

SUPPLEMENT.

A TEXT-BOOK OF METAPSYCHICS.¹

REVIEW AND CRITIQUE BY SIR OLIVER LODGE.

THE object of Professor Richet in writing his great work *Traité de Métapsychique* is to introduce Psychical Research as a serious scientific study into the Universities, and to get it recognised as the beginnings of a real science.

He considers that the stages through which the subject has already passed are :

1. The Mythical ; up to Mesmer (1778).
2. The "Magnetic" ; from Mesmer to the Fox sisters (1847).
3. The Spiritist ; from the Fox sisters to William Crookes (1847-1872).
4. The Scientific ; which begins with William Crookes (1872).

and he expresses a hope that this book will help to inaugurate a fifth period, which he calls "The Classic," being that of scientific recognition.

But he realises and sympathises with the great difficulty which men of science feel on encountering facts of a different order from any to which they are accustomed. The forces with which the investigation deals are intelligent forces : all other forces as yet studied by men of science are blind forces

¹ *Traité de Métapsychique*, par Charles Richet, Professeur à l'Université de Paris, Membre de l'Institut. Dédié à la mémoire de mes illustres amis et maîtres, Sir William Crookes et Frederic Myers, qui, aussi grands par le courage que par la pensée, ont tracé les premiers linéaments de cette science. Omnia jam fient fieri quæ posse negabam. (Paris, Felix Alcan, 1922. Pp. ii + 816.)

devoid of self-consciousness and caprice; in other words, without personality or will. Whereas intellectuality, will, and intention,—which may not be human but which resemble human will and intention,—are characteristic of metapsychic phenomena. Such phenomena seem due to unknown but intelligent forces, including among these unknown intelligences the astonishing intellectual phenomena of our own sub-consciousness.

Hence he is not surprised at the hostile reception and incredulity which the facts encounter at present. But he adduces instances of other phenomena, now well known and commonplace, which half a century ago would have been regarded as wildly incredible. For instance, these four, which in 1875 could not possibly have been foreseen:

1. A voice speaking in Paris is heard in Rome.
2. The germs of disease can be bottled and cultivated in a cupboard.
3. The bones of a living person can be photographed.
4. Guns can be taken through the air at 180 miles an hour.

Professor Richet is critical in his language. He will permit us to say that some facts are usual and some unusual; but he objects to our making two classes, facts that are understood and facts that are not understood. For he claims that we really understand nothing of the truths of science, whether great or small. We live among mysteries, which only do not astonish us because we are used to them.

The facts of metapsychics are neither more nor less mysterious than the phenomena of electricity, of fertilization, and of heat. They are not so usual; that is the whole difference. But it would be absurd to decline to study them because they are unusual.

In estimating the value of this book we must remember its object. This object will hardly be plain to English readers who occupy themselves with the translation so usefully prepared by Mr. Stanley de Brath. For its title, *Thirty Years of Psychical Research*, does not convey the impression of a Treatise on Metapsychics. It suggests rather a summary or survey of thirty years of personal experience and investiga-

tion. I can imagine someone saying,—“Well, after all, that is what the book is, except that the author quotes not only his own observations but the observations and experiments of many others, so far as they have been made accessible in one of the Romance languages.” If this were the plan, it might be supposed that when experiences are cited they would be given in full, with all the precautions and details, like a description of some new experiment in a scientific Journal; so as to enable a student to put himself in a judicial position, and detect, if he can, flaws of observation and possibilities of error.

But that is not the line taken by a text-book, or by any other summary treatise. Nor is it consistent with Professor Richet's plan. It would be altogether too burdensome and bulky to try and cover the ground in that manner. A comprehensive treatise can only give a general summary of the methods and results, with references to the original sources, where the student must look up the details of any particular point he thinks worthy of close attention, in the *Proceedings* of scientific societies or other contemporary publications. Full details are never given in a text-book. And in many text-books no reference to the original source is given. Incidents are copied from other writers, or taken on second-hand authority from some other expositor.

Hence in judging the information given in the *Traité de Métapsychique*, we must not judge it exactly from the *S.P.R.* point of view. If we do, we shall be able to point out lacunae, and even a certain amount of casualness in the narration, which can only be corrected by supplementary study of the original record whence the facts summarised in the text-book are drawn.

It is familiar to students of science that the original record of any experiment or discovery is usually more interesting and illuminating, when the paper written by the original discoverer is referred to, than the comparatively brief summary in a text-book can possibly be. Such summaries are of great value to students, who could not otherwise be expected to cover the ground or to know what to look for. To a certain extent they may be accepted as representing the impression made upon the mind of the writer of the text-

book; and they may in many cases be accepted on his authority, unless there is some special reason for doubting them. For the purpose of passing examinations, and getting a ground-work of knowledge, the text-book alone may be sufficient. But for anything like serious study, by a senior student, of some special phenomenon which attracts his attention, references to the original sources are indispensable. Otherwise a number of illuminating details may be missed, and facts may either be accepted too readily, or, on the other hand, rejected too readily; whereas a fuller study of the whole circumstances would supply many missing details, and contribute to a fuller and better understanding.

Especially is this necessary when dealing with facts to which we have not a theoretical clue, and which in their own nature seem more or less incredible. In all such cases no amount of reading would or ought to justify a feeling of complete confidence; nothing can replace first-hand experience. One object of a text-book is to encourage the student to make experiments for himself, to open his mind to the possibilities of discovery, and to value the critical care and precautions which have been and must be taken to avoid deception.

Professor Richet maintains that he is careful to confine himself to a summary and description of the facts of observation and to leave theories to the future. He objects to mixing up hypotheses concerning the real nature of the phenomena at the present stage. The facts as conceived by many people seem to have a distinct bearing on human destiny; and an attempt has been made to build a great theoretical structure upon them.

But all this is entirely foreign to Professor Richet's object. He says in his Preface that he has "endeavoured to write on science, not on dreams." He has therefore confined himself, or tried to confine himself, to a statement of facts and a discussion of their actuality, scarcely mentioning theories; for all theories as yet proposed to account for metapsychic facts appear to him terribly frail. No doubt some day a tenable theory will be formulated; but the time is not yet, for the facts themselves are in dispute. Scientific men have hitherto often rejected them without examination. Neverthe-

less in his view the facts are numerous, authentic, and startling ; and he does not see how any unbiassed man of science could dare to cast doubt upon them all if he consents to look into them.

The three fundamental phenomena of the new science he sums up under three heads :

1. Cryptesthesia (which covers Clairvoyance and Telepathy and Premonitions).
2. Telekinesis (or movements of inert matter without apparent contact or known forces).
3. Ectoplasm (or what are commonly called materialisation phenomena : appearances of clothes, veils and living bodies).

These, he says, make up the whole of Metapsychics. "To admit them is to admit a great deal. To go further is to go beyond the present bounds of Science." He claims however that these three strange phenomena will have to be admitted, whatever may be the explanation at which we ultimately arrive ; "although Science, severe and inexorable Science, has hitherto refused to contemplate them."

