposed epigastrium of another individual in whom percussion is executed.





My investigations of this method are limited and permit me to formulate only tentative conclusions:

1. Prior to the 4th month, the pregnant woman shows no polarity, i. e., extension of either the right or the left hand fails to elicit dulness of the stomach.

2. After the 4th month, if the extended fingers of the right hand evoke stomach-dulness (normal polarity), a female fetus may be diagnosticated.

3. If after the same period only the extended fingers of the left hand cause stomach-dulness, a male issue may be predicted.
4. For a variable period after confinement, no polarity can be demonstrated by the foregoing method.

The following incomplete record has been made by the author:

DATE	DURATION OF PREGNANCY	PLACE	POLARITY	PREDICTION	RESULT
Oct. 9, 1913 Mrs. T.	6 months	Kansas City (Dr. Craig)	Female	Female	Fier
Oct. 9, 1913 Mrs. C.	6 months	Kansas City (Dr. Craig)	Male	Male	m
Oct. 9, 1913 Mrs. V.	3 months	Kansas City	No polarity		
Oct. 20, 1913 Mrs. L.	7 months Patient yields electronic test for syphilis	San Francisco (Dr. G.)	No polarity		
Oct. 17, 1913 Mrs. E.	9 months	San Francisco (Patient of Dr. Koerber)	Male	Male	Male
Oct. 20, 1913 Mrs. G.	9 months	San Francisco Mt. Zion Hos- pital	Female	Female	Female
Nov. 7, 1913 Mrs. J.	9 months	San Francisco City & County Hospital	Female	Female	Female
Nov. 7, 1913 Mrs. S.	9 months	San Francisco City & County Hospital	Male	Male	Male

Investigations should be instituted to determine if absence of polarity (if previously present) may be employed in the early diagnosis of *pregnancy*. Determination of Sex

DETERMINATION OF SEX.

The law governing the production of sex has been the subject of much speculation. Hippocrates believed that the right ovary produced boys and the left ovary, girls. In accordance with the foregoing women who desired male offspring should during coitus lie on the right side and vice versa. The question of sex is dictated by two theories; the one supposing that sex is determined before impregnation; the other, that the embryo is possessed of the elements of both sexes until either one acquires a dominant influence in consequence of factors present during early pregnancy. The latter theory has been evolved from a study of lower animals and plants and is supported by the fact that the elements of both sexes in the human embryo are apparently present in equal force at the commencement of embryonal life. Reference has already been made to the author's experiments concerning the sexuality of plants and it is mere conjecture which prompts him to suggest the possibility that wearing any material of yellow over the right psychomotor area (which reverses polarity from the female to the male type) soon after conception until the 4th month may eventuate in a male issue.

In pregnancy before the third month, even though polarity is absent, a male type of polarity may be demonstrated when yellow material is placed over the right psychomotor area.

NEW CONCEPTS IN DIAGNOSIS.

THE PRACTICAL APPLICATION OF THE ELECTRONIC THEORY IN THE INTERPRETATION OF DISEASE.

ELECTRONIC PATHOLOGY.

The creation of a modern pathology based on my investigations respecting the recognition of energy and its polarity evolved in different diseases seems apposite. I am also utilizing human energy in the treatment of various diseases with most encouraging results but several years must elapse before my investigations concerning "ELEC-TRONOTHERAPY" can be published. Each atom of our organism is endowed with a definite vibration-rate.

Just as there is a "Periodic Law" with reference to the periodicity of the atoms of the elements so may we anticipate a law with relation to morbid processes (500). The periodic law emphasizes the relationship of atoms and periodicity of properties and shows that family relationships of atoms is as assured as are the organisms of the biologist. At present I am attempting to determine the vibration-rate in different structures but cannot as yet present concrete data. We must at present content ourselves in determining the energy evolved in a quantitative and qualitative direction.

The former is determined by the intensity of the stomach reflex (retraction of the organ) plus the distance at which it is discharged from the source of energy (conductor) and the latter refers to the polarity of the energy.

