CORRESPONDENCE.

*[The Editor is not responsible for opinions expressed by Correspondents.]*

THE DIVINING ROD AND UNCONSCIOUS MUSCULAR ACTION.

Unconscious muscular action is now generally accepted as the explanation of certain phenomena which had by many been previously attributed to the direct action of some " occult " force. But is not a more exact definition required of what is meant by unconscious muscular action, and a clearer idea desirable of the limits within which it may reasonably be supposed to act ?

Professor W. F. Barrett has made an important addition to the literature of the Society for Psychical Research in his work " On the so-called

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Divining Rod " *(Proceedings,* Part XXXII). In dealing with the causes of the phenomena,—the reality of which he considers established,—Professor Barrett says :—" Few will dispute the proposition that the motion of the forked twig is due to unconscious muscular action " (p. 243) ; and again he says :—" Assuming the actual motion of the rod to be caused by involuntary muscular action . . " (p. 254). From these two sentences, we are led to the conclusion that Professor Barrett looks upon "unconscious", as distinguished from conscious muscular action, as an adequate explanation of the movements of the divining rod. The question may, however, fairly be asked—does this explanation cover all the evidence adduced by Professor Barrett himself ?

Nine of the cases brought forward in Part XXXII. of the *Proceedings* seem entitled to form a group by themselves. Some other similar cases are included among those enumerated on page 243 ; but these are sufficient for the present purpose. These nine cases are :—

I.—" Even the President of the Royal Geological Society of Cornwall, Mr. J. D. Enys, F.G.S., is not a scoffer ; on the contrary he himself is an amateur dowser, and in a recent letter, writing from Penryn, Cornwall, Mr. Enys states :—Ί have tried it [dowsing for water] often. . . . On one occasion I cut a small slight rod and held it till I came to the place [where underground water existed], when it always acted by turning. On this occasion I was able to hold the rod, but it broke short off in front of my hands, and did so a second time in the same place ' " (p. 7).

II.—From a case sent by Miss Grantham, daughter of Judge Grantham : — "At two spots the point of the twig turned right up, exactly reversing its previous position ; in fact so strong was its impulse to point upwards, that we found that unless Mr. B. [the Rev. J. Blunt] relaxed his hold the twig broke off near his fingers" (p. 26).

III.—Mr. Percy A. Clive writes in reference to some experiments made on his estate at Whitfield :—" When Mullins held my wrists, and I held the twig over running water, it twisted round in my hands with such force that when I held it tight it broke " (p. 35).

IV.—The Rev. Martin R. Knapp, M.A., Vicar of Holy Trinity, Dalston, writes :—"My builder, who came from Bath, was very sceptical about the whole thing. Three or four of us who were on the -spot tried to see if the twigs would ' play up ' with us. We were unsuccessful till this man tried his hand, scoffing the while. But directly that he came to the spots the dowser had found, the twig showed vigorous signs of animation. When his hand was being twisted in his efforts to keep the twig steady, I cried to him to hold fast, with the result that the twig twisted itself into two pieces " (pp. 37-38).

V.—" Lady Milbanke says [in a letter to Dr. C. Hutton, F.R.S.] a large party attended to watch the gyrations of the rod, which in spite of the man's hands being stationary, twisted round so energetically when he stood over a spring that the rod was broken." This man was a peasant in Provence (p. 41).