It has long been recognised that the main branches of the whole subject are two, the more purely psychological variety and the more especially physical variety. The two are probably connected, but the connection is not always manifest.

Professor Richet divides his book accordingly, and calls the two branches :

1. *Subjective Metapsychics*, including Lucidity of various kinds, Monitions, and Previsions ; and
2. *Objective Metapsychics*, including physical movements exceptionally caused, Levitations, and Materialisations.

The subjective portion occupies some 500 pages ; the objective portion, in which he has admitted Hauntings, occupies about 300 ; while the concluding chapter of the book is a general discussion of the phenomena, with prejudice shown in favour of normal and material interpretation in terms of human faculty, and with hostile criticism of the other rather facile hypotheses which have been made by different workers.

The treatment, or implied doctrine throughout, is quite appropriate to the attitude of mind natural to an eminent

Physiologist, accustomed to deal with bodily mechanisms, and not ready to admit any kind of supernormal causes beyond unexpected and puzzling extensions of human powers.

The facts of clairvoyance and of Lucidity generally, or what he recognises as the unexplained human faculties which he sums up as Cryptesthesia, prove, he claims, that in human subconsciousness there are unexpected reserves of intelligence and far-reaching perceptions, not explicable by the recognised organs of sense and transcending the recognised boundaries of both space and time. The facts of Telekinesis and Materialisation tend to show that the human organism can exert force beyond its recognised periphery, and that temporary emanations from that organism can not only exert force on distant objects, but can also mould themselves into strange simulacra, which for a time can be seen, felt, and photographed, and which imitate, in an extraordinary manner, portions of the normal body whence they arose. These ectoplasmic formations are the most incredible of all, and must have seemed bizarre and almost repellent to any Biologist. Nevertheless Professor Richet, in spite of his recognition of their amazing and outrageous character, finds himself able to vouch for them as unexplained and apparently inexplicable realities.

All ideas about the Soul and Survival are foreign to his conceptions. He remains a Materialist, satisfied with expressing the facts in terms of their material substratum, and able to dispense with any speculation as to their psychic and spiritual nature. Everything is attributed to unconscious and hitherto unrecognised latent powers in the human organism. If information is obtained about things occurring at a distance,—the fact is attributed to the lucidity or Cryptesthesia of the unconscious part of the medium, not to the conveyance of information by some other intelligence. And when communications are received, apparently from some deceased person, about things which he alone might be supposed to know,—that also is attributed to the same kind of cryptesthesia, called forth and directed by means unknown to us, so as to operate unconsciously on the bodily mechanism. And in such cases the impression produced, on the medium and on those present, is liable to take the form of a dramatic

semblance or impersonation, so striking as to lead them to imagine that the deceased person is in reality exercising some influence; it appears that he is acting as if he still retained consciousness and memory, and as if he utilised the medium's mechanism, and worked it as he used to work his own, so as by its aid to be enabled to communicate.

Whereas, on Professor Richet's view, or at least on what he considers for the present to be the only scientific view, such deceased persons, having lost their brain and bodily mechanism, have ceased to be, and are obviously incapable of doing anything whatever, let alone still possessing the power of giving any information or showing signs of intelligence, even though the intelligence shown is such as otherwise might naturally be attributed to them. To suppose that deceased people are able to communicate, or even that they are still in any state of existence, is to him a hypothesis, a speculation, at present not scientifically justified. We must be satisfied to record the facts, and leave the interpretation to the future. Though it must be admitted that a strong prejudice against the usually adopted explanation may lead a critic, even one who tries to be scrupulously fair, into discounting and occasionally misrepresenting some of the facts which he is trying to record. He may, for instance, be tempted to bring an accusation of triviality and improbability to bear on cases which, to a less prejudiced mind, would emancipate themselves readily from any such accusation.

So far I have attempted to give some indication of the nature and scope of the book, which undoubtedly is a very important publication, and is bound to have a considerable influence on the future development of the subject. It may now be well to add a few points of genial criticism.

And first on certain small matters of nomenclature. Professor Richet's object in his nomenclature is to avoid anything in the nature of hypothesis. But the term "Cryptesthesia," which he prefers to Lucidity or Clairvoyance and Telepathy, does seem unintentionally to convey the hypothesis that the information obtained is got by an extension of the powers, or by an enhanced sensibility of the organs of sense; being allied to the words *Telesthesia* and *Hyperesthesia*, which are

intended to convey that implication. Something of that sort may be true, but it is unwise to assume it. A term which seems to assume it may become a troublesome trap. Nevertheless an assumption of that kind does seem acceptable to Professor Richet, for says he :

“ . . . I prefer to imagine an amazing retinal vision of written words (he means in a sealed box or at a great distance) than a reading of my brain wherein nothing is written, but in which there are so many impressions, memories, and exceedingly complex and evanescent combinations that are really ultra-microscopic modifications of cellular protoplasm, and have no relation, apart from my own consciousness, to the sound or to the phonetic sign of a name. To say “telepathy” explains nothing. Cerebral vibration, conscious or unconscious, is a profound mystery, much more mysterious than a signature, which is a positive, real, and tangible thing, and would be visible to sight if sufficiently penetrating; whereas the reading of a thought cannot be explained by any intensification of any of our senses.”

French Edition (p. 76).

English Edition (p. 66).

After some illustrations he goes on :

“Some go even further. As there are facts known to no living person, but known to B., now dead, this can still be explained by telepathy—it is still by telepathy that the thought of B., deceased, has been transmitted to the percipient.

These wire-drawn explanations amply show that we know absolutely nothing of the means whereby cryptes-
thetic cognitions reach the mind . . .

I think it best to keep within the limits of rigid science, and to say—At certain times the mind can take cognizance of realities which neither our senses, our insight, nor our reasoning, permit of our knowing. This is not an explanation, but it leaves the door open to any future explanation. Human thought is one among the realities thus made known, but this is not a necessary condition ;

the reality alone is sufficient, without its having passed through a human mind.

Let us go no further, and in presence of these unusual facts let us be content to say that our mental mechanism, even more complex than it seems, has means of cognizance that escape analysis and are even beyond surmise. This dispenses with all hypothesis;¹ it does not imply that cryptesthetic knowledge arises from transmitted vibrations of human thought; it merely states a fact, and it is more scientific to enunciate a fact without comment than to enmesh one's self in theories, such as telepathy, which are entirely unproven.

"Telepathy" implies a hypothesis: "cryptesthesia" has the great merit that it does not. If A. sees his dying friend B. at the moment of death it is a hypothesis to say that the thought of B. has been transmitted to A. But it is no hypothesis to say that A. has some special sensibility that makes him aware of the death of B. . . .

Therefore, when in this book telepathy is spoken of, as it often will be, it must be understood as a particular form of lucidity, and not as a distinct phenomenon. Both are equally mysterious."

