

JOURNAL OF THE BRITISH SOCIETY OF DOWSERS

Vol. II. No. 8

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BRITISH SOCIETY OF DOWSERS

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OBJECTS OF THE SOCIETY

- (a) To encourage the study of all matters connected with the perception of radiation by the human organism with or without an instrument.
- (b) To spread information amongst members, by means of a journal, lectures and other means, about the use of dowsing for geophysical, medical and agricultural and other purposes and for tracing objects animate or inanimate.
- (c) To keep a register of dowsers for water, minerals, oil, and for other purposes.

RULES OF THE SOCIETY

I.—Membership.

The Society is open to all persons interested in radiation-perception.
The Council has power to appoint honorary members.

II.—Subscription.

The subscription is five shillings per annum, or three guineas for a life member.

III.—Management.

The Society will be managed by a Council consisting of a President, who will act as Chairman, and five members, one of whom will act as Treasurer and Secretary.

The President and members will be replaced as necessary by the Council, appointments being confirmed at a General Meeting.

All questions regarding the publication of the journal, lectures, meetings, etc., will be settled by the Council.

Decisions of the Council will be arrived at by correspondence if necessary, the facts being recorded in the Minute Book.

Decisions will be decided by a majority vote, the Chairman having a casting vote.

The Council has power to co-opt other members for special purposes.

IV.—Accounts.

The financial year will be from July 1st to June 30th.

Accounts will be published annually within two months after the end of the financial year.

Accounts will be audited privately.

V.—General Meeting.

A General Meeting will be held annually, and other meetings when considered necessary by the Council.

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NOTICES

A special notice is being sent out about the Congress which will be held at the end of June.

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Addresses, which are printed below, were given at 74 Grosvenor Street by Mr. E. S. Shrapnell-Smith on February 7th, and Mr. T. Bedford Franklin on April 5th.

* * * * *

A fifth edition of *Le Sourcier Moderne* has recently been published. It contains extra information on depth finding, the azimuthal ray, and the use of dowsing for agricultural and medical purposes.

* * * * *

M. de France has sent us the detailed syllabus of his *Cours par Correspondance d'Art du Sourcier*, consisting of an elementary course of Radiesthésie and a course in Geology.

* * * * *

We have received the first number of *Radiotellurie*, the journal of *l'Association Française des Radiotelluristes Sourciers-Puisatiers*, the editorial office of which is at 115 Cours Lafayette, Toulon.

* * * * *

The death of Mr. Thomas Smitheram, a well-known water diviner, has taken place at Porthallow, St. Keeverne.

* * * * *

Whalebone for divining rods can be obtained from Messrs. Devine & Co., Ltd., St. Stephen's Road, Old Ford, London, E.3.

* * * * *

Communications for the Editor and enquiries should be sent to Colonel A. H. Bell, Backwoods, Lindfield, Sussex.

A SCIENTIST LOOKS AT DIVINING

By T. BEDFORD FRANKLIN, B.A., F.R.S.E.

I am not a water diviner as I have not the gift, and my only excuse for lecturing to you to-night is the interest I have taken in the scientific side of divining for a good many years.

The scientist's outlook on any subject is somewhat different to that of the ordinary man; his main interest is usually the finding of a theory to fit the experimental facts, and until such a theory can be found he will not admit that subject into the category of fixed sciences.

Now, finding water by means of the rod or pendulum is an art that has, in practice, always outstripped theory, and though the art has been practised for hundreds of years no satisfactory theory which will cover all the facts has as yet been discovered. This is particularly unfortunate, for it handicaps the genuine diviner, since he has no reliable theory with which to compare his results, while it enables the charlatan to carry on his deceitful practices undeterred by the yard stick of theory by which his results could be measured and his fraud brought to book.

This being so, the ordinary scientist can hardly be blamed for remaining sceptical of the claims made by diviners that they can not only find water by using an instrument over it on the actual ground, but also can do the same thing over a map in an armchair in front of the fire. Add to this the claims that the same simple instrument will find metals, lost articles, dead bodies, the seat of disease in the human body or the sex of hens' eggs, and it is not surprising that the views of the ordinary man are summed up by the first two words in the article on divining in the *Encyclopaedia Britannica*—"see Magic."

Yet, in spite of these great natural disadvantages, divining is coming into its own at last, and a determined effort should be made by all of us who are interested in it to find a scientific theory to cover all the facts, and so give it a place amongst the sciences.

It seems to me that diviners claim too much for the art—one simple piece of work often repeated with success is much more impressive than a multitude of claims that cannot be tested. We do not expect plants in our garden to branch out and flower before they are properly rooted, and the modern tendency of extending the branches of divining before the main idea of water-finding is soundly rooted in theory is much to be deplored.

Again, diviners must expect to be wrong on occasions—a tendency to hedge when a result proves wrong is bad for the reputation of the method and has an even worse effect on the operator. Hedging is a mere blind covering of our mistakes, whereas a frank admission of failure and a careful examination of the circumstances often finds the cause of the mistake and so prevents its repetition.

The saying, "We learn more from our failures than our successes" is very true in matters of science, and I can give you two examples out of my own experience which will show how useful failures may be.

Years ago, when using the instrument which I shall describe to you later, I had at the start a phenomenal run of successes, only to be followed by a series of failures. Now the individual can balance failures and successes, but this balance does not apply to the firm he works for, and the fact that one firm may have made a big profit out of one of his successes does not soften the heart of another firm which puts down a 500ft. borehole and finds nothing. So for a period of years I stopped all paid survey work and concentrated on finding the reasons for my mistakes. A careful examination of my records showed that I had been right when working over one geological formation and wrong when the geological conditions changed, and I now know why some of my interpretations in the past were wrong.

Quite recently I have tried to estimate the depth of gravel overlying the London Clay at various places in the Thames Valley. This was a new venture, and I had no data to work on. But thanks to the help given me by a fellow member I was able to check my results by the depth of boreholes in the area. My first results were all wrong, but I learnt from them the way to do it, and last week carried out a similar piece of work with complete success.

In fact, in my own case, failures have been more useful than successes in helping me to find the underlying theory of my instrument.

The finding of a theory to fit any set of facts may be done either by the genius of an individual or by the team work of many. Maxwell, by a flash of pure genius, evolved the theory of the electromagnetic wave and left worked out the mathematical equations of that theory some forty years before Hertz produced the wireless wave which obeyed those equations. The science of the weather has been laboriously evolved by millions of observations by trained and untrained observers, and their work is still going on.

Sometimes practice and theory are at loggerheads with each other—the theorists were hard at work proving that by no means could wireless waves travel from England to America just at the time that Marconi was showing that they did get there despite the theorists, and by doing so laid the foundation of the discovery by Heaviside of that ionised layer by which we guide wireless waves completely round the earth.

Putting aside for the moment the possibility that someone here, by a flash of pure genius, may find our theory for us—though if that were probable I would implore her or him to get on with it and so put us out of our pain as soon as may be—

the normal methods of team work will have to be relied upon, and this consists of—

- (1) The observation and classification of proved results—both successes and failures ;
- (2) The attempt to make these results conform to some known law ;
- (3) Failing that, to evolve a new law which will fit all the facts ; if this new law can be grafted on to present known laws it may possibly be true ; if it requires a genie to explain it then probably it is not true.

In this scheme of things there is work for all of us. We must have results right and wrong from our practical experts ; we must have those of us who are scientifically minded to put those results through a most exacting examination to see if any underlying principle can be detected, and the ramifications of the subject are so numerous that pure scientists, doctors and psychologists will all be needed to play their part ; we must have a body of linguists, who by translating the articles and reports in foreign journals can keep us in touch with the work done in the rest of the world.

This is a programme of much concerted work, but it is a work that our society could do.

And now I expect you have all got to the stage of saying to yourselves : “ That is all very well, plenty of work for all of us, but what has he been doing about it himself ? ” Well, I will tell you. For some years I have been working with an instrument which seems to have several points in common with the rod, or pendulum, and I thought some of its results might be of interest to you.

Divining is one form of recording action at a distance with which we are now very familiar through our wireless sets ; a sender and a receiver are necessary, and running water is presumably the sender and the human body the receiver. When first I became interested in divining through a friend who had the gift, I was not unnaturally attracted by the receiving end, since the twig would work with him, but not with me. But a somewhat dramatic experience convinced me that this was the wrong end for me to study. One day we went together to a lead mine, where I had done a good deal of work with my instrument and knew my way about, and asking him to find water I led him on a course that crossed two soughs, or mine drains, carrying very large flows of water, and also a large lead orebody. He found the water quite successfully but got no reaction over the lead. On the return journey, in a different part of the area I asked him to find lead, and he found two orebodies but had no reaction over the water.

It was obviously a question of tuning. When his body was tuned to water the twig reacted over water, and not over lead, and vice versa. The implications of this were too far-reaching

for me ; visions of muscular, nervous and mental processes far beyond my ken, with a dash of psychology thrown in, completely frightened me off the receiving end, and with a sigh of relief I betook myself to the sending end as at least simple in comparison.

My instrument, which could detect orebodies to a depth of several hundred feet, worked on an electromagnetic wave, had a very small error and was quite oblivious to the human touch—in fact, its readings when I was on the ground beside it or twenty feet up a ladder, reading its dials with field glasses, were exactly the same. Whatever else goes wrong its readings will be right, and though I may and do interpret them wrongly on occasions, that is not the instrument's fault.

Here, then, is an instrument whose law of action I understand, which has no human touch and which I have found has many points in common with the instrument of diviners, and it is to these points that I want to direct your attention, in the hope that thereby we may find some clue to the laws of water divining.

- (1) It will on occasion detect running water, and in doing so the needle on its dial pulsates as if, superimposed on the wireless wave I am receiving, is impressed some other form of wave propagation.
- (2) It will not detect standing water.
- (3) It detects ore or water much more strongly immediately above them ; if I cross an orebody at right angles to its length the effect appears more or less suddenly as I arrive immediately over the ore, and disappears in the same way ; it does not build up gradually and die away gradually over a considerable distance of traverse.
- (4) It will not detect ore under a thick bed of clay.
- (5) It will not detect ore lying above it unless I am very close to it and in the inductive field of that ore, though above the ore it will detect it hundreds of feet below. I have proved this by using it underground in mines.
- (6) It is affected by weather—heavy damp days are not good working days for it.
- (7) It is upset by underground pipes and cables, by telegraph and telephone wires and by running dynamos and power stations.
- (8) Pulsations occur over conductors carrying alternating current just as over running water ; this is particularly interesting, as when over a conductor a frequency of 50 cycles a second from the alternating current is impressed on the wireless frequency I am using.