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| DEO., 1897.] *Correspondence.* 153  VI.—Dr. Hufcton, F.R.S., the distinguished mathematician, thus •describes the movements of the rod in Lady Milbanke's own hands :—" The rods turned slowly and regularly in the manner above described, till the twigs twisted themselves off below the fingers, which were considerably indented by so forcibly holding the rod between them " (p. 42).  VII.—"The following is from Mr. F. Bastable, 14, Foskefct-road, Fulham :— . . . . ' We procured two pairs of smith's tongs to see if the twigs did actually twist, and held them in a tight grip, with one pair securing the tips, and the other the fork, but the contortions still went on between the points held ' " (pp. 86-87).  VIII.—The following is quoted from a letter written by Mr. J. Budd, of 'Tivoli, Tramore, Waterford. He is described as an amateur geologist :— "He [Mullins] held the twigs near their ends between his second and third ungers, as if you were going to write, the point of the fork pointing •downwards. At No. 1., [referring to a plan] the point lifted itself up until it turned over backward and twisted itself until it broke ! .... He used another and another twig. The clerks then held them with him, and held his hands, always the same effect. I saw to-day two of the broken twisted twigs " (p. 110).  IX.—Mr. W. Stone, of Bolingbroke Hall, Spilsby, Lincolnshire, a professional "dowser," writes in reference to a spring of water which he •discovered for the Rev. Mr. Morgan in the Isle of Wight :—" The moment I put my foot over the water, the rod turned in spite of me, broke itself, and left the two ends between my fingers and thumb " (p. 133).  Before saying anything further on these nine cases, it may be useful to refer to another class of phenomena. One of the most frequent and familiar •exemplifications of unconscious or involuntary muscular action is in "table-tipping" or "table-moving" as ordinarily practised, when the hands of the .sitters rest on the surface of the table. The majority of the results thus obtained are probably due to unconscious muscular action, and to nothing •else. But it sometimes happens that similar movements of the table occur when the table is entirely untouched by the sitters. For instance, the historic case in the Report of the Committee of the Dialectical Society, the •evidence as to which has never been impugned. The conclusion of that Committee is thus expressed :—" Your Committee express their unanimous •opinion that the one important physical fact thus proved to exist, that motion may be produced in solid material bodies without material contact by «ome hitherto unrecognised force operating within an undefined distance from the human organism, and beyond the range of muscular action, should be subjected to further scientific examination with a view to ascertain its true nature, source and power." (Report of the Committee of the Dialectical Society, original edition, p. 13.)  I do not overlook the interesting remarks which Professor Barrett makes, •following the two sentences above quoted from pp. 243 and 254. But they •do not seem to me to meet the case. Professor Barrett speaks of "the •extraordinary and involuntary spasm of muscular power, which often occurs |  |
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that whereas several phases of what the spiritualist calls " mediumship " and of what the S.P.R. calls "automatism" are frequently manifested by the same person, the power of using the " divining rod " is, so far as I have heard, not so associated. Many persons automatically write, draw and paint ; but I have not heard of any "dowser" also gifted in this way ; nor have I heard of any " medium ", in the spiritualist sense, being also a "dowser." So far as this goes, it would not seem to encourage the idea that "dowsing" belongs to the same class of phenomena as the forms of automatism above-named. Professor Barrett says: —"The rod must be regarded simply as the indicator of some action taking place upon or within the living mechanism of the individual who holds the rod ; " and in order to make it quite clear what he means by this, he adds : —" just as ' planchette' or a tilting table is used to indicate muscular impressions made by or through the so-called ' medium ', . . . the movement of the rod being due to involuntary reflex action " (p. 8).

The group of cases quoted above presents a strong *prima facie* case in support of the view that some of the movements of the " divining rod " may be attributable to a cause of quite another kind than muscular action. It is also important to bear another consideration in mind. Seeing that movements of tables and of other material objects do occur,—such as those without contact,—for which a cause wholly different to muscular action must be sought, it is probable that some of the results when contact exists are due to the cause which produces the results when there is no contact. Similarly as regards the "divining rod." If we are compelled to infer a cause wholly different to muscular action for some of the results, it is probable that muscular action is not the true cause in some of the cases where, if they stood alone, it would present an adequate solution.

The assumption made by Professor Barrett that the movements of the rod are always due to unconscious muscular action is therefore not only open to question, but is one that the evidence he himself has brought forward does not appear to justify. It is true that Professor Barrett says he leaves this and other problems to the trained physiologist to solve ; is it well then to adopt a positive view before such a solution has been offered ?

EDWARD T. BENNETT.

The question raised by Mr. Bennett is one well worthy of discussion, but I doubt whether it can be profitably discussed without more knowledge —based on the opinion of experts—than we at present possess.\* I quite agree with Mr. Bennett that at first sight it seems incredible that involuntary muscular action could accomplish feats which are beyond the reach of consciously directed voluntary action, and the passage quoted by him from our first report on thought-reading shows that I myself was at one time as strongly of that opinion as Mr. Bennett himself. But we have learnt a good deal in the fifteen years that have passed since that report

\* I do not know why Mr. Bennett selects only nine cases of the breaking of the rod ; several others are quoted in my paper, as will be seen from the list given on p. 244.

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was written. One of the earliest lessons taught by our experimental researches in so-called thought-reading was the fallacy of this preconceived opinion. None of us now doubt that involuntary muscular guidance on the part of the agent, and unconscious muscle-reading on the part of the percipient, are, for the purpose in view, inimitable by, and more effective than, any voluntary conscious act on the part of one or the other. Moreover, we have been led to recognise more clearly the wide realm and importance of the sub-conscious life. One of the most interesting facts revealed in the investigation of the dowser's art is that it affords (as stated on p. 255 of my paper) a striking instance of information obtained through automatic means often transcending that derived from conscious observation and inference.