The last thing I want to do in a review is to argue the matter with the author. My object is rather to present his case. But when it comes to theorising or speculating—which is inevitable however much one tries to refrain from it,—the idea of attributing a sort of omniscience to the unconscious self of the medium strikes me as so far fetched and intrinsically absurd that I may be allowed to indicate briefly the argument on the other side, which I will do by paraphrasing some words of Mr. J. Arthur Hill, since they summarise the position in a clear and crisp manner. He writes to me in a letter something like this :

To yield preference to the hypothesis that Mrs. Piper's subliminal somehow has access to the memories of, say, G. P., rather than to the hypothesis of the continued existence

¹ I interrupt here to say that the word "mechanism" in this connexion is full of hypothesis; and so is the word "sensibility" further down.

of G. P., appears illogical. The assumption of quasi-omniscience, or access to a cosmic reservoir of information and personal memories, is a step further from fact than is the idea of personal survival. We know at least that G. P. did exist, so there is nothing absurd in the supposition that he may still exist, if the facts point that way; whereas nothing has ever suggested the possession by a human being of any kind of omniscience. Moreover, even if the idea of indefinite extension of cryptesthesia or latent sensibility could be rationally entertained, there would still be the searching question to answer;—"From among the mass of material thus open, who selects the appropriate details"?

I (O. J. L.) put this question to Richet briefly and forcibly, "Who selects?" *Quis deligit?*

It is permissible to add that the fact of telepathy or transmission of ideas between living persons, without perceptible use of the organs of sense, makes it easier to accept the possibility of telepathic communion with a discarnate mind. The term "discarnate mind," or mind dissociated from matter, no doubt to Richet sounds absurd. But probably a Physicist is more accustomed to non-sensible and immaterial conditions than is a Physiologist. A Physiologist is bound to search for mechanical and molecular processes in the complex organisms he studies; and very admirable and successful has been his search. But a Physicist has had to learn, among other things, that in the ether of space there are no molecules, no Chemistry, and perhaps no ordinary Mechanics. He is not unaccustomed to encounter a thing *sui generis*, with properties of its own, distinct from the properties of the atomic and molecular aggregates with which our animal-derived sense organs have made us obtrusively familiar. Professor Richet would probably agree that to state a fact in terms of matter is after all no full and ultimate and final elucidation. Mystery remains even when such a statement can be made. So why lay undue and exclusive stress on what is after all an intermediate stage of exposition?

Richet is quite within his rights in feeling any form of spiritistic hypothesis highly improbable. But he must not

suppose that either in his mind or in his book he is refraining from theorising. Witness such passages as these :

Everything seems to prove that the intelligence is a function of the brain, that it depends on the integrity of the cerebral mechanism, and on the volume and quality of the blood that irrigates it.

It is possible, it is even probable, that there may exist in nature other intelligences under other conditions than the physical conditions of terrestrial life ; *but they would no longer be human intelligences* . . . They would not belong to humanity ; since the mind, whether human or animal, can possess the human psychological characteristics of consciousness, memory, sensibility, reason, and will, only if the brain exists. Thousands and thousands of experiments establish so close a relation between the brain as organ and intelligence as function, that it is as impossible to admit the persistence of the function (mind) without the organ (brain) as the renal secretion without the kidney.

F. (p. 770).

E. (p. 607).

This being his view—or at all events his present view,—it is not surprising that he finds a difficulty about telepathy. If telepathy means direct reading and interpreting the molecular configuration in another person's brain, by whatever penetrating insight such molecules can be perceived—such reading is I admit, frankly incredible. No wonder he prefers to take refuge in a vague agnosticism rather than admit the likelihood of any such forced and elaborate and gratuitous hypothesis. But his readers are probably aware that other serious students have held other notions, and that his alternative is not the only one. Some approximation to one of the normal methods of conveying human thought is altogether more likely. The point largely turns upon the question whether mind ever acts on mind directly without the customary modes of bodily and sensory signalling, and without the unlikely and unsupported hypothesis of brain acting on brain. To try to gain an idea direct from another person's brain

would be like trying to get an idea of music by witnessing from outside a hall some X-ray shadows of the movement of the orchestra. A microscopic examination of a phonographic record on a wax cylinder would be more enlightening if such record were made and were available. And this is probably the analogy on which sundry persons have speculated, but its basis is very insecure when applied to the interpretation of molecular configurations; which, after all, are inaccessible.

The fact is, that in spite of Professor Richet's instinct not to theorise but merely to state facts, he cannot help theorising at times; and in my view no one can. Facts strung on no thread of hypothesis are random and intractable things. Some hypothesis at the back of one's mind is necessary: to abstain from it is impossible, however lightly and tentatively it be held. But Richet is naturally so impressed, through a life-long occupation with Physiology, with the material and cerebral aspect of orthodox psychic phenomena in general, that he does not feel as if he were theorising in the least when he assumes that throughout every mental action, in origin, in transmission, and in reproduction, there must be a physical concomitant at every stage. Take Telepathy for instance:—admittedly there is a physical concomitant on the part of the percipient, whose muscles must be put into action somehow, presumably through his brain-nerve mechanism as usual, in order to display any result; but it is a pure assumption to suppose that that brain is stimulated mechanically or physically by some other organism. Or, to put it more concretely, brain processes are presumably of a chemical order, and it is a hypothesis to assume that there is anything in the nature of *vibration* between one brain and another when telepathy or any other transmission of thought occurs between two people. Whatever may turn out to be the truth about such a matter, to state with our present dearth of knowledge that there *must* be such a vibration is merely dogma. So that when Richet says that a telepathic impression must be due to some unknown vibration, he is theorising.

He seems rather enamoured of the word "vibrations"; spelled the same in French as in English, and I suppose

meaning the same. Of Hallucination, for instance, he says on page 708,

. . . in order to produce a veridical hallucination there must be some kind of exterior cause or molecular vibration that starts the cryptesthetic emotion ;

though he admits that these "vibrations" do not resemble ordinary mechanical molecular vibrations.

He further says that in the case of collective hallucinations, when several persons simultaneously see the same apparition, it is impossible to deny the objectivity. One can hardly suppose, he says, that these images which many people see have no objectivity,—are not mechanically objective. But other views have been held and discussed by Myers and Gurney.

So that the only theorising he really seems to object to strongly is the variety which is connected with spiritistic hypotheses. It may not have occurred to him that any theory is implied in ordinary materialistic views; to him they seem axiomatic. But confidently to assume their necessary truth and completeness is to close the door to a possible aspect of the subject which many students have been driven to, in spite of their initial materialistic predilections.