In disease like in health, the discharged energy may be:

- 1. Positive.
- 2. Negative.
- 3. Positive and negative.
- 4. Neutral or isoelectronic.

Diagnosis of the Sex of the Fetus

All the forces in nature are positive and negative.

We do not know what positive electricity really is.

However, if you conduct the energy evolved from the positive pole of a galvanic current by means of a single cord to the stomach-region, a stomach reflex is evoked and and it can be shown that the conveyed energy is actually *positive* in character.

By aid of the commutator, you can produce a *negative* form of energy.

A unit of negative electricity in motion carries with it some of the surrounding ether. It is this bound ether plus the moving negative unit which we call mass.

As before remarked the atom is a sphere of positive electrification enclosing negatively electrified corpuscles and the negative electricity of the corpuscles exactly balances the positive electricity of the enclosing sphere.

We are confronted with another problem, viz., the arrangement of the corpuscles in the sphere. The arrangement of the corpuscles in groups to form atoms confers on the latter their specific attributes.

If, owing to some external disturbance, one or more corpuscles within the sphere is detached, then the atom will assume a *positive charge* owing the loss of a negative corpuscle.

The stability of an atom is dependent on the number of corpuscles it contains.

When the stability of an atom becomes extreme the corpuscles of the outer ring may lie on the surface of the atom in which case it assumes a *negative charge*.

In other instances the atom becomes neither electropositive nor electro-negative.

The configurations of the corpuscles in an atom depend in general on the energy they contain. If the corpuscles

rotate with a velocity beyond a critical period, they slowly but surely lose their energy and then there occurs a sudden convulsion or explosion with the evolution of a large quantity of kinetic energy.

When the crash comes, this atomic cataclysm results in disintegration.

I fully realize that I have given you an incomplete picture of intra-atomic energy and atomic disintegration.

My real object in exploiting the electronic theory is to account for the augmented energy and changes in the polarity of the latter occuring in certain diseases.

The molecules of our body consist of more than a thousand atoms and the atoms themselves are grouped and regrouped and then grouped again in such a way as to make the molecules of the body highly mobile and quite unstable.

The slightest external disturbance will change the stability of the atom and it will assume a positive, neutral or negative discharge of energy.

With the discovery of *radium*, a new property of matter known as radioactivity was discovered. It meant that matter possessed the property of emitting rays.

Then followed a differentiation of the rays into *alpha* (positively charged), *beta* (negatively charged) and *gamma* (neutral) rays.

My physiologic reaction (stomach reflex), shows that radioactivity is not limited to radioactive elements but that it is a universal property of matter.

NEOPLASMS.

My observations have this far been limited to the diagnosis of carcinomata.

The method of procedure may be illustrated as follows by citing two cases: A patient has only recently observed a vaginal discharge.

One end of a conducting cord was fixed by the patient in the region of the lower border of the stomach^{*} which was previously defined by percussion and its border marked by a dermograph.

The other metallic end (which is insulated except at its extremity which is brought into apposition with the skin) was gradually passed over the abdomen until a site was attained which yielded stomach-dulness. The latter was demonstrated just above the *symphysis pubis* occupying an area about the size of a dime.

The polarity of the energy-discharge was found to be negative[†].

Dr. C. G. Levison, made the gynecologic examination and found a polypoid mass protruding from the *cervix uteri* which on examination by the pathologist, Dr. Dannenbaum was found to be a perithelioma. At the operation (performed by Dr. V. G. Vecki) the cervix was densely infiltrated and indurated throughout its entirety. The body of the uterus was not implicated.

A woman occasionally passes blood in the urine with symptoms suggestive of vesical hematuria.

A negative discharge of energy may be led off at a point to the left side one inch above the *symphysi pubis* as revealed by stomach-dulness plus retraction of the lower border of the organ. A cystoscopic examination by Dr.

^{*}This metallic tip may be fixed to the skin by means of adhesive plaster. The patient must stand on a flooring of wood or other non-insulated substance.