As regards the motion of the divining rod, the widespread belief of a sceptical public is, of course, that the dowser intentionally twists the forked twig when he fancies he has reached the object of his quest. The evidence I have adduced shows this belief is untenable. The only other alternative known to science is that the motion of the twig must be due to some involuntary muscular action on the dowser's part. It is true Melancthon and the rest of the learned world of the sixteenth century thought that the motion originated in the twig itself, and was a necessary consequence of the "law of sympathy,"\* but the learned Jesuit Father Kircher (one of the founders of experimental science) about the year 1660 showed that the twig itself was inert, and that in some way the motion was communicated from the dowser himself. It is true Malebranche and Lebrun, 50 years after this, urged with resistless logic that the explanation of the divining rod was to be found in the sport of good-natured or mischievous devils, "the badinage of demons " ; whether these philosophers thought the demons got hold of the end of the stick and twisted it, or gave supernormal strength and skill to the dowser, I do not know.t This spirit theory, apparently, is the view of some people at the present day. It may be true enough, if these creatures swarm in the neighbourhood of mediums and dowsers, only it needs a good deal of evidence, and I am afraid it will be some time before science will accept any evidence of that kind. Hence, as I have said, the only alternative before us is that some involuntary muscular action on the dowser's part causes the twig to turn and sometimes break.

There is undoubtedly considerable difficulty in understanding how this explanation covers all the facts, if such cases as Mr. Bennett has quoted are correctly described. The breaking of the forked twig can only be accomplished by a rigid grasp of one of the forks, and a rotation of the twig by the hand holding the other fork. This is probably what occurs—the skill and

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strength required to do this, without much visible motion of the hand, being as much beyond the conscious effort of the dowser as the feats of a somnambulist or hypnotised person are beyond the power of the same person in his normal state ; and the physiological explanation is probably much the same in the two cases, namely, an automatic concentration and discharge of most of the available nervous energy of the individual into one narrow channel. I had intended,—as will be seen from the foot-note to page 138 in my paper—discussing this question of unconscious muscular action in its relation to the motion of the divining rod in the part of our *Proceedings* which has recently been published. The paper had, however, grown to such portentous length that I held over this question, and hope to return to it in the second part of my paper.

Meanwhile, as I have received communications much to the same purport as Mr. Bennett's letter from several well known scientific men, who happen to be interested in this subject, I will here quote an extract from the report of a small committee who, in 1894, critically examined a dowser at work. The committee of investigation consisted of the pathologist and the assistant physician of one of the British hospitals, Mr. Mole, F.R.C.S., and Dr. F. H. Edgeworth,—the latter having made neurology a special study—and the Rev. R. A. Chudleigh, of West Parley Rectory, Wimborne, Dorset. Mr. Chudleigh, who acted as reporter, though not an M.D., has made a life-long study of both physiology and pathology. The committee were therefore well qualified. They were fortunate in securing the co-operation of a skilful amateur dowser, who placed himself as well as his estate (on the border of the Mendips) entirely at their service. In the course of a lengthy report, Mr. Chudleigh says : "If there be one thing which is perfectly clear it is that the movement of the wand is due to an unconscious muscular contraction, just like other muscular contractions, except that it is unconscious." Albeit, he goes on to say, " The violent tremor which convulsed the overstrained arm is itself enough to suggest witchcraft to an ordinary spectator, and yet I am sure that it is nothing more than what is known as *muscle-clomis.* " Anatomical reasons are then given to account for the sudden violent motion of the rod, and the report continues : "A precisely analogous phenomenon is seen in those cases where a spinal wound or a spinal poison throws the whole body into universal spasm ; but the flexors master the extensors and the back muscles overpower the front ones, the result being the frightful and well known pose called *opisthotomts."* The writer then points out that the sudden spontaneous tension of the muscles of the arms which occur when the dowser believes himself to be over a spring is probably due to auto-suggestion; "this auto-suggestion makes a diviner positively tetanic when he knows or thinks that water is present."\* The symptoms described in the foregoing were more strikingly exhibited by the late Mr. W. Scott Lawrence than by most other dowsers ; the dowser, whom this small committee investigated, was a journalist who does not wish his name published. Notwithstanding this

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report there is, however, I admit (and as I have stated in my paper) room for further physiological examination, especially as regards the points named on pages 243-246 of my paper. I am glad to say that one of the foremost anatomists of the day has kindly promised me to make such an examination if an opportunity can be given him of seeing a dowser at work. This, I hope, may be possible before the second part of my paper appears.

W. F. BAKRETT.