If we allow that on some of these points there is a similarity between the behaviour of my instrument and that of the water diviner, then, since I know mine is made to work by an electromagnetic wave, it is, perhaps, reasonable to suppose that his is also worked by some form of electromagnetic wave. An interesting point arises at once—what is the wave-length of the wave

the diviner uses? I can tune my instrument to use any wave between about 2,000 and 200 metres wave-length, and it is possible that a human body can tune itself to receive different wave-lengths for different purposes at will.

But whatever wave-length he does use, it seems as if the wave must penetrate several hundred feet of earth if it really comes from the water and reaches the diviner. Now I cannot work my instrument on too short a wave-length, for waves of short wave-length do not penetrate the ground to any depth and so cannot bring back to me any message from below their depth of penetration. At one time I worked on a wave-length of only 50 metres, and found that though my instrument would then detect pipes and cables a few feet down, an orebody at any reasonable depth was outside its range of action, and so could not be found.

In the whole range of electromagnetic waves only the very long and the very short penetrate soil to any considerable depth. Waves of 1,500 metres do, to my knowledge, penetrate about 1,000 feet into limestone, for I have received them at that depth far away from any pipes or cables that could conduct them there down the shaft of the mine from the surface. Cosmic rays of minute wave-length also penetrate hundreds of feet into the ground. But the waves intermediate to these do not penetrate to any distance, and the very short wireless waves to be used for television can only arrive at the receiver if no ground intervenes on the line of sight from sender to receiver.

Moreover, there is now no part of the whole range of electromagnetic waves which has not been explored by scientists, and we must not suppose that the water diviner uses some wave in that range about which nothing is known at present—this is merely invoking a genie to solve a scientific problem, and we have already noticed that a solution of that sort is not likely to be true.

German workers have recently reported that they have found the wave-length used by diviners and have measured it and have taken photographs by it. But proof by photography is a chancy business, for when I was quite a boy I discovered that certain kinds of cardboard if irradiated in strong sunlight for some time and then packed up with a photographic plate in the dark room and left for some days, actually exposed the plate under the cardboard, while a control experiment with a piece of card which had been kept in the dark produced no result. I amused myself cutting out ghostly figures in this card, irradiated them in bright sunlight and produced images on the plate in the dark room with them. These plates were then used in the camera to take photographs of individuals or groups in the ordinary way and on development showed the ghost as well as the group. Yet I fear these results could hardly be accepted as evidence of the existence of ghosts.

Some years ago, when a search for radium was being made in the limestone caves of Derbyshire, two boxes of infra-red plates were left for some weeks in a cave above the underground river Manifold. One box was just as bought in the shop, the other was wrapped up and sealed in lead. The plates in the ordinary packing were found to be exposed when developed and those in the lead packing unaltered. At the time this was thought to be due to radioactivity, but since practically no radium was found in the caves it is possible that the plates were affected by waves from the river Manifold flowing beneath.

And now that I must come to an end you will realise that we have settled nothing. We do not know by what means water sends out its message, nor do we know how the diviner receives and interprets it. But the problem is a fascinating one, and the solution of it is urgent if divining is to take its place amongst the exact sciences, and if I have suggested any lines of approach along which others will push their way towards a solution I shall be more than glad.

STILL WATER

By ELVAN

The Dowser's mind has astonishing powers of interference or selection. This perhaps accounts for the continued survival of various quite unnecessary inhibitions. For example—the insulation (or rubber sole) theory was flourishing before 1790, and is by no means dead yet.

This is curious. The effectiveness of dowsing from a car has been recognised for some years; the car is a great time saver. Even dowsing from aeroplanes has proved feasible. A member of the B.S.D. was employed for some time during 1934 to prospect for water and oil from the air in Argentina, and other successful cases have been recorded. If 1,000ft. of air do not stop the Dowser, we can clearly rule out insulation.

Mr. Franklin, in his recent B.S.D. lecture, told an illuminating story. He took a Dowser along a line in Derbyshire which crossed two soughs at 500ft., and a big body of lead ore at 200ft.; the Dowser was asked to look for water; he found the soughs accurately, but missed the lead. After a detour he was brought back over the three, along a different line, and asked to find lead; he located the ore accurately, but walked over the soughs. This seems to have been pure mental selection; being constitutionally averse to unnecessary strain, the writer prefers to use samples.

Though it may not be quite in the same category, the theory that a Dowser cannot find still water seems even more indestructible. With a suitable sample still water can be found just as easily as still half-crowns, crowbars, or anything else. Metals

radiate more strongly than water, but the principle is the same in either case.

The proof is simple. Place a large jug of water on the ground, fill a small bottle from it, and holding this in either hand with the rod, advance towards the jug. The rod will act exactly as if both sample and object were similar half-crowns. In my own case, when using a sample and the normal hand position, the rod lifts over, or dips under, the object. This seems to be common to most Dowzers, though with some the natural action is different.

Any simple structure with a zone of saturation, such as a patch of glacial gravel and sand over clay (vide p. 98, No. 5 Journal), provides a good field example. The strength of the pull with a water sample varies directly as the amount of water below. Walking over such a patch variations can be felt, and the gradual fade out on approaching its edge. A more complex example: Elie, in Fife, pumps water from a borehole which passes through loosely consolidated, saturated, sandstone. This was a trial bore for coal, abandoned on reaching a dolerite sill at 214ft. The borehole was subsequently found to be full of water, tested for supply, and taken over. More than 150 gallons per minute are pumped from it.

Using the plain rod, small fissure streams can be found and tracked in this sandstone; actually there are none within many feet of the borehole. While the pump is working, the travel of the water through the rock to the well can easily be felt close to it.

With a water sample there is a steady pull from the still water in the pore spaces of the sandstone; crossing the area, the varying pulls of the small fissure flows are superimposed on this original pull. Naturally the tension must be varied as necessary to allow for this, an ordinary matter of touch.

The ability of the Dowser to find these areas of saturation where conditions are suitable, and roughly estimate their useful limits and water content, can be of real value.

East Fife provides a possible example. North of the Auchtermuchty-Cupar-Tayport road, there is andesite lava which contains practically no water, and is over 1,000ft. thick. South of this line the Old Red Sandstone and Carboniferous sediments are greatly broken up by dislocations, and by invasions of igneous rocks; further, over much of this country the structure is masked by 10-30 feet of boulder clay.

Possibly as a result of this intensive faulting and intrusion, the fissure streams throughout this southern division, though numerous, are generally small; they flow along highly inclined cracks, at unusual depths for their size; so, apart from any question of yield, they offer a narrow target for a borehole. Consequently the best chance of a serious supply would be a suitable area of this water-bearing sandstone, or a similar area

of saturated gravel. A good supply is pumped from gravel near Leuchars.

The Elie area was found by accident. There a N.S. fault meets a big E.W. fault, the N.W. sector is sandstone with the borehole near the point; the remaining 270 degrees dolerite of unknown thickness (a sill near Largo is nearly 400ft. thick). In this sandstone sector, between the surface and the dolerite sill at 214ft., there is a depth of loosely consolidated sandstone, which is full of water.

A similar area supplies Crail. For this a Dowser was responsible. He not only pegged a stream, but stated that plenty of water could be got anywhere in a particular field. The very competent Dowser pupil who took me to the Elie borehole subsequently examined the Crail area. He confirms the Dowser's saturated area, its edge was sharp, and he walked 150 yards across it without reaching the other side. He also found and tracked the Dowser's stream, after which the original peg was uncovered to show him that he was correct.

As the site originally selected did not belong to the town, the Engineer picked a spot a short way off where the geological structure seemed identical; fortunately, the saturation was there, but I gather it was less intensive. The core showed "several thick bands of very loosely consolidated sandstone." The borehole is 314 feet deep, the R.L.W. 6 feet down; 60 gallons per minute were pumped.

This should show the possibilities. A competent Dowser should be able to pick up these big patches of saturation from some distance away, especially from an approaching car. In simple dowsing for water the sample is a most useful accessory; the writer has used one for several years.

One further point might be worth stating. A sample should be a full component of the object sought. Particularly with rocks, a surprisingly small amount of any substance in the sample, which does not occur in the object, tends to invalidate the former; but where there is an abrupt change, as, for example, an igneous dyke in limestone, the tolerance is quite large. On the whole, it is better to use pure metal when looking for ore than an ore sample.

For this reason the best water sample is distilled water, a full component of all natural waters. Water does not radiate as strongly as metal; the necessary bottle has an undoubted damping, but apparently no serious qualifying, effect. No doubt metal samples held in the hand would be best, but they radiate so strongly that a 1-drachm bottle of pure powdered metal is usually sufficient, and much more convenient. For water, the 4-drachm (half-ounce or 1 tablespoon) size is preferable.

Personally, I find the sample most reliable, and mental selection less so. But the whole matter is by no means as simple as this brief outline may seem to suggest.

THE LIFE-WAVE EFFECT IN PHOTOGRAPHY

By E. S. SHRAPNELL-SMITH, C.B.E.. F.C.S.

Many present will have noticed the live appearance portrayed in some photographs of a man, woman or child, and the deadness of others. The brightness of the day, or the actinic value of the available light, does frequently account for such variations, but there may be other explanations of these obvious differences.

A little more than two years ago my attention was directed to the possible influence of the sitter's health, or of his (or her) radiation characteristics, at the moment of facing the camera. A German physicist, with whom I was then in touch, and to whose research laboratory I paid visits in other connections, was primarily engaged upon the investigation of a new theory of the structure of matter. I am not at liberty to disclose his main lines of attack, but I may mention the fact that he was one of the early advocates of the view that each of the 92 elements in nature is recognisable by its specific radiation. He had even found and identified the elusive Coronium in the earth's atmosphere. Each element gave, under certain test conditions, a directional beat to a particular type of pendulum when that instrument was employed by him with due regard to various precautions which he had established. Two elements only imparted gyratory movement, one clockwise and the other counter-clockwise, viz., tungsten and gold respectively.