[†]The polarity of energy (153, 154) may be determined by a bar-magnet. If dulness of the stomach is elicited by conveyed energy from the morbid site, have an assistant or the patient hold first one end marked N (positive) and then the other end marked S (negative pole) in the direction of the stomach during percussion. If the dulness persists with the N pole and is dissipated by the S pole, the energy conveyed is positive. The opposite also holds good.

V. G. Vecki, revealed a supposititious malignant growth at the left ureteral opening.*

One could multiply such records in carcinoma and other affections corroborated by necropsy, skiagrams, operations and histologic examinations. Thus Dr. Geo. O. Jarvis writes "diagnosticated cancer of the uterus which was confirmed at the operation. It gave little evidence of its presence beyond the electronic reaction."

In the diagnosis of visceral malignancy, there are at least eleven diagnostic methods ranging from the antitrypsinic properties of the blood to the meiostagmin test. It is not my purpose to deprecate these methods as impracticable or unreliable but to emphasize the fact that the methods aim at generalized in lieu of localized diagnoses.

My observations on polarity seem to clarify several problematic questions concerning neoplasms.

"The vast assemblages of atoms comprising the heaviest atoms are unstable. As their kinetic energy decreases the aggregation explodes and the corpuscles rearrange themselves with the evolution of energy and the projection of some of the products of the rearrangement." The slightest external disturbance will alter the stability of the atom.

In other words, irritation is the most frequent etiologic factor in carcinoma.

At the period of life when neoplasms develop most frequently, one finds a decrease in the discharge of energy.

The polarity of the energy in cancer is negative.

It is a physiologic fact that every active or injured part shows a negative electrical reaction toward every other part which is at rest or inactive.

^{*}Six weeks after transference of her own energy to the site of the lesion, a cystoscopic examination by Dr. Vecki revealed the disappearance of the bladder-tumor.

N	е	0	p	l	a	S	m	S
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If we apprehend malignancy from the viewpoint of the physicist, one must assume that the discharged energy is due to chemical dissociation of atoms into negative and positive ions and electrons.

A tissue at rest is in a condition of electric equilibrium (isoelectric).

If this equilibrium is disturbed by some traumatic factor, a difference of potential is established and the altered tissue becomes electronically negative to the normal. The sensitive living cells are at the mercy of their environment and this refers in all cogency to changes in the constituent elements of the fluids in which they are bathed.

The beneficent action of *radium* on new growths is not explained.

The gamma or neutral rays are the most efficient in reestablishing a normal cell-balance in carcinomata.

The *beta* rays (negative) stimulate cell-growth and have been shown to augment the growth of carcinomata.

From the data already presented it does not seem difficult to explain the action of radium.

Cancer developing in people who live together (cancer à deux) suggests contagion.

Just as radium confers radioactivity on other substances, so may a cancerous person by induction alter the polarity of another individual.

Thus, if the negative energy from a cancer is conveyed to the stomach of a normal individual, the stomach-dulness of the latter may persist for some time after the source of energy is removed and it will be found to possess a negative polarity.

In *carcinomatosis* (generalization of cancerous growths), the arteries which in the norm yield a positive energy demonstrate a negative energy.

SUMMARY.

1. The electronic diagnosis of cancer is an early sign.

Cancer in its early stage irrespective of its localization is apparently an insignificant lesion (Bloodgood), hence the importance of an early diagnosis.

The condition in question corresponds to what was once called the pre-cancerous stage which is in reality cancer without positive signs.

Morbid cell-activity may temporarily discharge a *negative energy* as I have occasionally observed in gastric and duodenal ulcer but this variety of energy ceases when the condition is improved. The present morphologic conception of a neoplasm is destined to be supplanted by an electronic conception when energy-discharge will signalize a tendency toward the development of a neoplasm.

2. The energy-discharge in cancer is negative and provokes the stomach reflex of contraction.

The degree of malignancy may be gauged by the amplitude of retraction of the lower border of the stomach.

3. The electronic test localizes with exactitude the area involved and metastases if present may be demonstrated.

4. At the time of the operation, the electronic test may be employed to indicate the extent of invasion and to show that the involved tissues have been extirpated.