I see that Professor Richet not only objects to the term "supernatural,"—which many people do,—but also objects to the term "supernormal," which Myers devised in order to take its place. He says that both terms are inadmissible, that there can be nothing in the universe but the natural and the normal. "From the moment that a fact exists, it is necessarily both natural and normal." I do not know whether the French word *normal* conveys a significance different from ours, but certainly the phenomena of Metapsychics are not normal in our sense of the word. They may be real, they may be natural; they may even some day seem commonplace; but certainly, in the present state of human knowledge, they are not customary, or universally admitted, or normal. They do not come up, either, to any recognised standard or norm. They lie outside our regular experience. They are astonishing, extraordinary, supernormal.

This is evidently a limitation depending on the present

standard of human attainment. But then, what else is language? Professor Richet's objection to the term, however, is interesting, because it emphasises his object, which is to bring these phenomena out of the region of the occult and the mysterious, into the region of the normal through unusual faculties of mankind. "*Unusual*" he will perforce allow: but "*super-normal*" he will not. And that is a brief summary of his theoretical position throughout the work. His hope and endeavour are to trace and attribute everything to the normal faculties of man, without bringing in outside and hypothetical influences of any kind whatsoever. Not that he is foolishly dogmatic enough to deny the possibility of such influences, but because he considers that they are beyond the scope of present science; and his object is to be purely scientific.

Whether he will succeed in influencing his biological colleagues favourably, by this cautious attitude, is doubtful; but at any rate it seems to give him some advantages, and inspires him with an easy boldness in narrating the queerest facts. He can feel sure that his sanity will not be called in question. And, after all, what the theoretical view of any one person may be at any given time—even a Professor Richet,—is comparatively unimportant. Judicial recognition and acceptance of genuine facts is the vital thing for the future well-being of science. For if, after all the effort of the past and present generation, the subject still lies outside the bounds of recognition,—if it still continues to be the subject only of ridicule and contempt,—that wholesale rejection will to future generations seem rather a sad and lamentable repetition of mistakes which have too frequently and consistently been made by the high priests of orthodoxy in the past. Now, however, we learn that Professor Richet has had the courage to present his volume to the French Academy of Sciences, and that on the strength of his reputation the book was accepted even with some acclamation. Criticism of course is far from silenced; no one would wish it to be silenced; but the dawn of a more enlightened day seems approaching.

CRITICISMS OF DETAIL.

So far for a general and appreciative survey of the book. It is rather a thankless task to descend to details and speci-

ally into minutiae of criticism. But from the S.P.R. point of view it is necessary to say something in that direction. Otherwise a wrong impression may be conveyed as to the precision and care taken in the selection and treatment of the selected examples.

It appears certain and very natural that Professor Richet has paid more attention to the physical and physiological side of things than to the more purely psychic phenomena, notwithstanding the abundant space which these latter occupy in his book. He is not as familiar with the evidence collected by the S.P.R. as he doubtless is with the details of many other enquiries. And unintentionally he occasionally misrepresents it. It seems desirable therefore in the interests of truth that a few of these misrepresentations, or occasional errors of detail, should be pointed out, so as to put students on their guard and make them realise how necessary it is to refer to the original authorities. Unfortunately the really original authorities—at least in English cases—are rarely cited or apparently referred to by Richet, who seems content with accepting his foreign matter in quotations by others, or to depend often on abbreviated translations. He therefore does not always do full justice to the exact record, sometimes tending to appreciate it somewhat, sometimes unduly to depreciate it; and apparently insignificant details, like proper names and places, are treated rather casually. He probably considers that he has an instinct for the essential, and can afford to slur over the rest. The S.P.R. is more laborious and cautious, for it is conscious that it does not precisely know which points are essential. And its leaders cultivate a habit of scrupulosity about detail which may be wearisome but is a defect on the safe side.

The important branch of the subject called by the S.P.R. "Cross-correspondence" seems to have been totally misconceived by Richet. Most of the instances which he gives are mere instances of telepathy, not of cross-correspondence at all. This absence of understanding about the meaning of what has been termed cross-correspondence is a defect which I feel sure he will wish to remedy. At present the heading affixed to that section of the book is misleading. Other important people abroad have failed to recognise the special

features of real cross-correspondence, and the singularly striking character of the evidence for survival which they embody; though admittedly they embody it in a way which needs some laborious delving, for it does not lie on the surface.

Concerning hallucinations, Richet seems to think there is something pathological or morbid about them; saying that, with a few insignificant exceptions, "no normal sane individual, fully awake, has any hallucinations. If he sees apparitions it is because the apparitions have an objective reality." But this is contrary to the evidence collected by Gurney in *Phantasms of the Living*, and also to that collected in the "Census of Hallucinations." (See *Proceedings*, Vol. X.) So that this must be regarded rather as a dogmatic assertion than as a carefully considered estimate, if the word "hallucination" is used in the S.P.R. sense. But, as I point out later, Richet's terminology is rather different, and his use of the word hallucination, as an impression not caused by anything outside the patient, does require a pathological cause. I emphasise the different signification of the term here, because otherwise readers of the book who are familiar with the *Proceedings S.P.R.* may be misled.

In the rapid summarising of recorded evidence there is always liable to be some slight error, sometimes unimportant, sometimes important. And it may be helpful if I record a few which have been noticed. First, certain questionable assertions about exact time.

Page 379.

Mrs. Green's dream of drowning girls. Judging by the dates given, the dream as recorded occurred twelve hours after the death, not "à cette même heure." This error is quite excusable, however, for when the case was first printed in the *Journal S.P.R.* the percipient had attributed the wrong sign to the difference of longitude. The correction was made later in *Phantasms* (Vol. I., page 376, footnote), and in an article by Myers in the *Proceedings*. This case is a good one, and is often quoted by Richet. He will recognise that it is important to make no error about coincidence of time, because that may clearly affect a subsequent explanation.

Page 305.

There seems no evidence in the record that the death of

Mrs. Bagot's dog occurred on the same day as the vision; though it is clear that the vision occurred before the percipient knew of the dog's death.

Page 381.

I am told that the Griffin vision preceded death by about twenty minutes, and was not accurately "at the same moment."

Pages 384 (the Jukes case), and 394 (the Runciman Haggit case).

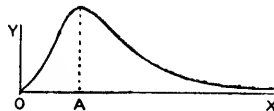
The discrepancy in time was a few hours.

Page 406. (The Williams case.)

The death appears to have occurred about two days later than the dream.

The compilers of *Phantasms of the Living* paid particular attention to time; not only for evidential reasons, but because, working on the hypothesis of telepathy, an impression received before a death could be attributed to the unconscious agency of the still living person; whereas, an impression received some time after the death of the presumed "agent" would have to be attributed either to telepathy from the dead or to deferred telepathy from the living. If telepathy is thrown overboard, and a general cryptesthesia substituted, details about time probably seem less important.