This investigator, quite by accident, found that he was able to detect differences of behaviour when his pendulum method was applied to photographic negatives, or to prints made from them, of human beings. He asked me to pursue this matter, and I have done so.

After I had, in the course of over 2,000 observations, examined and tested some 250 photographs, I happened to purchase (in May, 1933) Sir James Jeans' book, "The New Background of Science" (1st edition), and in this (p. 175) I was much encouraged to persevere by the following paragraphs in Chapter V. dealing with "Matter and Radiation":—

"The observable ingredients of the external world are those which directly affect either our instruments or our senses. At first sight these may seem to be of a vast number of kinds; actually there is only one—the impact of photons. It is obvious that the imprints on photographic plates, which play so large a part in modern experimental science, are the result solely of the impact of photons, and that all optical and photo-metric effects must be the same. It is less immediately obvious how effects such as galvanometer deflections, which measure the passage of an electric current, or thermometer readings, which measure temperature, or the pressure on an ear-drum,

which registers the arrival of sound-waves, can be caused by the impact of photons. Yet they are ; neither a physical instrument nor a sense-organ can exhibit an effect unless energy is in some way transferred to it, and all energy which is transferred from one object to another consists of photons. We are not, of course, speaking of photons in the limited sense of bullets of light, but in the more general sense of bullets of energy, which we reach by extending the concept of light to all possible wave-lengths and frequencies. In brief, all instrumental effects and sense-impressions depend on the transfer of energy, and all transfer of energy is by photons. So great a simplification may seem almost too good to be true. . . .”

This very clear statement of the case, which I have quoted in full, leads to the necessity for other extracts to convey more information about photons. I proceed to work towards that point, from the same authoritative source—Sir James Jeans’ book.

His assertion (p. 3) that “The whole of nature appears to follow us about,” leads him to urge (p. 43) that “We must study the relation between nature and ourselves.” As one proof of law and order in the external world he cites (p. 7) the principle of “the uniformity of nature—like causes produce like effects.” Again, he writes (p. 114), “Nature appears to have only one mechanism, which is action at a distance, action across intervening space.”

In our bodies, he reminds us (p. 8), “the nerves may be compared to a number of telephone wires transmitting electric currents into a prison cell, which suitable instruments subsequently metamorphose into messages of sound, television, &c.” This recognition of the value of the human body as an instrument is by no means universal amongst scientists. A fitting comment on it might well be—“Truly we are fearfully and wonderfully made.”

My next step, in selecting from 200 pages some extracts which bear on the present objective, is to quote (p. 25) certain passages which explain the fundamental nature of light. These read : “We find that light is neither waves nor particles. It is neither atoms, nor protons, nor electrons which the sun shoots off ; there is a further constituent to all matter, which we call energy without knowing in the least what it is. It may exist either associated with matter, or as ‘free’ energy not attached to matter. Energy may pass from one piece of matter to another, but it may also break loose from matter entirely, and travel through space as free energy, when we describe it as radiation.”

Such “freely travelling energy,” or bullets of radiation, he continues (p. 26), “are known as ‘photons.’ . . . An average transmitting aerial sends out about 10^{32} photons (which means

a number with the initial digit 1 followed by 32 zeros) every second, each having a wave-length of, say, 500 metres. . . . Like all other forms of energy, photons possess the property of inertia or mass. . . . Photons differ from molecules in that they do not interact with one another; nothing but matter can stop a photon, or deflect it from its course. . . . the lens of a camera (p. 28) arranges that all photons which come from the same direction shall be thrown on to the same point of a photographic plate, and so produce a picture of the world outside the camera."

Later (p. 29)—"There are photons which we cannot see; some are of too short a wave-length. . . . We can only see one octave of light in a range of vibrations extending over about 63 octaves." (p. 31).

As to our ability to receive impressions and to sense them, Sir James Jeans, whilst evidently holding that human beings are "entirely wanting in an electric sense," writes (p. 31):—

"Nevertheless, no one would claim to be able to imagine all the kinds of senses that we might possibly possess, or maintain that science has provided us with substitutes for them all. . . . If passage-ways connect the domain of physics with the domains of life or spirit, physics ought in time to discover these passage-ways, for they start from her own territory. . . . New and unfamiliar concepts are still necessary for the progress of science (p. 42). . . . Science may perhaps be defined as organised knowledge." (p. 45).

He proceeds:—

"A scientist says in effect, 'Observation shews that the following facts are true; I find that a certain hypothesis as to their origin is consistent with them all.' He and his colleagues may now set to work to obtain more accurate or extensive data bearing on the original facts, or entirely new facts may be discovered. . . . Nature may answer our question by shewing us a phenomenon which is or is not inconsistent with our hypothesis. She can never shew us a phenomenon which proves our hypothesis; one phenomenon is enough to disprove a hypothesis, but a million million do not suffice to prove it. For this reason the scientist can never claim to know anything for certain, except direct facts of observation. . . . Strictly speaking, the time for replacing a hypothesis by a claim to certainty never arises."

I have examined during the past two years close upon 2,500 photographic prints and reproductions, these investigations having involved some 20,000 observations. These series of observation have led to my successive abandonment of numerous hypotheses, and to various changes of method in testing.

The theory on which I have been working can be briefly stated thus:—

A.—Each of us is a broadcasting installation from which individually characteristic waves of energy (photons) are being transmitted into and through space.

B.—Amongst the most sensitive reception sets, by reason of their individual identifiable qualities, are existing photographs (negatives or prints) of any person under consideration. There is the equivalent of a common natural oscillating frequency.

C.—When brain, heart and nerve-cell have all ceased to function there is no longer a wave-train to be accepted, and all photographs which were previously co-responsive now show no result when tested.

This brings us to the simple inference that, just as it is useless to try to tune in to Daventry when that Station is not transmitting, so must one fail to get the life-wave of a dead person by any method which is effective when he or she is alive.

There is nothing difficult nowadays in the conception of an individual life-wave. There are roughly 2,000 million people in the world, yet coincident finger-prints are almost unknown. There are many thousand times as many wave-lengths and wave-frequencies, without taking into account that in space some or all of them may spin. The possession of a specific and individual life-wave corresponding to the inherent *ego* of each member of the human race is held to be a reality rather than a probability.

The point at once arises, on this premise or supposition—can one tune in on a selected individual's life-wave if it is still being propagated? And if so, by what methods, and with the use of what instrument? I am hopeful that before long, by some adaptation of the photo-electric cell and with some type of sensitive oscillator, it may be possible to do this without employment in the circuit of living nerve-cell energy. To-day, precisely as in the Abrams diagnosis, a record is unobtainable without recourse to a human being whose sensitiveness is such as to fit him or her to provide the essential coupling action between pure physics and brain, nerve-cell, spirit, mind, or whatever may later on be proved the true source and/or channel of the energy changes involved.

Here, again, I venture to quote Sir James Jeans, not with any suggestion that he personally believes in or knows anything from me of my theory, but because I find encouragement in his attitude to all genuine investigations. He says (p. 51): "The layman sees science, as it seems to him, for ever changing her mind, hesitating, turning back on her tracks, and repudiating her earlier opinions. The scientist sees her ever progressing through a succession of theories, each of which covers more phenomena than the predecessor it displaces, towards the goal of a single theory which shall embrace all the phenomena of nature."

My theory begins with the fact that when a sitter faces a camera he fires off millions of his own individual photons which are concentrated by the lens, and large numbers of which are received and retained on the sensitised plate, film or paper. That sitter goes about the world emitting the like photons, all precisely the same and peculiar to himself or herself, as long as life do last. There is a photon wave-train throughout space which the individual prints pick up.

This concept is not a wild one. Sir James Jeans urges (p. 60) : —“ It would seem that science might legitimately progress along the road from phenomena to reality by thinking over unfamiliar concepts until they become familiar, the concepts being selected in the first instance on grounds of probability, as appearing likely to figure in ultimate reality.” He then recalls that the late Lord Kelvin explained his inability to get hold of the electromagnetic theory of light because he could not make a working model of it ! Sir James Jeans’ own current view is (p. 66), “ It may be that the true nature of light is for ever beyond our powers of imagining ; quite certainly it is so now. Thus we cannot reason about light, only about the results of our experiments on light.” Also (p. 67)—“ Our experiments on nature provide an obvious connecting bridge between ourselves and nature, and in exploring nature we naturally start from our own end of this bridge. Because the bridge involves ourselves as well as nature, it is hardly surprising that our present knowledge of nature should still possess a subjective tinge.” I find this view complementary to the one, already quoted, that the pure physicist also starts at his own end.

Radiation is by very small—mathematically and almost infinitesimally small—units termed quanta (152). Einstein was responsible in 1905 (153) and in 1927 gave the name “ photons ” to these. They travel through space at a constant speed of 186,000 miles a second (154). They retain (158) their individual identities. “ Every photon has indelibly and unalterably stamped on it a quantity, its frequency, which tells us the distance between the two fundamental frequencies associated with it ”—those of the protons and electrons associated with it originally (177-180).

“ The fundamental distinction that protons and electrons carry electric charges, whereas photons do not, is enough to account for many of the differences of their properties. Both carry energy and possess mass. For a charged particle to carry a finite amount of energy, it must move more slowly than light, whereas for a photon to carry a finite amount of energy it must move at precisely the same speed of light. This explains why photons always travel with the speed of light (p. 209). . . . Photons, having no charges, cannot interact with one another at all. . . . A million electrons need a space of three million dimensions for their proper representation ; a

space of three dimensions suffices for the waves of a million photons, and we may properly identify this latter space with the space of our everyday life, for this is the space in which we see sun, moon and stars. . . ." (p. 215).

"Photons . . . are merely free vibrations of the laboratory, or else the waves of such vibrations combined into wave-packets (216). . . . Any disturbances, no matter how restricted, can always be regarded as made up of constituent waves, each of which extends through space (206). . . . On imagining the walls of the laboratory to recede to an infinite distance we find that the energy of a free vibration in space extends through the whole of space." (167).

