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The "Electronic Reactions of Abrams."¹

A N acrimonious discussion has been carried on for some time past concerning the merits of a method of medical diagnosis and therapeutics generally known as the "Electronic Reactions of Abrams." Dr. Albert Abrams graduated in medicine at Heidelberg at the age of nineteen years. At thirty-seven, after many years' practice in San Francisco, he founded a therapeutic method which he called "Spondylotherapy," and six years later, in 1910, he introduced a method of diagnosis and treatment based upon a new physiological phenomenon which he claimed to have discovered and which he named "electronic vibrations." The rate of these vibrations he held to be constant for each individual, each organ, and each disease. It is measured by an Adams's "Dynamiser" in circuit with the patient or with something more or less miscellaneous belonging to the patient, his blood, sputum, saliva, or even his signature. Readings are taken according to certain changes in the abdominal percussion note of the patient or of a "subject" or "medium" interposed in the circuit with the patient's blood, sputum, or similar substance.

The "dynamiser" is a box containing three electrodes; of these the two lower, on which the specimen rests, are electrically connected to earth, while the third, which forms part of the lid, is connected in series with two (or three) resistance boxes. The first of these is called the "amplifier," while the second (and third if present) is known as a "reflexophone." From the last resistance a wire passes to another electrode held in close juxtaposition with the forehead of a normal healthy person, standing on earthed plates "facing west" and known as the "subject" or "medium." Certain areas on the abdominal wall of this "subject" are then percussed by the operator, and for each such area the first "reflexophone" is adjusted until the normal percussion note changes to "dull"; the readings of the "reflexophone" corresponding to such changes of note are known as the "rates" of "electronic vibration." Abrams's comprehensiveness was not confined to the terminology of wireless telegraphy. Sex, race, religion, as well as disease in all its varying forms and sites, had for him their proper "rates of vibration," of which they were merely the expression. So he reversed his procedure and invented the "oscilloclast," which, by producing any desired rate of "electronic vibration," might be expected to change, if not the sex, race, and religion of his patients, at least their pathological

¹ A Preliminary Communication concerning the "Electronic Reactions" of Abrams, with special reference to the "Emanometer" Technique of Boyd. Read before a Joint Meeting of the Sections of Medicine and Electro-Therapeutics of the Royal Society of Medicine, January 16, 1925, by Sir Thomas Horder on behalf of M. D. Hart, Dr. C. B. Heald, Sir Thomas Horder, Lieut.-Col. H. P. T. Lefroy, W. Whately Smith. Pp. 56. (London: John Bale, Sons and Danielsson, Ltd., 1925.) 2s. 6d. net.

states. "The climax was reached with the assertion that both numbers and letters were possessed of sexual characteristics, odd numbers and vowels being feminine, while even numbers and consonants were masculine."

The "oscilloclast" is leased to practitioners for £150. on condition that it must not be opened; but according to Messrs. A. S. E. Ackermann and W. Clark, consulting engineers, the greater part of the apparatus is functionless, the essential part consisting of a simple rocking magnetic interrupter, which permits about a micro-ampere of current, interrupted about 200 times, to flow to the patient. There seems, however, to be some inconstancy in the contents of the mysterious box.

In the face of ridicule, and unchastened by numerous test results of the most ludicrous description, "E.R.A." has become an established cult. It has taken root in England, where there is now a "small British society of doctors who employ Abrams's methods," the Society of Electronic Medicine. Nevertheless, "employment" of Abrams's methods appears to be an imperfect description, for, composed of "genuine" Abrams workers, but unsuccessful in its application to the leaders of the "cult" in the United States for information concerning the machines its members use, the Society has agreed unanimously to explore the mechanism of the instruments supplied and publish all details (*British Medical Journal*, January 10, 1925). Moreover, it is made clear that the "genuine" Abrams workers, up to January 26, had not wholly embraced the theories of the master, for "our researches (apart from treatment results) have not enabled us to say more than that an as yet undefined relationship exists between 'reactions' and disease" (*British Medical Journal*, January 31, 1925).

When the claims of the Abrams school were first reported in England, they attracted the attention of Dr. C. B. Heald, Medical Adviser to the Director of Civil Aviation. The Director authorised an investigation which resulted inconclusively. In consequence, Dr. Heald, with Lieut.-Col. Lefroy, head of wireless research at the Air Ministry, Mr. M. D. Hart and Mr. Whately Smith, who are engaged on physical research on behalf of the War Office and Air Ministry respectively, carried on the investigation unofficially. Later, Sir Thomas Horder acted as chairman co-ordinating their work.

A preliminary communication concerning the investigation prosecuted from that time onwards has now been published in pamphlet form by Sir Thomas Horder. It is an exceedingly puzzling document. While it is clear that extensive and painstaking investigations have been carried out, the report is argumentative rather than critical, deals only with a modification

of Abrams's box, called the Boyd "Emanometer," reserves important parts of the evidence, and while frankly denying to the electronists any shred of justification, ethical or scientific, for their practice, gives the unfortunate impression that there is "something in it" without elucidating in the slightest degree the nature of the "something" evidenced. Boyd's "emanometer" as described by Sir Thomas Horder substitutes for the variable resistances of Abrams's box "a variable inductance and a variable condenser" in series with a "receiving plate" and a "normal human subject standing on earthed plates facing west." "An outstanding feature of the Boyd apparatus is the incorporation of earthed metallic screens, which are claimed to eliminate contamination from external sources."

The "operator" and "subject" in a series of experiments in Glasgow were "two Gallowgate boys"—i.e. one Gallowgate boy percussed the abdomen of another Gallowgate boy, and his verdict concerning the percussion note constituted the "result." The tests consisted in (1) the discrimination between two apparently identical substances; (2) the identification of one specific substance from among a number of others; and (3) the determination of whether a specimen exhibited was "screened" or not from the receiving plate.

Most of the results were correct, and Sir Thomas Horder, setting aside the possibility of chance, considers "the veridicity of the phenomena in question" to be fully established. But what are the "phenomena in question"? What is it that "does something"? —the emanometer, the "substance," the experimenter, the Gallowgate boys, or some unconsidered factor or combination of factors? Mr. H. St. G. Anson conducted experiments extending over a period of some five months (1) to obtain instrumental evidence of some change in the electrical condition of the subject's skin concomitant to the variation of the percussion note, and second, to obtain graphical records of this acoustical phenomenon; and (2) to eliminate the possibility of the *apparent* change in the percussion note being due to the imagination of the observers. In respect of (2) "some measure of success was obtained, but the other part of the work proved entirely abortive." Yet it is hoped that these "entirely indeterminate" results "may prove of value in subsequent investigations into the physical nature of the phenomenon which it is hoped to undertake"!

A vigorous effort should be made to remove the restrictions under which Sir Thomas Horder's committee appears to have laboured, and to push the inquiry to a conclusion with the utmost expedition. The matter as it stands does no credit to scientific investigation.