Myers went so far as to suggest the plotting of a sort of probability curve representing the time interval (before or after) between death and apparition. The sort of curve he means, and indicates on page 427 of Vol. V., *Proc. S.P.R.*, could easily be assimilated by a physicist to Maxwell's law of the distribution of velocities among the molecules of a gas. The curve of Maxwell is shaped like this:



and its equation is

$$y = \frac{4}{\sqrt{\pi}} x^2 e^{-x^2}$$

The point *A* would correspond with the instant of crisis or death. Times before and after, at which monitions or apparitions occur, are plotted horizontally; number of instances are plotted vertically, each at its right relative time.

If any young investigator is stimulated to use the records already made, for analysing their time relations,—though at present the number of records are insufficient, in spite of the laborious “census of hallucinations” conducted by Prof. and Mrs. Sidgwick,—I would caution him or her to be very careful in estimating each detailed time. Time and longitude are rather confusing, without practice, and a hasty extraction of dates and hours may be misleading. Moreover, clocks are liable to be wrong enough to matter sometimes, even if they are carefully read.

Then, passing to examples of another kind :

Page 232.

Professor Gilbert Murray's important experiments are attributed by Richet to auditive hyperesthesia. This hypothesis was considered, and apparently half-favoured, by Professor Murray himself—in default of any even semi-normal explanation; but it was carefully examined by Mrs. Verrall (*Proceedings*, Vol. XXIX., p. 83), and is really not a reasonable supposition, under all the circumstances.

Page 268.

About the well-known case of Abraham Florentine. Richet says no American or English journal had mentioned his death. That is not so. Accounts had been printed in America; and the main question is whether these papers can have fallen under the eye of Stainton Moses. (See *Journal S.P.R.*, Vol. XX., pp. 148-152, 223, 258.)

Page 708.

Experimental apparition of Mr. Kirk to Miss G. (See *Proceedings*, Vol. X., pp. 270-272.) There were two apparitions, not one. The first was quite realistic and life-like: the second it was which gave his face in miniature. Probably Richet here, as in other cases, may have been misled by the secondary authority to which he refers, a quotation or reference to it in some other work, instead of going back to the original authority, and enabling his readers to do the same.

Richet appears to be under an important misapprehension about the experiments with G. A. Smith by Gurney and Myers. He thinks that G. A. Smith ultimately denied these experiments (page 104). But that is not so. By the way, the reference given to these experiments is wrong; those published in Volume VIII. of *Proceedings* were an entirely different set. The invented denials and supposed surreptitious methods, published long afterwards by Blackburn (called by Richet, Blackman) in a newspaper article, are worthy of no credence. For Blackburn turned out to be a scoundrel. (See, for a full account of the newspaper correspondence, *S.P.R. Journal*, Vol. XV., pp. 115-132.)

The following brief extract will show what G. A. Smith's attitude was. Blackburn had concocted his article for *John Bull* or some other paper, under the impression (which he admits) that Smith and all who could contradict him were dead. Says G. A. Smith :

"Let me say at once that Mr. Blackburn's story is a tissue of errors [this is a mild term] from beginning to end.

We never contemplated the possibility of 'coding' until we learnt it from Mr. Myers and Mr. Gurney themselves. He says we practised it together and brought off startling hits. We never did anything of the kind. He did once say what a journalistic sensation might be made by pretending the phenomena were done by trickery. He has waited, it appears, until he thought all were dead who took part in the experiments in order to pretend this . . ."

Discussing possible normal means of effecting the transmission of a certain sketch to the percipient while swaddled and swathed in blankets, Smith quotes Mr. Gurney as having said at the time that under the circumstances the only possible way of doing it by trickery was to conceal the drawing in a pencil case and pass it into the supposed percipient's hands as soon as he asked for a pencil. This and other still more ingenious suggestions of Mr. Gurney, concerning possible and conceivable tricks of signalling, were later reproduced by Blackburn as having been the means by which the feats were actually done.

Later Mr. G. A. Smith says of Blackburn's statement,—

“It is the most amazing piece of invention ever brought to my notice . . . All the essential points of Mr. Blackburn's article are untrue, and I deny the whole story from beginning to end.”

Perhaps this denial of Blackburn's lies is what misled Professor Richet into thinking that Smith denied the validity of the experiments! On the contrary, he adheres to them strongly, and says that he found Myers and Gurney “were on the watch not only for premeditated trickery but for unconscious trickery as well.” They were “aware of every device and dodge for making sham phenomena.” And the ingenuities in Blackburn's amusing series of articles are those hypothetically devised by Gurney himself as outrageous schemes against which to guard.

The experiments conducted in 1881 by Professor Barrett and others with the Creery children are not to be set aside cavalierly, as Professor Richet is inclined to do (pp. 67 and 107). They were upheld as genuine by the extremely cautious Professor Sidgwick, in his Presidential Address to the S.P.R. in 1884, when he implies that the results could only be accounted for normally by one or other of the investigators having been in the trick. The subsequent detection and admission of signalling between these girls, on later occasions when one was agent and another percipient, do not really undermine previous experiments, when the investigators themselves were the agents. Sir William Barrett sets special value on his original experiments with the Creery children, because he regards them as essentially the scientific discovery, as opposed to the mere popular suspicion, of the fact of telepathy or telepathic lucidity;—a fact which, however interpreted, has since been so amply confirmed. So ample has been the confirmation of this kind of lucidity, in other cases, that Professor Richet is well within his rights if he prefers to ignore any experiments on which any kind of doubt or suspicion can be thrown by reason of subsequent mal-practices. Gurney's statement on the subject is in *Proc. S.P.R.*, V. pp. 269, 270. Some account of these and other early telepathic experiments are given in *Phantasms of the Living*,

pp. 10-31. Barrett's own initial summary can be referred to in *Nature*, Vol. 24, page 212 (July 7th, 1881), that being a year before the foundation of the S.P.R.,—in which foundation no doubt Barrett's enthusiasm played a stimulating part.

There are other little points, sometimes of discrepancy, sometimes of judgement, to which I might call attention. But enough of these small corrections, which by no means pretend to be exhaustive. They would to some readers seem quite trivial, if we went through them all. But when engaged in recording facts without theory, no details can be trifling. When we have not the clue, we have no means of judging what is trifling and what is not. With a clue we may rationally discard some things as insignificant; but when searching for a clue, the most trivial detail—a smear on a window ledge, the brand of a cigar ash, a fragment of finger-nail,—may be more significant than all the rest of the striking and superficially interesting events. In detective cases a witness has to be adjured to leave out no detail, however trivial; and the same urge is surely rightly felt by a conscientious recorder of psychic occurrences. Everything, not merely conspicuous things, must be exact. That is why the methods of the S.P.R. have been so irritating: they might be stigmatised as even painfully picky and pragmatically precise. As pioneers they were seeking a clue, and required the scent of a sleuth-hound and the instinct of a Sherlock Holmes. If that instinct sometimes failed us, and if we have occasionally attended to details with Dr. Watson's eyes, our good intentions and the difficulty of the subject must be some excuse.