It must be evident from the foregoing that we are all firing off photons, units of energy. The rate of discharge is presumably increased when the energy of light falling upon our bodies is greater than at other times; yet discharge does not cease during hours of sleep by day or night! Each of us has characteristic individual radiation which is emitted in units possessed of their own wave-length and frequency (period of oscillation). The problem becomes one of tuning in—of identification, if we seek to tap a particular photon line. That is how I conceive it.

I purpose now to demonstrate the apparently simple—some cynics, of course, think foolishly simple—method of testing photographs to ascertain if the person depicted reacts or does not react. It does not matter at what age the photograph under test was taken.

[The lecturer used an amber bead, weighing about 120 grains, on a vertical steel needle about 2.75 inches long, with silk thread suspension some 10.5 inches long to a conducting holder. He used a light grip between the thumb and first finger of the right hand, with the wrist resting on a solid block of indiarubber 12 inches in height by 4 inches thick by 6 inches wide. He divested himself of watch, chain and other metals. He held this pendulum *at rest* above the centre-line of the forehead in the photograph; the result came as a beat for a male (or a counter-clockwise circle for a female) within a few seconds. It was sometimes necessary to search at a short radius round the head for the line of direction, in order to get the first beat. (A check test can be made over the right eye). In every case the point of the needle is from half to three-quarters of an inch above the print. The amplitudes built up to between one and two inches. He "unloaded" by earthing between each test. The table on which photographs rested was separately earthed from his own earth, a wire connection to a gas-pipe in the room being used in one case, and a chain in the other. He avoided contact himself with the table.]

In conclusion, I should like it to be known that I have been at pains, after the first few hundred photographs had been furnished to me by friends or relations, to make my tests upon those of persons unknown to me. These came *inter alia* from the Chief Constable of one of this country's leading police forces, from the staff of the Head Office of one of our leading banks, and from the managing directors of two world-wide insurance companies. The object in view was to test the possibility of determining if a missing, absent or wanted person was alive or dead.

I have never reached 100 per cent. accuracy over a number of photographs. My results, including photographs taken so long ago as 50 years, and concerning persons of all ages, have seldom been better than 90 per cent. right over all. They have fallen as low as 50 per cent. on a test set of twelve. Unless, and until 100 per cent. accuracy is achieved, no practical use can be made of this study. It is clear that at times, and under certain conditions, which as yet are not fully ascertained, the energy-quanta are insufficient to register when a photograph is taken ; at other times, there may be interference, or bad reception, or bad transmission, when tests are made on an individual, notwithstanding the fact that control tests with standards show radiation conditions to be effective generally. My own control tests, before trying any unknown photograph, are made on :

- (1) Gold
- (2) Copper
- (3) The photograph of a known live person
- (4) The photograph of a known dead person

I recognise the fact that my inferences and deductions, in so far as they are based upon the writings of Sir James Jeans, derive from my own interpretations of his views. The sphere of bio-physics into which I have ventured is not the special sphere of Sir James, and I feel confident that it is from investigators whose philosophy takes them along bio-physical lines of research that we must look for further evidence in support of the theory of an individual and characteristic quantum of nerve-cell energy, peculiar to the emitter, corresponding to, if not ultimately known as, a "photon."

SOME DOWSING METHODS

By H. O. BUSBY

A short description of the methods adopted by certain dowsers in this country, Australia, may be of interest to the readers of the "Journal" who may wish to try them.

One dowser, a Mr. Murphy, of Koorawatha, N.S.W., who died some years ago, was quite an advanced worker and had thought out matters which are now receiving attention in Europe, *e.g.*, he claimed to be able to diagnose certain ailments and to analyse minerals with the aid of his rod.

The rod he used was a piece of copper tubing shaped thus:—



the upward end being flared out into a small cup, in which was placed his "sample." He used the sample method generally. The other end was held in his right hand, which was kept close into the centre of his body, the cup end being forward. The presence of water, or whatever the sought-for substance might be, was indicated by the forward end swinging to, and following, the edge of the stream, &c., and when directly over the object the rod swung from side to side.

I was not acquainted with Mr. Murphy, but a friend who knew him well and worked with him gave me this information relating to him. On one occasion Mr. Murphy was in South Australia, dowsing for water, when a stud-sheep farmer was faced with a problem which he could not solve and decided to enlist the assistance of Mr. Murphy. A buyer for flock rams had come, and after inspecting certain sires, said that he would purchase the progeny of a certain one of them. Now it is practically impossible to keep track of the bulk flock rams which may number hundreds, or even thousands, on a large property. Special studs are in quite a different category. These young flock rams are usually kept in quite a large flock and are sold for general flock purposes, so general records are kept but not individual ones.

The owner could not say which was the progeny of the sire in question as they were mixed with many others so Mr. Murphy was asked if he could do anything. He expressed his willingness to try, although he did not know anything about sheep. He secured a lock of wool from the required sire, placed it in the cup of his rod, and stationed himself at the side of the "race" through which the young rams passed one by one. When his

rod indicated any ram by swinging with it as it passed, he signalled to the man in charge of the drafting gate to send it to one side.

When the work was finished the buyer examined the drafted-out rams and bought them, as they exhibited the characteristics which he had noted in this particular sire.

The single-handed wire rod is used by quite a number of people. One method is to have the short end of the rod placed in a short piece of piping so that the long forward end swings freely, the piping being held in the hand. If a sample is used, it is held in a small receptacle hung on the forward end of the rod, held in the hand with the rod, or in the free hand; it does not seem to matter much what method is adopted, and each person uses what appeals to him. I have seen one dowser who used a forked rod place his sample in his mouth. I did not envy him when he emptied a small phial of crude petroleum into the same receptacle when looking for petroleum.

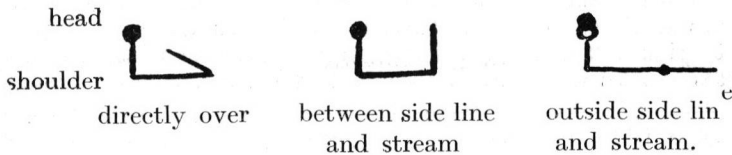
For my own purposes I prefer the plain wire rod of a fairly light gauge, 12 to 16, held directly in the hand without a holder. I bend the wire at right angles, the short end being about six inches and the long about nineteen inches. These lengths may be shorter or longer as the individual may desire.

The indications in my own case, and in others with whom I have worked, are usually of two types, and either may be used at will by a practised dowser. In one the free end appears to be attracted to the outer edges of a stream, &c., to "lines of force" in other words, given off by the object. There are other lines of force which the rod picks up, related to the object but not directly over it: *e.g.*, there is that which is sometimes referred to as the 45 degree line or side line sometimes used as an indication of depth. Mons. L'Abbé Mermet shows several of these lines relating to a stream in his book, *Comment J'Opère*, this main line being called by him "the seventh line of force, or the great parallel line."

I use the rod in this way when locating a stream, pool, or whatever I may be seeking, and then hold it upside down: *i.e.*, with the longer and horizontal part downwards. This is just a personal method. The rod will give an indication of direction even though I may be a very considerable distance away from the object: thus much walking about is eliminated as one goes directly to the spot. The free end of the rod turns in a certain direction and one follows it as though it were a compass needle. On arriving at the spot the rod appears to pick up a line of force, so that if one walks over this the rod will swing back towards it; its actions are usually very marked. If the dowser using this method is directly over the object the rod swings from side to side as though it is attracted to the lines of force at the edges alternately.

In the other method there appears to be some sort of induced attraction set up in the body when the dowser is directly over the object, or on one of the side lines, so that the free end of the rod is drawn in towards the body. I use this method when examining a stream, &c., in detail, and then hold the rod with the longer and horizontal part upwards.

The presence of these outside lines of force occasionally brings about mistakes on the part of dowzers who have taken them for actual streams. I have seen sites for wells marked on these lines, whereas the actual stream lay several yards away. I have, at times, used this second method to determine on which side of a line of force an actual stream lay; on one side the attraction will cease, while on the other—the stream side—the attraction will partly remain, *i.e.*, the rod continues to be drawn partly towards the body.



Another point which I have noted in connection with the location of sites for wells or bores is that the edges of a stream bed, *i.e.*, an old watercourse which has been buried—and many of our so-called underground streams in this country are of that type—give off quite a strong line of force although there may be no water at the edge at all, the actual water occupying quite a small portion of the defined bed. I follow a stream until it appears to open out into a pool, and mark that. I have seen bores put down in the centre of a stream as defined by a dowser and fail to get a good supply (though they sometimes improve it with pumping after a period), because the bed was rather impervious and the actual stream followed the line of least resistance, which happened to be to one side. The usual bore has a diameter of only about six inches, so it has to be accurately placed. If a pool is located it is obvious that the chances of missing the spot are lessened; one also has the advantage of drawing on an accumulation of water.

One can use what may be termed the “direct question method” in determining the position of the actual water in the stream bed. I incline towards Sir William Barrett’s definition of dowsing, “a supernormal cognitive faculty”; that it is a function of the subconscious made manifest through the movement of the rod as medium, and think that this faculty may be made to function

by direction. That there is also strong evidence for a more physical basis in some cases is undeniable, and there are probably many who prefer to regard it as a physical faculty.

Actual samples, colour samples, and what may be termed mental samples or adjustments, appear to be equally efficacious, and I have used them all. I suggest that it will be an interesting experiment for readers to try the "direct question method." Write your question: "Is there actual running water?" and hold that paper, or if you are a forked-rod worker attach the paper to the apex of your rod, and see the result. Use any question which may apply to the matter in hand. When doing this be very careful to avoid auto-suggestion. To make a success of the mental adjustment method is largely a question of personal training in mental discipline.

As a practice in the sample method take a leaf from a tree and it will be found that by using this leaf as a sample it is possible to pick out an individual tree from a number of the same kind, also that the rod will be found to work strongly while standing directly under the leaves and branches of the tree: then walk away from the tree and a strong line of force will be found at a distance from the tree which bears a relation to the height of the tree.

My own experience in dowsing leads me to think that this faculty exists in most people, but is latent in the majority, and that it is possible to cultivate it by practice. My first contact with actual practical dowsing was in South Africa about thirty years ago. A forked twig was used but I could not get the slightest result from it myself. After returning to Australia I often tried the forked rod without getting any result, and I have never yet succeeded in getting the slightest indication with this type of rod.