5. It is best to employ another subject in executing the test and to select one in whom the stomach reflex is normal and not easily exhausted.

6. In eliciting the electronic reaction proximity of the subject to intense light must be avoided (127), light being a form of energy is capable in itself of evoking the stomach reflex.

7. When *pain* is present a neutral energy may be elic-

S	U	m	m	a	r	у
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ited. This reaction of real pain may be utilized in differentiating it from pseudo-pains in malingerers.

8. In testing for normal or abnormal energy, the subject must be grounded (either patient or subject on whom the test is made). If the patient or the subject stands on insulated material (porcelain, varnished floor, glass, etc.), no stomach reflex is obtainable. The latter is important when the tests are executed in an operating room with a floor of porcelain tiling. In such instances the subject and patient must be grounded by a single wire from the foot to a convenient faucet or radiator.

9. The presence of fluid in the stomach or bladder yields a neutral discharge of energy, hence these organs must be empty before conclusions are formulated.

10. The process of elimination must be exercised in every possible direction. Thus, a kidney which yields in the norm a negative energy may simulate a neoplasm if luxated.

NORMAL AND PATHOLOGICAL ENERGY.

In the employment of electronic diagnosis the following facts will assist in the recognition of normal and abnormal energy:

1. Normal energy may be determined by its polarity.

2. A few whiffs of chloroform will at once dissipate normal energy, *i. e.*, it is insufficient in potential to evoke the stomach reflex whereas no amount of chloroform appears to deprive abnormal energy of eliciting the same reflex. Even under complete anesthesia the energy discharged from neoplasms persists.

3. To convey sufficient normal energy to elicit the stomach reflex, the tip of the cord must be in contact or not in excess of one inch from the part supplying the energy.

Morbid energy however may still be conducted even though the metallic tip of the conductor is more than one inch distant from the source of energy-supply.

4. When the stomach is the object of investigation another subject should be selected for the elicitation of the stomach reflex.

SYPHILIS.

Since the discovery of the *spirocheta pallida*, this organism has been found in the brain of paretics and in the cord in tabetics. Many tests have been suggested for syphilis:

1. Complement fixation or deviation test of Wassermann; 2. Noguchi or butyric acid reaction; 3. Cobra venom hemolysin test.

 Control of the Wassermann by measuring the aminonitrogen of the blood-serum;

5. Luetin reaction.

In the Noguchi-luctin reaction, the test is not applicable in the primary and secondary stage; the chief response is in the treated and late cases.

The Wassermann is not absolutely specific for syphilis insomuch as it is not dependent on syphilitic antibodies in the blood but upon admission to the latter of abnormal products from morbid tissues.

The Wassermann reaction has been found positive in scarlatina, appendicitis, cancer, typhoid, sepsis, phthisis, diabetes and other diseases.

The *electronic reaction for syphilis* (congenital and acquired), is as follows:

Energy conducted from the liver, spleen and vertebral column (site selected, 7th dorsal spine), causes a stomach reflex (ascertained by dulness) and the dulness is dissipated by the + and - poles of a bar magnet; *i. e.*, the energy is neutral or isoelectronic.

Energy conveyed from the arteries, veins and heart is also neutral but insomuch as this reaction is obtainable in other diseases, the foregoing the reaction as first cited should be accepted.

The exact site of the primary lesion may be also be ascertained by this method*.

Ascertaining the site of the primary lesion is of value as corroborative evidence and may aid us in treatment.

Thus in a case seen in consultation with Dr. F. S. Haeberle (St. Louis), it was impossible to elicit the electronic reaction after the primary site of inoculation was submitted to several mercurial inunctions.

The reaction was obtainable in every case of syphilis notwithstanding salvarsan, neosalvarsan, mercury and various organic arsenic compounds had been employed.*

The electronic reaction was positive despite the fact that in many cases the Wassermann and luctin reactions were negative.

DEMENTIA PARALYTICA.