Parenthetically it occurs to me to suggest that the kind of summary description which Richet gives of each quoted *case* might have been employed with advantage as a prelude to each of the detailed accounts recorded in *Phantasms* or *Proc. S.P.R.* It is tiresome to have to read the full record in order to find out what sort of case it is and what it is all about. A short summary would tell us this, and then the record would be there for study and minute scrutiny in such cases as seemed worth while.

RICHET'S TERMINOLOGY.

It may help a reader to know that what the S.P.R. called "Phantasms of the Living" (or of the Dead for that matter), and "Monitions," Richet calls "sporadic cryptesthesia" (*cryptesthésie accidentelle*.) The S.P.R. similarly called it "Spontaneous Telepathy," a term which is much the same, though rather more definite, and therefore with the chance of being rather more wrong (or perhaps right).

What is commonly called "Psychometry" (which he stigmatises as "a detestable term") Richet styles "Pragmatic cryptesthesia," because it is excited by or in connexion with some material object; though he thinks it doubtful if material contact with any object is really necessary.

Previsions are "Premonitory cryptesthesia," and may, he says, be either due to some form of auto-suggestion or unconscious self inference, or may be received under hypnotism, or may simulate spiritistic influences. Such premonitions may relate to sickness or to death or to accidents or to sundry events.

It is noteworthy that Richet does not use the word "hallucination" freely, as the leaders of the S.P.R. have done or used to do; for he considers that about an hallucination there is something morbid, and if an apparition or other deceptive appearance represents or corresponds to some kind of reality, no matter how remote, that subjective vision or audition is not strictly an hallucination. He interprets that term as signifying "a mental image exteriorised without any exterior reality."

In general we may say that Professor Richet's independent attitude and freedom from tradition are rather refreshing. We in this country are apt to follow a lead or general trend, especially in writing for the S.P.R., the cautious attitude of whose founders we more or less admire and desire to imitate. Richet is emancipated from this tradition, and, by following a course of his own, sets things under a new aspect.

Richet's Chapter VII. contains a remarkable summary and discussion of cases of prevision; for this surprising extension of human faculty evidently impresses him considerably, and the more difficult he feels it of any rational explanation, the

more closely he attends to and collects the evidence. In the end he considers it established, though he admits the difficulty of reconciling such a faculty with other experiences and human instincts in general. This section is perhaps the most notable and carefully compiled in the subjective portion of the book. He knows how extraordinary such a faculty is, and how strong the evidence necessary to establish it, but he perceives that the evidence is strong enough. So he has faith that an explanation will be found in time, and that this phenomenon, together with all the other facts he deals with, will presently fit into their niches in an orderly system of ascertained truth.

In contrast with his acceptance of prevision, may be instanced his rather hypercritical attitude to what he calls "Xenoglossie." The instances he cites of this speaking or writing in unknown tongues are impressive, especially those in which a child is the operator; but he disdains to consider anything of the nature of partial possession or "control," either in this or in any other connexion; and he sums up by saying that :

"none of the facts, whether of Xenoglossie or of automatic writing by children and unlettered persons, carries sufficient weight of proof. We cannot therefore grant them full rights of citizenship in the kingdom of subjective metapsychics, though I am inclined to think that before long some may be admitted as authentic."

Child prodigies, musical and other, are dismissed too, as explicable by abnormally rapid development; and when emphasising his own personal knowledge about the marvellous precocity of Pepito Arriola, who was "a skilful musician at the age of three years and three months," he says that "no one has imagined the intervention of a spirit to explain it."

But it is difficult to contemplate some of these child and animal prodigies, when well evidenced, without at least surmising some form of outside intelligent control. I really cannot contemplate an untrained organism playing the piano or the violin, or writing Greek or even ecclesiastical Latin, merely under the influence of its own unconscious or reflex action.

PHYSICAL AND PHYSIOLOGICAL PHENOMENA.

Concerning the physiological phenomena treated of in the second half of the book, it would be an impertinence for me to criticise or even to praise Professor Richet's investigations and conclusions. In his own subject he is beyond my reach. His medical training gives him many advantages; and of the abnormal or unusual in this direction he has seen much more than I have. It was indeed only through his kind invitation and hospitality that I was enabled to see what I did, in 1894, of the Eusapia phenomena, under admirable conditions on his Mediterranean island (see *Journal S.P.R.*, Vol. VI., pp. 306-360). We never got the conditions so good again; and phenomena fluctuated, till in England they almost petered out. Some were genuine even then—notably the swelling of a curtain—but Professor Richet may be assured that Eusapia did get a hand loose, by surreptitious and apparently rather practised means. I pass no condemnation on her, for various reasons, but such is the fact.

I am able however to vouch for genuine and unmistakable phenomena on the island, as strongly as Professor Richet himself. Some of them were totally and even absurdly inexplicable by any amount of hand or foot loosing, even if such loosing had been allowed; which it is safest to assume may have been done sometimes, however unlikely it may seem.

I have no fault to find with Richet's very brief summary of a few of our experiments on the Ile Ribaud with Eusapia. Phenomena were obtained which were undoubtedly genuine, and which overcame all suspicion. But his idea of what went on at Cambridge is vague, and he may think that there was no fraud. But there was. Hodgson pretended imbecility, and Eusapia fell into the trap. She adopted a stupid though rather skilful trick. The results so obtained were feeble, not at all of the old order, and I found it difficult to suppose that she was trying to fool Hodgson. Fortunately, before the end, she tried to fool me also; and I testify that undoubtedly she contrived, by a substitution trick, to get a hand loose when I and Professor Sidgwick were controlling. Myers was disgusted with her, and the end

was rather painful. But later on, at Richet's invitation, Myers was prevailed on to see her again in more congenial surroundings, and his confidence in her possession of real powers—however much when under difficulties she might try to eke them out—was restored.

To throw away good experiments because of some bad ones is an unwise procedure: and few discoveries could be made if that policy were adopted in a laboratory. Laymen think that Nature never deceives; but she does. Caution and repetition, and renewed caution, and varying conditions, and repetition with greater knowledge of weak points,—those are the remedies for untoward incidents.

MATERIALIZATION.

As to the general question of so-called physical phenomena and the difficulty of reconciling them with ordinary scientific knowledge, it is a notable circumstance that Richet finds himself impelled to admit "materialisation," or ectoplasmic formations of an anatomical and physiological kind, as a fact.

The evidence must have been very strong to convince him of so improbable a phenomenon. I myself have both seen and felt ectoplasmic protuberances; though sometimes they could be felt when they could not be seen, and the vision of them was always more indistinct than seemed consistent with their palpable activity. I doubt if the visible thing is the energetic and forcible portion. The suggestion to my mind is that the filmy visible thing is more like a sustainer, connector, or conveyor, of the more active and important agency; on the analogy of a placenta or an investing membrane; and that its function is to maintain organic connexion with the strong substantial mechanism which itself cannot be seen. Invisible agencies able to exert or transmit force, even enormous force, are common in physics, *e.g.* magnetism, gravitation, cohesion, and they all depend on the Ether—for which we have no sense-organ.