About fifteen years ago a man located a well site for me, using the single-handed wire. Naturally, I tried that method, also without result. I frequently tried this method over the known site and one day noticed that the rod had a slight movement. So I kept on practising, usually at night—being somewhat sensitive to possible ridicule—and in time became more adapted to the reaction, so that it was definite and clearly marked. This experience makes me think that almost anyone can become a dowser, as I was not especially gifted; in fact, quite the reverse; the faculty was decidedly latent and only aroused with difficulty.

DOWSING AND DIAGNOSIS

By H. H. LANGELAAN

One cannot but admire the wonderful ingenuity displayed by Man in devising instruments to record and measure sensations. From the simple twig, probably the first gauge to judge the position and depth of underground streams, to the delicate instruments used in medical research to-day, there is a development to be marvelled at ; yet behind it all there still exists that mysterious source of energy we call psychic, from which springs, apparently at least, the phenomena we seek to measure and regulate.

Behind all the elaborate tools to-day used in dowsing, there still persists the primitive power of feeling and finding with the hands alone ; behind all the elaborate and scientific tools used for medical diagnosis, there persists the primitive power of psychic and clairvoyant diagnosis in some people. In literature it is easy to distinguish the outpouring of the psychic impulse for expression, from the sometimes too perfect work of the intellect, steeped in the perfection of grammar and technique.

So it is in Music and in Art. Each kind has its qualities, but they are poles apart. The intellect should keep the outpourings of the Psyche in due bounds, but, alas, it too often treats the Psyche as a child that should neither be seen nor heard.

In medical diagnosis and dowsing there is a factor which is common to both, although it is not always realized ; for instance, some dowsers, in addition to finding water with a twig or mechanical contrivance, can "see" the water beneath the ground, with the clairvoyant sight. I had a little experience of that kind myself some years ago in Cornwall. At the house where my wife and I were spending a holiday, our host mentioned that he intended to employ a local dowser to seek for water for the domestic supply, his present needs being supplied by rain water, filtered. I remarked that only once had I tried, and that was in a paddock at home, with a local unlearned professional who instructed me how to hold the twig ; but when I passed near to an underground stream the muscles of my arms contracted so violently that I lost control of them, and the twig was wrenched violently apart.

When I accepted his invitation to try my power we searched for a suitable twig, but none being available, I tried with my outstretched hands alone, palms downward. My host led me at first, blindfolded, over the ground, but as I did not find any indication of water, he took off my hoodwink, and explained that he had led me over the rainwater tank (which was concealed under the lawn) as a test. We tried near the house and discovered a tiny stream, the direction of which we marked with

stones; but while looking downwards I became aware that I could actually see the stream of water, apparently 15 feet below the surface. It was not just a sinuous line, but bulged out at intervals into miniature lakes.

Although this was my first experience, I judged that this stream was of little value for the purpose required; and last year I learned that the local dowser had tried but had not discovered a sufficient supply.

Clairvoyance enters largely into psychic diagnosis as well, more so than in dowsing; and a curious thing about this kind of diagnosis is that frequently there arises in the consciousness, coupled with the awareness of the kind of disease, an impression of a remedy for the same. It is here, I think, where the untrained psychic faculties and the trained intellectual faculties could be profitably joined, for the intelligent expression of the Psyche requires all the general knowledge it can find, not only to tell what is the matter but to name the remedy.

I can illustrate this by giving an instance of medical diagnosis which was a personal experience. A gentleman staying in the same guest house where my wife and I were spending Christmas some years ago had been too ill to leave his room until after lunch. In the course of conversation when we were alone, he mentioned that he was a scientist, was engaged in research work in his laboratory in London, working solely for the love of the work. When the war broke out he volunteered and was accepted for research work, during which he was gassed twice.

From time to time he had to take a rest owing to a recurrence of the distressful symptoms. He told us that he had been terrified during the previous night by the awful feeling of suffocation, and that his medical adviser had ordered him to leave work for six months. I asked permission to look at his throat, and to try to "see" what was the matter. There appeared to my clairvoyant vision a patch of skin on the inside of his throat which reminded me of the new skin which forms over a wound or abrasion. The position agreed with the locality of his feeling of suffocation. "I do not mind so much," he said, "so long as there is no infection."

In dealing with an ordinary person it would have been well to avoid answering that implied question, for fear of the mental reaction; but he, being a scientist and therefore a man with a trained mind, I told him I believed there was infection, and that the name of it was spelt Cocc . . . (After this long time I find that I do not know how it was spelt beyond the Cocc). He, however, partly confirmed my statement by saying that there were but two, and that this was one of them.

"What can be done" he asked. I know the remedy, I told him, but I have not the slightest idea how it can be applied; it is clay. "Kaolin," he jerked out; "I know how to apply it; why, during the war we sent quantities of it East, for the troops.

We mixed it with collodion and it was used to draw the infection in cases of collitis. I shall mix myself some of it fairly thick, and it will stick on like a coat of varnish while the infection is drawn out."

On the face of it, it seems as if that man might have been saved a great deal of discomfort, both mental and physical, over a period of years, for he quickly recovered after treating himself with the collodionized kaolin, or clay. Who can explain how that word came into my consciousness? I use clay for modelling, and as a child saw it made into bricks, but had not the slightest knowledge, or should I say intellectual knowledge, of its use in medicine.

Of course, there is seldom such a wide gap between the primitive psychic and the modern methods of diagnosis; no doubt this was an exceptional case, for in the majority of cases the scientific methods are accurate; many of my own attempts, both spontaneous and directed, have agreed with that of the person's own medical attendant.

One recent case (and this seems as mysterious in action as divining by means of a map of a locality) may be of interest. A piece of material, dressing for instance, which has been kept in contact with the patient for an hour or two, is sent to me. It is better that no other person handles the material, but that the patient places the material, wrapped in paper, into an envelope himself. If another person handles the material, it is apt to be impressed with his vibrations and an erroneous diagnosis may result. I hold the material in my left hand, and with my right I write down the impressions I receive.

Or a glove is sent. Quite recently a friend of ours, a nurse, for whom we have experimented over a number of years, sent a glove and a note, saying, "Mother has had some attacks of fainting; my sister is alarmed, and intends to call in a doctor if she has another; will you tell me the impression you get from mother's glove, which is enclosed?"

Immediately I placed my hand in the glove, two words arose in my consciousness, "Epilepsy: bromide." I imagine that at some time I must have read or heard that a bromide was used medicinally for epilepsy, hence the association in the sub-consciousness. A few days after I posted the result there came a letter from our friend stating, "Soon after I wrote to you mother had another attack, and sister sent for the doctor. He said it was a mild attack of epilepsy, and gave her bromide of potassium."

A different experience will show how the psychic works when it is deficient in terms of intellectual knowledge, and unable to put its conclusions into words. It simply uses older symbols than words; pictures; and pictures may be described in any language, home or foreign.

An old friend of mine was ill ; against my natural inclination I visited him. Above his body as he lay in bed I saw an unmistakable symbol, it was a crab. It is general knowledge that the sign of the zodiac pictorially represented by a crab is called Cancer. Poor fellow : the symbol represented the truth, although it was not suspected at the time.

Another experience will tend to show that the psychic part of us is able to convey knowledge in a simple and instantaneous way which is not available to us through the intellectual processes. More than ten years ago, while speaking with a friend in the street, I noticed he was not very cheerful, and suddenly became aware of a small claw-shaped form situated in the neck of the bladder ; it reminded me of the soft claw of a crab. He told me he had been receiving medical attention to relieve the bladder. He died a month or two later.

Until three months ago I had forgotten all about it, but while in conversation with a gentleman keenly interested in research work, I happened to recall this experience, and mentioned to him the claw and the circumstances under which I saw it, clairvoyantly.

It seemed wonderful to me when he told me that what I had seen agreed with the form of the female cancer when viewed through a microscope. The psychic part was able to convey something of which the intellectual part was entirely ignorant.

Unfortunately these psychic powers of diagnosis, unlike the power of dowsing, have little or no value to the community, for it would be unwise to rely on them except in co-operation with a qualified medical man, and that co-operation in the past has not been accomplished. Even the Cancer Research Committee appear to ignore information received from this source, for twice I have sent information which might have some value, and accompanied with a donation ; but although the donation was acknowledged the communication was ignored. Yet, when I mentioned this to the gentleman engaged on cancer research, he assured me it was a useful line of research, and almost bewildered me when he described the method he should pursue to test it.

In the course of about twenty years I have only broached the subject to three medical men, friends of mine. The first said " You will never convince me that you can see beneath the walls of the abdomen." (I had been describing some morbid state of an organ). The second said : " I really haven't time to discuss it " ; and the third, a wonderfully sympathetic man of the old family doctor type, and a dear old friend, replied " Now, what will you take to drink ? Port ? Sherry ? Or what about a spot of whisky ? "

After all, hospitality is the oldest virtue.

SOME EXPERIMENTS WITH THE FORKED ROD

By R. S. THOMAS

Since dowsing is individualistic we cannot lay down many laws, but it is interesting to see along what lines the "other fellow" is investigating this phenomenon.

As a dowser of only two years' experience I fully realise that there are far more able pens, but perhaps being in a different latitude and working amongst different conditions may bring to light some points for further study. (Also I shall be pleased to hear from interested readers).

Since reading M. Mager's book on water divining, I have been experimenting with colours, as I had early discovered that an "attraction" on a rod cut from any handy tree and with a sample of gold in one or both hands, did not very often give me the location of alluvial gold. Gold has been my chief study, as I am prospecting for that elusive metal.

Gold gave a good "action" to a twig rod bound with yellow paper, but so did a certain kind of sandstone; so yellow was abandoned. Next I tried an azure blue and used that until I got tired of being led astray, for I was sinking holes and shafts to prove the rod.

Then making a rosette as described by M. Mager, I discovered that the correct colour should be violet-white, so painted a rod accordingly, cane being used of 3-16th inch diameter, untreated in any way.

On further experiment by placing the gold under the centre of the rosette I found a slight action over the yellow sector, and a still slighter over grey and blue. After further experiments and information from Mr. Busby, whose article appeared in No. 3, I conceived the idea of arranging the colours on a rod in the order they would appear in the spectrum, starting with white, then violet, blue, yellow, grey and black, the part of one leg gripped by the hand being white, the other hand holding the black.