Noguchi demonstrated the *spirocheta pallida* in the stained specimens of the brain in general paralysis. Forster and Tomasczewski, demonstrated living spirochetes in 8 out of 20 cases examined by aspiration of the cortical substance. The author has examined a large number of paretics and ascertained the following invariable electronic reaction; when a connection is made between either *frontal eminence*

^{*}This was demonstrated to the eminent syphilologists, G. Frank Lydston of Chicago, V. G. Vecki, of San Francisco, and many other physicians.

^{*}In only five patients among many hundreds examined, a negative reaction was obtainable. Here, it is interesting to observe that in these patients antisyphilitic medication was executed at the time of the primary lesion and maintained for periods varying from one to five years.

of the subject and the gastric area, dulness of the stomach immediately ensues and the dulness is dissipated by both poles of a bar magnet. Aside from this neutral energy, one may obtain the same reaction from the liver, spleen and spine.



FIG. 14.—Illustrating the cerebral sinuses and psychomotor area (4x6 cm. in area) where energy is normally discharged. The sinuses yield a negative discharge. In the norm no discharge is obtainable from the mastoid, a fact of importance in eliciting the reaction for pus.

In the norm and in syphilis (without cerebral involvment), no energy sufficient to dull the stomach is obtainable from the frontal eminences. In dementia precox, a *positive* energy is obtainable from the frontal eminences.

Great care must be exercised in recognizing the many areas on the head from which energy is normally discharged (Fig. 14).

Dementia Paralytica

Error may be eliminated by consulting page 41 of this address and furthermore by recalling the fact that the energy-discharge of other areas is positive or negative and not neutral as in syphilis.

It is true however, that if the tip of the conductor is directly over an artery or vein, one may elicit the reaction of a neutral energy (in syphilis) but if the frontal eminence is alone selected, errors of interpretation may be avoided.

The syphilitic shows no polarity and it is impossible to obtain sufficient energy to dull the stomach (as in the norm) from the left psychomotor area in the male and from the right psychomotor area in the female.

Many cases of insanity examined by me at the asylums were found to be cases of brain-syphilis and this was notably the case in patients diagnosticated as *dementia precox*.

The electronic test is destined to serve of great value in the differentiation of a host of mental maladies.

Already the serological diagnosis of syphilis bears results in the passing of paresis.

The close relationship between syphilis and the latter has always been recognized but with the distinction however that paresis was a parasyphilitic affection due to the indirect action of toxins whereas it is now known that the *treponema pallidum* is directly concerned in its production.

The passing of parasyphilis emphasizes the fact that, within a few weeks after the primary inoculation the spirochetes invade every tissue of the body and to prevent spirilloses of the nervous system heretofore designated as parasyphilitic, energetic treatment must be commenced at the time of the primary inoculation.

The foregoing suggest the value of the electronic reaction in the early diagnosis of syphilis.

TUBERCULOSIS.

It is generally conceded that the tuberculin reaction is a phenomenon of sensitization.

There are many limitations to the tuberculin test which time will not permit me to review.

The electronic reaction in tuberculosis yields a neutral energy.

One may localize with absolute certainty the site of the lesion and ascertain its area whether located in the lung, larynx, lymphatic gland, bone, joint or other structure.

Observe that the reaction is that of syphilis, but the reaction *cannot be obtained from the liver*, *spleen or spine* (provided these structures are not implicated by tuberculous lesions).

It may be difficult for you to differentiate between an active and a healed tuberculous lesion.

In the latter, the reaction is only obtainable when the tip of the cord is in *immediate contact* with the site of the lesion, whereas in an active lesion, the reaction is obtainable when the tip is held *several inches* away from the site of the lesion.

The potentiality of the energy-discharge is in direct ratio to the bacterial or toxin content of the lesion.

When tuberculosis is generalized, the arteries and veins yield a neutral energy.

Pus (streptococcic reaction) may be detected practically anywhere in the organism and by the immediate demonstration of these foci of suppuration, the so-called "cryptogenetic septicemia" is destined to be regarded as an avoidable diagnostic error.