DEDUCTIONS.

Examining now his conclusions or working hypotheses, we shall find that Richet is human enough to be subject to

moods. Which of us is not? Sometimes he is the strict materialist; sometimes the lack of explanation in terms of matter, and the poverty of outlook in that direction only, cannot but shake his conviction. The book is a large one, and not every sentence in it is consistent. It is a fine piece of work, and the occasional variation in mood is instructive. The variation is part of the facts, and should not be concealed. To tinker with the sentiments, so as to make them absolutely consistent throughout, would not be fair, and has not been done. The author lets us into his doubts as well as his certainties, he allows himself to hint at profound mysteries unfolding before our gaze, and he claims no finality for his present speculative conclusion. What he claims finality for are the facts—the great mass of facts—allowing here and there the evidence for some of them to be weaker than for others, ready to discard any which show signs of weakness, and discarding a few which are really not weak at all, because of the least suspicion of a flaw.

If anything, either in fact or theory, tells against the spiritistic explanation, it is emphasised to the full; and the student with a balanced mind will be well advised to accept the reiterated accusation of triviality and folly and improbability with a certain amount of hesitation, just as he is likely to accept the facts with a certain amount of hesitation. My advice to a student is:

See what Richet says; keep an open mind, and, when there is an opportunity, try experiments or make observations for yourself. Be not deceived by glib spiritualism or by equally glib materialism. The truth may lie in middle ways. Some facts strongly suggest and support the spirit hypothesis. Others hardly suggest it, and do not support it at all. Others again are difficult of adjustment and may be held to tell against it. The existence and display of the power of extensive lucidity and clairvoyance, exercised apparently apart from any mind but an unconscious one, is a real and not a fanciful objection. Reconciliation of opposing views will come in time, but still further study of the phenomena is necessary. The part played by the medium may be exaggerated, but it may also be unduly minimised.

Towards the end of the book Richet begins to abandon

the strictness of his claim to be stating facts only, and says—I quote from Mr. Stanley de Brath's excellent translation :

P. 619. "To state facts is not enough; we must summon up courage to outline some kind of theory, imperfect though it will necessarily be . . . To transform matter, to become a living ephemeral being, and to create ephemeral living matter is to open a new world. We are evolving in another dimension, and Man no longer belongs to the animal kingdom. He even transcends the mechanical world in which we move, where chemistry, physics, and mathematics reign supreme. Anything is possible."

And then, before long, he continues—surprisingly :

P. 621. "Why should there not be intelligent and puissant beings distinct from those perceptible by our senses? By what right should we dare to affirm, on the basis of our limited senses, our defective intellect, and our scientific past as yet hardly three centuries old, that in the vast Cosmos man is the sole intelligent being, and that mental reality always depends upon nerve-cells irrigated with oxygenated blood?"

P. 622. "It is said: 'Man only shows his mind by his brain; therefore there can be no mind without a brain.' Such is the amazing logic of those who accuse us of working against Science."

I am ready to go no further myself! And his view of the Universe is similarly expanding; for, after referring to the outlook of Science fifty years ago, when the range of enquiry seemed limited and exhaustible, he heartily welcomes the new knowledge in words such as these :

P. 625. "Our hopes are now vastly greater; we have a glimpse of a whole unexplored world full of mysteries, before which we stand as dumb and dense as a Hottentot might before Poincaré's vortices, Hertz's waves, Pasteur's microbes, or Einstein's relativity."

CONCLUSION

In speaking of the book as a text-book, I may be conveying an impression of aridity. But what I mean is that

it tries to cover the ground in an orderly, comprehensive and systematic manner. Text-books can be dry and uninteresting, but nothing written by Professor Richet is likely to suffer from faults of that kind. His literary style has often been praised by competent masters; and as a matter of fact the book is lively and interesting reading. And it gives a comprehensive summary of the whole subject in what is intended to be a simple and straightforward manner. It does not of course compare with Myers's great and original *Treatise on Human Personality*. It does not aim in that direction. Myers's aim was strongly theoretical; and the numerous facts which he adduced, and which he gave in Appendices in fairly full details, were purposely selected as illustrative of his theories. Richet, we will say, has no theories. Or rather, his theories are of what may be called the orthodox kind. He adheres to biological orthodoxy so far as he can; and in so far as his facts do not fit into the scheme,—that is not his fault. He really tries to fit them in, and would never wish to exclude a fact on theoretical grounds. Whatever weaknesses may be pointed out here and there, he has done yeoman service by his labours, and has furnished the world with probably the most comprehensive survey of the subject that has yet been produced.

SEQUEL TO THE REVIEW OF PROFESSOR RICHET'S
"TRAITÉ DE MÉTAPSYCHIQUE."

Having now reviewed the book, I feel inclined to trespass on the space allowed me and carry on a half-playful argument with my good friend and eminent co-worker as to the points on which we differ. The points on which we agree are too numerous for mention. It seems curious that, on a common basis of facts, two men of science, both fully accepting all the discoveries in orthodox science, and acquainted with most of the phenomena in metapsychics, should differ in their consequent outlook on the universe, rather markedly; though each is willing to abandon his theoretical position on good ground shown.

We may take the "Conclusion" of this book as Richet's latest, though by no means his last, word on the subject.

Taking then a few of his points I quote from the English edition,—

P. 608. "Will the self of a person who stammered continue to stammer in the Beyond? What puerility!"

Why should this be called puerility? What do we know one way or the other? Let us be guided by the facts. If facts seem puerile or childish,—well, some facts are puerile and childish, viz. those belonging to boys and children. Until the possibility of survival is definitely disproved, it does not seem altogether unlikely that personal peculiarities and habitual tricks of expression might be re-assumed and reproduced, if the old terrestrial existence was either dreamily or otherwise occasionally remembered and dramatised.

It is mere hypothesis again to say that deceased people would never talk about trifles. How do we know? Why should they differ so completely from the same people when living on this planet? Our ideas about death have grown so solemn and religious that it is easy to raise prejudice against their mentioning or thinking of such a trifle as a ring or a tie-pin, even if it had special or affectionate associations. When Professor Richet says,—

P. 611 "That one should come back to earth to speak of a sleeve-link is not merely feeble, it has no likelihood at all; it is a strong argument against the spiritist doctrine."

And, again, when he says,—

P. 613. "A specific set of prose and verse imitations or personations of certain authors is clever literary work but does not come from a Beyond . . . It is in no way beyond human powers. It is not the semi-divine inspiration that we might expect from spirits."

It sounds most sensible.

But is it? How do we know that "spirits" are in any sense "semi-divine"? How do we know that if able to return they might not bethink themselves of some trifling episode?