Now in which hand should the white go?

When testing the radiations of a human being I hold the rod (the "normal" type—black with white binding) over his open hand held palm uppermost.

In most cases, if it is the right hand, the rod at first points downwards, but when gradually raised, at a certain vertical height above the palm the rod assumes a horizontal position, the point of the rod remaining stationary as my hands are raised higher. Over the left hand the reverse happens, *i.e.*, the rod first points downwards and gradually rises to the horizontal position and then points upwards.

For the hand of a natural dowser I find that this vertical height is usually 16 inches. I call the action over the right hand "positive" and that over the left hand "negative."

In the case of some people the action is reversed, *i.e.*, the right hand produces the negative and the left hand the positive effect.

With some men both hands produce the positive effect, the vertical height to the horizontal position then being eight inches for each hand. With some women both hands produce the negative effect.

Accordingly I tried the white in the right hand considering that the highest vibrations would be in harmony with the positive force from the hands, but was surprised to find it was necessary to hold the white in the left hand to get an action over known gold-bearing reefs.

It was easy then by experiment to build rods for other metals. Tin "acts" on the junction of red and grey in the rosette. Yellow on the rod acts a little over tin, as also does violet, so the "tin" rod (which lead also affects) is violet—yellow—dark red—grey, violet being held in the left hand. No action occurs if the legs are reversed and this forms a check as to the existence of the suspected substance.

For coal the rod is violet—blue—green—yellow—red—dark grey. I was absolutely unable to get this rod up to normal or neutral position when over coal seams.

Now further experiments showed there was a line of force from a permanent magnet in a certain direction for every substance, so, by placing a bar magnet on the ground with the north pole towards the north, I found for gold an action 40 degrees west of north. This line of action extended for just over 11 inches in that direction and the rod then dipped smartly.

For these small-scale experiments I used a very light whalebone rod, 1-16th by 1-8th inch section and $5\frac{1}{2}$ to $6\frac{1}{2}$ inches long—black with white binding.

Further, by taking the multi-coloured rod for gold I could wave it across the edge of the field of force and it remained in the upward position until the field of force had been cut 198 times, then, on coming over it the 199th time it dipped down smartly. I found the yellow rod did this also, but it also went up and down at other numbers, sometimes uncertainly, sometimes quite smartly, but it always dipped smartly at 198 after going up from about 180 to 197. Note the discrepancy of 1 between the two rods.

I could not obtain multi-coloured paper, so made a pile of 197 yellow paper discs, keeping the 198th to place on the top of the pile. Now, with the normal or yellow rod, and the pile placed in the field of force, I enquire if there is gold. If the action is upwards over the pile of 197 and downwards over it after the extra disc has been added, I conclude it is worth checking out further, with coloured rods, action from magnet and length

as described, rosette, first serial on normal rod (11 for me), putting a piece of gold on the ground to see if it destroys the action, tracing out the planes of force and examining the rectangle (see *Water Diviners and their Methods* by H. Mager).

When all these tests have been made I dig, even then often to be disappointed!

The reasons are various; the reef may be down at a depth and not exhibiting on the surface, and I cannot prove it unless it can be seen before I get eight feet deep—the reasonable limit for a man working with pick and shovel by himself.

NOTES AND NEWS

A certificate to two successful locations in chalk:

Mrs. K. H. Dale has reported on ten sites and several areas in March and April, 1934.

Two of the sites given by her have been developed and have proved entirely satisfactory.

Her estimate for the first was 160 to 170 feet in depth and 7,000 gallons per hour, and for the second 260 feet to 300 feet in depth and 6,000 to 7,000 gallons per hour.

In the first case boring was stopped at 168 feet and in the second at 260 feet, and in each case the quantity was in excess of the estimated amount.

(Signed) H. L. PIGOTT,

Durrington,
6.12.1934.

Command Land Agent,
Southern Command.

* * * * *

Here is a case of successful map dowsing by Captain H. I. Halliday:—

February 15th, 1935.

Dear Sir,

This is to testify that I sent you two 25in. Ordnance Survey sheets for the purpose of map dowsing, and upon these have been marked courses of streams of underground water.

These courses I have to-day checked and find them to be entirely accurate.

With regard to the depth of my well, this has been tested by you and the depth given was approximately 180 feet, and this is correct according to the firm of well-borers who did the work about 20 years ago.

The well was bored through a strata of chalk.

Yours faithfully,

(Signed) ALFRED J. BLAND, F.A.I.

Moore, Ganard & Son,
Auctioneers, Valuers, Estate Agents,
Offices Hoxne, Diss.

Mr. H. M. Varvill, of the Nigerian Administrative Service, reports:—Not long ago I had a long talk with a Hausa water diviner. He was a real expert, but not a diviner in your sense of the word. As to results, he has practised for a while in Bornu, which is the part of Nigeria most like desert, and also in Munshi country. The site chosen for the D.O.'s house was a high ridge, but it was doubted if any water could be found on such a spot. This mallam said that there was, and sunk a well on the very summit to find water within a depth of 12 feet. Having seen his work I made friends with him and asked his method. He had no instruments at all. When questioned, he would just say that he could "feel water" in one direction as opposed to others. He would walk along the line so indicated, and at a certain spot would experience this "feeling" more strongly than elsewhere. Then he would clear the ground and as a good Muslim proceed to draw on the ground the geometrical pattern known locally as the Prophet's belt. It is a six-pointed figure formed by two equilateral triangles. The space in the centre is marked as a circle for the well-shaft, which he, muttering a verse of the Koran, proceeded to sink.

* * * * *

Colonel Hugh Rose writes:—Reading the account on page 19 of the March journal of the failures to locate certain articles brought to my mind an incident in France in the latter part of 1917. My Corps H.Q. was at Le Catelet, once a fine and prosperous farm, standing on high ground some two or three miles East of Peronne.

When the German troops in this area retired to the Hindenburg Line, they destroyed houses, farms, fruit-trees and vines with diabolical malice and thoroughness.

One morning I was sent for to help the proprietor and his wife, who had just come down there from Paris for the first time since the outbreak of war. Of their dwelling house not one stone remained, and all the outhouses had disappeared. With the exception of one small portion the farm was in ruins.

The poor owner was anxious at any rate to recover if possible an iron safe containing jewellery and valuable lace of Madame. It had been buried shortly before August 1st, 1914, under the floor of a small outhouse.

The husband got very excited because there was no clue left as to its whereabouts. However, I calmed him down and at last he indicated a possible spot. I turned some men on to dig, but they had no success. At noon I told M. that the men had to knock off temporarily for their dinner, and as his wife and he were obviously much upset by the whole affair and in need of cheering up, I took them to our mess hard by, assuring them that no officers would enter it till just before one o'clock.

While they were having lunch I thought of my steel clock spring, and went out to prospect with it. A handy horse-shoe served as an "affinity" to the iron safe. Between 12 and 15 yards from where M. had indicated I got a reaction for iron and marked the spot. Then I became aware that M. was nearby, watching my actions with suspicion. I explained to him the working of the spring and told him that on the fatigue party's return I proposed to dig at the place marked.

It turned out to be the safe all right; it was between three and four feet down. I got the owners a motor-car and sent them off with the safe to Peronne station in time to catch a train back to Paris.

* * * * *

As reported in the *Banbury Advertiser* of February 21st, Mr. W. J. Worrall, of Culworth, was successful in locating the body of Mrs. Hobbs, who had disappeared from her home at Moulshford, in the Thames.

No information being available, he tried to get a bearing from the doorway of the cottage with a twig. Having twice obtained a bearing in a south-easterly direction, he followed this line as far as the river, which he crossed. On the Oxford bank the twig pointed sharply back towards the river. Dragging was started by the police at the spot indicated, but was hampered by the swiftness of the current. However, on a second attempt the body came to the surface and was taken out a short distance below the spot where dragging operations had taken place.

Mr. Worrall has made many locations for water in the Midlands, and for this purpose, we understand, generally uses a motorscope made of copper.

* * * * *

As reported in the *Daily Telegraph* of August 14th, 1934, the body of a murdered man named Etienne, of Montpellier, was recovered by the help of a dowser, a monk of Frigolet Abbey.

Responding to the appeal of the missing man's father, Father Gerlac visited the man's home and office and touched various books and garments belonging to him; then, holding in his hand the rod, he followed the route on which Etienne had last been seen. On arriving at the workshop of a carpenter named Fabreguettes, the rod became violently agitated. The movement died down after the shop had been passed, but was renewed when the monk returned. Father Gerlac then declared firmly: "The body is in there, and my mission is at an end."

The carpenter, on whom suspicion had fallen, was already in custody, and a few hours later admitted that he had murdered Etienne and had hidden the body in an oven in his workshop.

According to the *Yorkshire Observer* of September 20th, 1934, Mr. Robert Brotton, the well-known water diviner of Richmond, Yorks., on September 19th located the body of Mr. A. Reginald Smith in the River Strid. He used a hazel twig with wire attachments and carried a hat belonging to the missing man as a sample.

Five days later the body was recovered on the spot indicated (*Yorkshire Evening News*, September 24th, 1934).

* * * * *

Mr. J. A. Clarke and another water diviner, working independently, are reported (*News Chronicle* of March 12th, and *Leamington Chronicle* of March 15th, 1935), to have located the body of the Rev. Andrew Thomson in the River Leam. The body was found at the spot indicated.

* * * * *

The *Yorkshire Herald* of November 21st, 1934, reports that a water diviner was employed by the Scalby Urban District Council. On his advice two shafts were sunk, one of which gave 30,000 gallons per day and the other 6,000. The first spring was an enormous asset during the drought. If this action had not been taken it would have been necessary to ration householders.

* * * * *

According to the *Oxford Times* of December 7th, 1934, a water diviner was employed by the Bicester and Ploughley Rural District Council to improve the supply at Amcott. Water was found, but proved unfit for drinking.

* * * * *

In the *Evening Advertiser* of January 3rd, 1935, it was reported that Mr. John Hitchings, water diviner, of Swindon, had discovered an excellent supply of water for Birmingham's new estate at Canwell, the yield being more than 2,500 gallons per hour.