ELECTRONIC REACTIONS.

In the subjoined table an attempt has been made to summarize a variety of affections yielding electronic reactions.

In *erysipelas* and *meningitis*, further control-tests are necessary before accepting the reactions as final. The reactions in *typhoid* and *malaria* may be present for years after recovery from the primary attack.

I must caution you against the error in diagnosis of accepting as conclusive so-called pathognomonic symptoms.

No physician can assume skill in diagnosis until he has mastered the rules and principles of logic.

By aid of these reactions one is not only able to make a diagnosis but it will be possible as in pertussis to localize the debatable site of infection.

SOURCE OF ENERGY	From the site of neoplasm.	Liver, spleen, spine, arteries, veins and heart.	From the sites of lesions.	About an inch away from angle of of jaw to exclude normal en- ergy from vessels.	Spleen, ileocecal region and blood-vessels.	Spleen, ileocecal region-arteries.	From the focus of suppuration.	From site of suspected lesion.	From site of lesion.
POLARITY OF ENERGY	Negative	Neutral or isoelectronic	Neutral	Positive and negative	Neutral	Negative	Positive	Negative	Negative
POSITIVE POLE NEGATIVE POLE	Maintenance of dulness	Dissipation of dulness	Dissipation of dulness	Dulness persists	Dissipation of dulness	Dulness maintained	Dulness dissipated	Dulness maintained	Dulness maintained
POSITIVE POLE	Dissipation of dulness	Dissipation of dulness	Dissipation of dulness	Dulness persists	Dissipation of dulness	Dissipation of dulness	Dulness maintained	Dulness dissipated	Dulness dissipated
STOMACH-REACTION	Dulness	Dulness	Dulness	Dulness with retrac- tion of stomach	Dulness	Dulness with marked retraction of stom- ach	Dulness	Dulness with retrac- tion	Dulness
DISEASE	Carcinoma	Syphills	TUBERCULOSIS	Diphtheria	TYPHOID FEVER	Ракатурнош	Pus (Streptococcic infection)	PNEUMOCOCCAL INFECTION	ANTHRAX

ELECTRONIC REACTIONS

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Electronic Reactions

SOURCE OF ENERGY	From site of infection.	From site of infection.	From site of infection.	From papular eruption.	From the spine. (In the norm, the 7th C. spine yields a neu- tral discharge of energy and the 1st lumbar spine, a posi- tive discharge of energy).	From affected joints.	From affected joints and veins.	From the spine.	From site of infection.
POLARITY OF ENERGY	Negative	Positive and negative	Positive and negative	Negative	Positive	Negative	Neutral	Negative	Positive
POSITIVE POLE NEGATIVE POLE	Dulness maintained	Dulness maintained	Dulness maintained	Dulness maintained	Dulness dissipated	Dulness persists	Dulness dissipated	Dulness persists	Dulness dissipated
POSITIVE POLE	Dulness dissipated	Dulness maintained	Dulness maintained	Dulness dissipated	Dulness maintained	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness persists
STOMACH-REACTION	Dulness with retrac- tion	Dulness with retrac- tion	Dulness with retrac- tion	Dulness with retrac- tion	Dulness	Dulness	Dulness	Dulness	Dulness with retrac- tion and latter is in proportion to intensity of infec- tion
DISEASE	TETANUS	MENINGOCOCCIC INFECTION	GONOCOCCIC INFECTION	ACNE BACILLUS	Poliomyelittis	POLYARTHRITIS	Gour	Friedreich's Ataxia	Ervsipelas