* * * * *

According to the *Western Mail* of March 9th, 1935, the Pembroke Council have called in the service of a water diviner to discover a satisfactory supply for the town.

* * * * *

An interesting lecture (delivered by Mr. Eardley Beswick) on "Divining for water, oil and coal," and demonstrations were given by Mr. P. J. Gatward, an amateur dowser of wide experience, at Building Centre on February 7th. Several members of the B.S.D. were kindly invited to attend.

The lecturer gave a brief history of divining, and quoted several instances which clearly showed the superiority of the dowser to the geologist in certain circumstances. Some of the unsatisfactory investigations carried out by physicists last century

were referred to, but nothing was said about the well-conducted experiments made by Dr. Lintott at Guy's Hospital in 1933.

Mr. Gatward uses a modification of the "Bishop's rule" for finding depth, and estimates volume by the degree of reaction at the depth so found. He prefers a freshly cut rod; he gets no result with a dry rod. When using a sample he fixes it in the fork of the rod.

He considers that dowsing depends on the presence of some abnormality in the earth's otherwise uniform substance, such as running water, coal amongst shale and clay, and metals amongst earths, a sovereign hidden under a carpet.

* * * * *

A most instructive lecture on "Water supplies from underground sources" was delivered by Lieut.-Colonel J. D. Restler, O.B.E., M.I.C.E., M.I.M.E., M.I.E.E., M.Cons.E., at the Royal Society of Arts, on February 20th, to which many members of the B.S.D. were kindly invited. The Minister of Health, Sir Hilton Young, G.B.E., was in the chair.

In the discussion which followed, Sir Hickman Bacon stated that he would never think of sinking a well without first consulting a water diviner, and gave a remarkable case of a successful location by a diviner at the depth of a few feet when a bore of about 100 feet had proved abortive.

Mr. H. W. Sanderson also testified to the value of water diviners.

Mr. J. Timms cited a number of instances in which he had been able to tap supplies of water after engineers had sunk wells without results.

Major C. A. Pogson considered that a practical official test should be applied to determine whether diviners were capable of materially assisting water engineers and geologists.

Sir Alfred Chatterton spoke unfavourably of his experiences of an English water diviner in the Madras Presidency.

The lecturer and the other speakers seemed to have had no experience of water diviners.

REVIEWS

PHYSIKALISCHER UND PHOTOGRAPHISCHER NACHWEIS DER ERDSTRAHLEN

LÖSUNG DES PROBLEMS DER WUNSCHELRUTE

By Dr. PAUL E. DOBLER; *Sommer and Schorr*, Feuchtwangen.

This is a memoir, 70 pages in length, of which the first part is a description of an outstanding attempt by the author to solve, once and for all, by physical methods, the problem of the existence or non-existence of physical radiations in the

causation of dowsing phenomena. In his introduction he states that the publication collects the results of several years of work, involving very numerous experiments: and he also expresses the hope that his memoir will serve to remove the scepticism that certainly exists at present with regard to the phenomena of "dowsing."

The author briefly refers to the controversy regarding the actual existence of "earth rays"; and he maintains that his researches have shown that these are as frequent in occurrence as those of light. He then plunges directly into an account of his experiments, taking first of all his attempt to prove, in a purely physical manner, the actual existence of these rays; and, later, giving such results as he got with the assistance of Dr. Karl M. Müller, of the Bavarian Forest Service, using that gentleman as a "physiological indicator."

His first attempts were made by investigation of the air potential in the neighbourhood of "zones of influence" (reizstreifen), by means of a delicate potentiometer. Both examples given by him show that the potential at a point within the zones of influence was found by him to be lower than that at points outside. This he concludes is the result of radiation.

From this account, which is very brief, he proceeds to the most important part of the publication, an account of his experiments, which he considers to be conclusive, upon the photographic recognition of rays from subterranean watercourses and also from other sources. Briefly, he believes that he has discovered a medium by means of which these rays can be so altered as to influence a photographic plate. The medium which he used was aluminium, in the form of strips, which were polished at the edges. He compares this work with that of Professor Paschen in 1905, in which the investigator found that when β rays fell upon strips of platinum laid on a photographic plate a stronger blackening was noticed under the strips than in the part. Dr. Dobler's photographs certainly show a very marked effect along the edges of the strips, which were exposed to the rays, while blank experiments, carried out in the dark room, showed little effect. An interesting point to note is that plates wrapped in tinfoil were unaffected, while plates which were merely wrapped in paper showed a strong reaction. He draws the conclusion that the rays are such as cannot penetrate metals, and says that further work, which will be published later, is being done on this.

The author is obviously quite confident that he has in this way definitely proved the existence of these earth rays, and that he has discovered a physical method for their detection. He proceeds to attempt to determine the wave lengths of the rays in certain specified instances, in which case he first uses a "phy-

biological indicator" and later his photographic method with the help of a reflecting interferometer. His photographs are very striking, but it would be of interest to know whether he made duplicate observations in any case. A natural criticism would be that other causes might be at work in these experiments and that confirmation by duplicate experiments is desirable in wave-length determinations. For instance, if he found that he always got the same spectrum with the same substance, it would help to confirm his view more strongly than the fact that he gets different spectra with different substances.

From Dr. Dobler's account of these vibrations a casual reader might assume that no research work had been done on electromagnetic vibrations of wave-length between 10 c.m. and .343 mm. (on p. 30 he refers to "the previously unexplored region between the infra red and the shortest Hertz waves"). This can hardly be considered to be the case, as waves have been produced by electrical methods which actually overlap the longest light wave produced by a mercury lamp. (A text book of Physics, by E. Grimsehl, *Blackie*, 1933).

It is true that Dr. Dobler describes these waves as "undamped," and, as the reviewer's mathematics are more than a little rusty, he consulted a friend at Cambridge, who is of the opinion that "the division into damped and undamped waves in this connection is quite artificial. The damped wave train may be built up of a Fourier series of undamped waves, and damped trains covering the whole of the gap between the short electric waves and the infra red have been introduced."

It seems, therefore, that the author is hardly justified in his apparent claim to be the original discoverer of waves lying between the infra-red and the Hertz series, although, of course this does not disprove his theory that the "Dowsing" phenomena are due to such waves. The reviewer must confess, however, that he would like to have seen more details concerning the "Hertz" resonator described on pages 36-38. From the context it does not seem that any particular care was taken to vary in any way the size of the aluminium ring taken as a "resonator." If the experiment was only done with one ring, surely Dr. Dobler was very lucky to get a ring which was in tune with the vibrations at his first shot.

The second part of the memoir gives an account of various natural phenomena occurring within the "zones of influence." He explains these all by means of his new theory, and gives a very good bibliography at the end.

C.S.T.

*BULLETIN DE L'ASSOCIATION DES AMIS DE
LA RADIESTHESIE.*

(January, 1935).

This is the beginning of the sixth year of the existence of l'Association.

Accounts are given of the addresses delivered at the third International Congress. On the afternoon of September 17th, as M. Voillaume was not able to be present, his address on Physics was read by M. Armand Viré. It dealt with the chief external agents in Radiesthésie under the headings of electricity, magnetism, electric and magnetic fields, radioactivity; then with waves and their propagation; and thirdly with the influence of the terrestrial medium, ending with some remarks on M. Marignane's system of testing the authenticity of works of art with the pendulum.

After an interval General Lemoine gave an address on "Radiesthésie and Agriculture," under the headings of "methods of analysis of soils and plants," "study of variations in the zone of vegetation," ending with a discussion on the objective value of series and formulae, *i.e.*, are series absolute or do they vary with the operator?

M. de France then gave an address on Geology.

Amongst other contents of this number is an article by M. Turenne dealing with the rays given out by radio-active substances; oil and electromagnetic waves; fluorine and electromagnetic waves; the suppression of magnetic waves by closed boxes.

Dr. A. Leprince writes on the medical application of Radiesthésie, and discusses the sensitiveness of an operator can be increased by metal contacts on the body which cause the development of minute currents.

Engineer in Chief of Aviation E. Pitois has an article on the radiesthetic analysis of pathological liquids and describes the methods of M. Soulier, M. Turenne, Dr. Naret and M. Lesourd.

C. Rod Pollak records some examples of medical diagnosis, including one of tele-diagnosis.

A.H.B.

*ZEITSCHRIFT
FÜR WÜNSCHELRUTENFORSCHUNG.*

(January-March, 1935).

This number begins with an appeal to all dowsers to send in accounts of their observations in a systematic way, according to a definite table which is given for guidance.

Dr. Beyer contributes a good example of the detection by himself of a spring at a place where previous borings had been unsuccessful. This he gives, as he says, in the hope that dowsers may send in similar results, to be collected and correlated by the editorial staff.

Dr. Wüst publishes a note, strongly criticising Dr. Dobler's book on the photographic recognition of earth rays. He states that two well-known scientists, whom he names, have expressed the opinion that Dobler's phenomena could be ascribed purely to the action of moist air, and that the fact that plates wrapped in tin foil were unaffected is probably due entirely to the protective effect from moisture by the tin foil, and not, as Dobler thinks, to the impenetrability of the foil to the rays. They do not think, therefore, that Dobler has proved his point, as he does not appear to have taken this possibility into consideration, but they think that further investigation should be done before the theory could be condemned.

In consequence, Dr. Wüst did a series of experiments, taking special precautions that all experiments were done under similar atmospheric conditions. In these experiments he failed to detect any difference between the plates exposed to the rays and those not so exposed. Dr. Wüst also offers the criticism, in the case of Dr. Dobler's experiment with the interferometer, that blank experiments should have been done, and that several experiments should have been carried out with the same materials. Different results with different materials do not of necessity prove that those materials are the causes of the differences.

In connection with this criticism of Dr. Wüst, readers of the "Journal" (*B.S.D.J.*, II, 7, p. 24) will remember that Dr. Wüst in collaboration with Herr Wimmer, has recently published a paper on the results of his own experimental work, from which he concludes that earth rays exist in fact; but that they are not of the same type as the Hertz and light waves, as they appear to be vibrations of low velocity (43 metre per sec.).

Dr. W. Laue has written a short article entitled "Opinions in favour of the divining rod." This is mainly an argument against the opponents of dowsing, and also gives one or two results obtained in medical diagnosis with the help of the rod.

Dr. B. writes a note on the investigation of plagues of ants by means of the divining rod. His note is from a private publication by an observer in Brazil. It has long been known that ants build their nests over subterranean water, and the observer claims that the ants, when "on trek" follow the zones of influence (reizstreifen) to the lines of which they also orient themselves. By using the divining rod the observer found a point from which

many of these zones radiated, and in this way he located the nest, which was otherwise difficult to find. He gives two examples of this method with diagrams.

Doctors Braun-Fernwald and Osswald contribute a review of work in foreign countries. In Italy Dr. Dobler contributes to the *Rassegna di Sci. Geof. e Rabd.* further observations on radiations from different substances. The *Rassegna* remarks that Dr. Dobler's opinions appear to agree with those of many Italian and other observers; but that a final opinion must await further investigation. Attention is also drawn to a method, published by Colonel Karl Beichl, for the photographic recognition of earth Rays (*Allgem. Oesterr. Ing. und Chem. Zeitung* 5/11/34). Dr. Dobler has created a flutter in the dovescots—a good thing whether he is right or wrong, for controversy is better than stagnation.

France, as usual, contributes largely to this part of the *Zeitschrift*, while Spain, Czecho-Slovakia and Turkey also appear as contributors to our knowledge of the subject.

Herr W. Melzer writes a notice on the paper read by Professor Dr. Kraft on "The problem of the divining rod," to the Natural History and Medical Association at Dresden, also comments on the criticism of Dr. Dobler's work by Professor Friedrichs, Professor Dr. von Angerers, and Dr. Lüppe Cramer. He does not think that the severity of their criticisms is quite justifiable.

Finally, Dr. Franz Witzel describes a new apparatus, the "gerameter," which shows with great precision the disturbance caused in the earth's field by the presence of different bodies beneath the soil (water, oil, salt, coal, ore). Dr. Wetzler states that in spite of the accuracy with which the instrument is made, that its purchase is within the means of all dowzers. He is, perhaps, a little sanguine, as the apparatus costs RM 220 in the cheap variety, and RM 350 for what perhaps may be described as a "de luxe model."

He also gives the address from which the apparatus may be procured, and three testimonials showing its usefulness.

Dr. Beyer announces, with great regret, the death of a great and accomplished student of the divining rod, Herr Wirkl. Geheimer Oberbergrat Berghauptmann Dr. H. C. Scharf.

C.S.T.

LA CHRONIQUE DES SOURCIERS.

January.—M. de France describes how whilst his son and Count François de Clermont-Tonnerre were flying in an aeroplane in the neighbourhood of Amiens, his son with a rod at a height of 300 metres, was able to locate considerable streams and lines of high tension cables, whilst numerous ponds caused no reaction,

He found, too, that a line of borings made during the war corresponded to a large fissure perceptible from the air. These borings are supposed to have been made by the English on the indication of a dowser.

Do any of our members know anything about this ?

A medical centre of Radiesthésie has just been opened at Paris. Information can be obtained from M. André Capron, 20 bis Rue des Bateliers, Clichy (Seine).

M. Lambert has opened a shop at 16 Rue St. Roch, Parish, where apparatus, books and information can be obtained.

February.—This number contains an interesting note on *rémanence* by Commandant Gorceix, describing some experiments carried out with tellurium and silver.

March.—Abbé Crisenoly, Cure of Kairouan (Tunis), at the request of M. Lapeyre, Director of the Carthage museum, has located with the pendulum part of the ancient wall of Carthage, at a depth of five metres.

Count de Marsay has successfully located at Chantenon in Allier a deposit of petroleum at a depth of 825 metres.

It has been learnt that Abbé Ferran died at Albi on April 5th, 1934. He was one of the foremost of modern dowsers and pointed out to M. de France the value of the adjustable pendulum.

April.—Dr. A. Leprince compares *rémanence* to homœopathic medicine, a minute quantity of which has an effect which a larger dose fails to produce, because the former has an energising action whilst the latter acts chemically. When a piece of metal is buried in the ground a salt is formed which remains after the metal has been withdrawn, and spreads through the ground. This is possibly the explanation of "images."

There is a note by Commandant Gorceix about the experiments by Adrian and Matthews at Cambridge on the varying potentials of the human brain.

The next Congress, at which M. Armand Viré will preside, will begin at Paris on June 10th.

LA COTE D'AZUR MEDICALE.

February.—There is a translation of an article by Raimondo Jemma on lunar influences dealing with the effect of the moon on vegetation through the changes caused by it on atmospheric electricity.

March.—In *Radiation from metals* M. Henry Copin explains how he was the first to discover the action of metals at a distance on the germination of beans, and not Professor Rivera, as stated by M. Lakhovsky in his work entitled *La Matière*.

Dr. S. Abravanel Aysoy, Professor of the Veterinary Faculty of Angara, describes his instrument called radio-amplifier for

reinforcing the muscular contractions and for eliminating the effect of auto-suggestion when a pendulum is used. Comparable in principle and object are the inductor of Dr. Regnault, M. Duvermy's pocket battery, and Mager's magnetised needle.

April.—There is an interesting article, *Le Fluide Humain*, by Ad. F., compiled from a lecture given by the Swiss engineer, E. K. Müller to the Helvetic Scientific Society, the text of which was published in 1932 in No. 26, 27 and 29 of the *Schweizerische Medizinische Wochenschrift* under the title, "Objectiver, elektrischer Nachweis des Existenz einer 'Emanation' des lebenden menschlichen Körpers und ihre sichtbaren Eirkungen."

Müller carried out experiments during eight years on Mme. Sp., a "hydrosensitive," and came to the conclusion that :

(1) Sensitiveness (reactions of the rod) can be transmitted from a sensitive to a non-sensitive.

(2) Transmission can be effected by direct contact of the hand, left hand to left hand ; by the hand of the sensitive being held above that of the non-sensitive ; by connecting left hands with a piece of copper wire up to ten metres in length ; by left arms being held parallel. He observed that when the distance between the two persons exceeded ten metres there was a delay in the reaction of at least 22 seconds.

(3) Transmission through walls of wood and glass was also effective with a delay of several seconds.

In another series of experiments Müller used a variety of instruments in which deviations were noted on his approach, which were obviously not due to calorific radiation. Sometimes no deviation occurred, but at other times, particularly before a fall of snow or after he had lately eaten or taken tea or smoked cigars, there was a strong deviation. After experimenting for eighteen months he was convinced that certain atmospheric conditions and particularly drinking tea or smoking produced the most pronounced effects, which he attributed to some kind of radiation.

He found not only that the extension of the hand towards a Fortin's apparatus at a distance of two metres was sufficient to cause a deviation of the needle, but that the mere concentration of the will produced a slight deflection.

[A similar effect is produced with Major Raymond Phillips' "Humanoscope," which was exhibited at the Boy's Exhibition last autumn.]

In attributing these phenomena to a human radiation, acting at a distance which can be reinforced by an effort of the will, Müller rules out the possibility of the cause being due to a change

in the electric field, holding that a variation in the capacity of the instrument could not be caused at a distance of two metres or be in any way dependent on mental concentration; moreover, the air in the laboratory was more often damp than dry and the observer was standing on a layer of concrete over the natural soil.

A curious experience often observed by Müller was that a cotton shirt worn next to the skin acquires a strong electrical charge at a rapid lowering of the temperature, and that the electricity seems to be "boxed up" in the material of the shirt, only leaving it in the form of sparks when the shirt is shaken. Moisture due to sweat or atmospheric moisture did not prevent this phenomenon from taking place.

LA PROSPECTION A DISTANCE.

February.—M. René Blandin describes how his brother successfully traced two dogs which had been worrying a flock of sheep by observations on the spot with a rod and afterwards with a pendulum over a map.

M. Paul Heyndrickx gives a method he calls "go and return." Place an object on a table, using a sample turn your back to the table and advance. Your rod will rise at a distance of about $1\frac{1}{2}$ yards from the table; then go backwards and the rod will rise again. It will not rise in going backwards unless the sample is identical with the object which may be hidden in a box or buried in the ground.

By this method a picture can be identified if a photo of the painter or a photo of one of his pictures is used as a sample.

In the case of alloys the rod will not rise in going backwards if the sample is of one constituent only; it will dip. But it would rise if the sample represents all the metals in the alloy.

March.—The following experiments were carried out by Général de la Gontrie at a meeting of the Association des Amis de la Radiesthésie on January 22nd, 1935, in the presence of numerous members, and were repeated successfully by several of the latter immediately afterwards.

(1) The operator with a rod or pendulum concentrates his thoughts on a definite material object. In doing so his instrument reacts in a manner corresponding to the characteristics of the object.

If he thinks of something abstract, such as music, painting, no reaction occurs.

(2) (a) The operator gets an assistant opposite him to concentrate his thought on a material object. This causes reaction appropriate to the object thought of in the operator's instrument.

(b) The operator gets his assistant to think of an object intermittently. This causes intermittent reactions in the operator's instrument.

(c) The operator concentrates on the radiesthetic characteristics of a certain metal, liquid &c. He then asks his assistant to "will" to receive the radiation, and his instrument will react in the appropriate manner when the assistant complies.

To avoid auto-suggestion this experiment can be performed in the reverse manner; that is to say, discover the characteristics from the assistant and then see to what object they are appropriate.

From these experiments it appears that:

(a) The emission of a thought regarding a material object by an operator causes appropriate reactions in the operator's instrument whatever the distance of the object.

(b) Every thought of that nature emitted by an operator causes the appropriate reactions in the instrument of another operator in mental connection with the former.

April.—Dr. Guérin describes how he, with a rod, traced the position of menhirs in Vendée which had been removed or demolished.

Madame G., in a letter to Abbé Mermet, testifies to his having correctly described from an examination of a photograph the fate of her husband, who had been drowned in the Allier.

Dr. Heyndrickx states that an aluminium rod will not react to *rémanence*; an aluminium pendulum will only do so if accurately adjusted.

LES CAPTEURS D'ONDES.

November - December.—In *L'Antenne oculaire* Commandant Gorceix discusses how the radiesthetic effect of an object is increased by the power of the human look and connects this effect with the *rayon mental* of M. Voillaume.

A.H.B.