DISEASE	STOMACH-REACTION	POSITIVE POLE	POSITIVE POLE NEGATIVE POLE	POLARITY OF ENERGY	SOURCE OF ENERGY
OSTEOARTHRITIS	Dulness with retrac- tion	Dulness dissipated	Dulness dissipated	Neutral	From implicated articulations and veins.
Keloid*	Dulness with retrac- tion	Dulness dissipated	Dulness dissipated	Neutral	From cicatricial tissue.
Malaria	Dulness	Dulness dissipated	Dulness persists	Negative	From spleen.
PARETIC DEMENTIA	Dulness	Dulness dissipated	Dulness dissipated	Neutral	From either frontal eminence; also electronic reaction of syphilis (q. v.).
DEMENTIA PRECOX	Dulness	Dulness maintained	Dulness dissipated	Positive	Frontal eminences.
EPILEPSY	Dulness	Dulness dissipated	Dulness dissipated	Neutral	Psychomotor areas.
INFLUENZA	Dulness	Dulness dissipated	Dulness dissipated	Neutral	From nostrils and when infection is generalized, a neutral energy is obtained from blood-vessels.
Scarlatina	Dulness	Dulness dissipated	Dulness persists	Negative	From nostrils (one end of insu- lated tip held within the naris). No discharge from eruption.
LEPROSY (All varieties)	Dulness	Dulness dissipated	Dulness dissipated	Neutral	From all leprous lesions.
"This yields the same reaction as <i>tuberculosis</i> bacilli.	tion as <i>tuberculosis</i> and sugge	sts Da Costa's conce	ption of it, <i>viz.</i> , a gr	owth resulting from t	and suggests Da Costa's conception of it, viz., a growth resulting from the irritant action of the toxins of tubercle

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SOURCE OF ENERGY	From implicated areas.	From liver. Neutral reaction from heart, arteries and veins.	From the intestines, notably in abdominal region correspond- ing to jejunum.	Colon and from liver (when implicated).	Spleen and from tissues involved in leukemic infiltration.	Larynx, trachea and bronchus. Over the latter hold end of cord receiving energy a distance of r inch to avoid normal energy from heart.	†Among 30 diabetics examined, in two only was any reaction obtainable from the head of the pancreas which occupies the concavity of the duodenal loop.
POLARITY OF ENERGY	Neutral	Neutral	Neutral	Neutral	Positive	Neutral	ncreas which occupi
POSITIVE POLE NEGATIVE POLE	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness dissipated	n the head of the pa
POSITIVE POLE	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness dissipated	Dulness persists	Dulness dissipated	ction obtainable fro
STOMACH-REACTION	Dulness	Dulness with retrac- tion. Latter in proportion to se- verity of affection	Dulness	Dulness	Dulness	Dulness	nined, in two only was any rea
DISEASE	TINEA TONSURANS	Diabetes†	ANKYLOSTOMIASIS	AMEBIASIS	LEUKEMIA (Lymphatic)	Pertussis	†Among 30 diabetics exar

Electronic Reactions

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EPILEPSY.

All theories concerning the nature of epilepsy are unproved hypotheses.

The majority of writers concede that the paroxysms are discharged from the cerebral cortex, notably the cortical motor regions.

Before presenting my conclusions concerning a large number of epileptics whom I examined, certain fundamental facts must be reviewed.

We know that from the *left* psychomotor area in the *male* and from the *right* psychomotor area in the *female*, sufficient energy can be conveyed to the stomach to evoke dulness of the latter.

We also know that when the end of the connecting wire is distant beyond $\frac{1}{4}$ inch from the psychomotor area, the energy is insufficient to elicit stomach-dulness.

All epileptics discharge a *neutral energy* from *both* psychomotor areas and this electronic reaction is characteristic of this affection. My measurements show no increase in the energy-discharge either from the psychomotor area normally discharging energy nor from the area which in the norm discharges no energy. Before puberty where polarity is not yet expressed, there is nevertheless a discharge from the right psychomotor area in the male and from the left psychomotor area in the female.

DIAGNOSIS OF DEATH.

The author in his "Transactions of the Antiseptic Club," refers to the fact that it is unfortunate that the generality of physicians neglected the important duty of diagnosing death.

Diagnosis of Death

The application of one positive sign of death should be made obligatory by law. We now know that the living body constantly discharges energy from definite areas, notably the heart-region.

If sufficient energy cannot be conveyed from the latter area to evoke stomach-dulness, it is practically a certain sign of death.