A might hold that they would never think of trivalities; B might hold that they would think of nothing else. Why not cease

to make guesses and ascertain the fact? It is no use trying to decry facts by adjectives. The sole question is, are they facts?

If they are, then it is possible that we may be instructed by them, and that our adjectives are less than just. In England the prejudice against the employment of trivial recollections for evidential purposes has been countered again and again, but probably on the Continent there is leeway to be made up.

It may seem as if I am attending too exclusively to the subjective side of psychic phenomena and their interpretation, which after all are not Richet's main concerns, but he will know that we in England have studied the subjective side of metapsychics almost exclusively, and only by long consideration have been brought to this pass of yielding to the conviction that survival and intercommunion are proved realities, in spite of numerous difficulties in fully comprehending them.

He will not claim that a worker in science can do without theories for ever, or that human beings are irrefragably bound to materialistic theories. We *must* be guided by the facts.

The importance of Richet's book, which is undoubtedly based on a long study of the subject, justifies a thorough and critical examination of his position, and he will be the last to resent arguments and contentions about the various phenomena regarded from a point of view differing from his own. He must realise that we have not taken up our position lightly and without fair recognition of its difficulties; but until a better theory can be promulgated,—and the absence of all theory is not a better one, however allowable as a temporary and cautious expedient,—we must follow our clue until it ceases to guide. The time for caution must some time expire; and if we have had to get down off the fence, he will grant that it may be with good reason, even if he does not appreciate or accept that reason. If he considers that our reasoning is not good enough, I cordially recognise his right to an opinion.

But now let him imagine himself awake and intelligent “on the other side,”—if he will grant me such a supposition,—and trying to convince us of his identity. How will he proceed? Will he recite the names of his sons and daughters

and grandchildren? Will he tell us about his meeting with some named deceased friend?

We shall probably know the main facts underlying these names; their citation is quite natural; but it is too natural, it proves nothing. Nor does the appearance of these names disprove anything. They leave the question where it was.

Will he tell us of some laboratory experiment, say about the suffocation of a dog? We know that too.

Will he tell us of some epoch-making scientific novelty? He could equally well tell us of it now. If he does not, it is probably because he does not specially know one,—does not know much more than he has already published, or read about in treatises by others. Why should a year or two apart from his laboratory make him more cognisant of physiology than he was here, with *corpora vilia* all round him and instruments to hand?

Will he tell us that he has met Raymond and G. P., and perhaps even Phinuit and John King, and found them real after all? We shall not believe him; or perhaps we shall; but there will be nothing to convince sceptics in such a statement.

Will he tell us that he has found out that the old control we commonly speak of as Phinuit really was connected with Marseilles once on a time, though he is foggy about the name by which he was then known? He will be telling us no more than Phinuit has already said,—without credence.

Will he tell us that somebody's son, now in robust health, will have a hunting-accident before the year is out? He will probably not know it. And if he does suspect it, through some source of information inaccessible to us,—well, hunting-accidents are not infrequent, and mediums often make guesses, and some of them come right by chance.

Will he read some characteristic poetry, and speak his admirable French? The dramatising powers of a medium are capable of anything.

Will he read and transmit a sealed letter, finding that matter is not so obstructive to mind as had been thought? That would be obvious cryptesthesia.

Will he take some effluence from the medium and construct a (not very good) likeness of himself, that we may have objective proof of his existence? It is no proof at all, nor

of anything except of a surprising formative power of the unconscious.

Will he stand in front of a camera to be photographed? Most likely no impression will be produced. If there is an impression, the photographer has done a good trick, or, rather, an evil one.

Will he lament his purblind attitude to psychic phenomena apart from material machinery, and teach us the joy of emancipation and freedom from the flesh? Hundreds have done the same and not been believed.

Will he control a child and cause it to play music or do calculations, or employ scientific terms? Child prodigies have long been known.

Will he make a special effort and take the trouble to learn and recite some poem from the Classics, or to invent some ecclesiastical or other Latin when controlling an illiterate medium? The verdict will be "interesting, but the incident should have been repeated." (The quotation is from p. 225.)

Will he extract some matter or secretion from the medium and, welding it into solid form—as instructed by some who have been making experiments longer than humanity,—will he surprise the people present by hand-grasps and luminous appearances and noisy blows?—He will probably not be able to do it; but if he can get it done, then of course that is ectoplasm, which is plainly a sort of substance simulating intelligence and really controlled by the unconsciousness of the medium from whose body it emanated.

Will he cause an ignorant mediumistic woman to speak some sentences in Arabic about his visit to Algiers? He will only raise wonder at the Xenoglossic power of an uneducated medium; and suspicion will be raised as to the truth of her assertion if she maintains that she never knew anything like Arabic.

Will he try to see and tell us what is being set up in type before anything appears in print? Or will he read something in a closed book and convey that; so as to demonstrate his new-found power of surpassing the ordinary obstructiveness of matter? It will be useless; and will be regarded as an argument against survival, and as a demonstration of the extraordinary power of the medium's subconsciousness.

Will he transmit some learned and peculiar phrase, or narrate some incident in his past life unknown perhaps to any person but recorded in some private cipher? The power of the medium will be held to transcend time as well as space, and as it were, to witness the incident.

Will he tell us of a lost note-book in a railway carriage, that it had a red star on the outside and some stamps stuck into it on the inside, some of them foreign ones? What triviality to concern himself with such rubbish under new and semi-divine conditions!

How will he proceed with his demonstration? I really do not know. Nor will he. Nor does he know now,—

Page 616. "Taking subjective facts alone, it [the spiritist theory] is not demonstrated; and the trying thing is that one does not see how it could be demonstrated—how it could be proved that human consciousness, with its remembrance and its personality, had survived the death of the brain."

But I can tell him this:—that when in due time he finds himself on the other side, and meets a welcoming company, with Myers and other friends and some kindred spirits of whose sympathy and interest at present he is probably unaware, I feel sure that he will keenly discuss with them the experiments they have made, and the various attempted plans for convincing the world of spiritual existence apart from ordinary matter; and will eagerly devise new experiments to demonstrate what he will then perceive to be the real meaning of his beloved nascent science of metapsychics. He will find it more difficult than even he had imagined, and will be perhaps chagrined at the sullenness and stupidity of those down here whom he tries to influence. If he thinks he will be able to demonstrate anything so preposterous as his own permanent discarnate existence, he will find himself deeply disappointed at the result. Any sort of explanation, or none at all, will be considered better than that.

He may wish he had apprehended more nearly at their true value, the attempts which have already been made; he will realise how real and familiar surviving humanity still is, even when divested of the old material instrument; and

he will be amused at the idea, which he used to entertain, of there being only non-human entities among the manifold possibilities of existence. Those there will be; but he will find plenty of humanity too; and he will realise that it was not for nothing that they laboured and underwent much obloquy and criticism, in their efforts to call their fellows to a larger view of the universe, and to a recognition of a whole multitude—a whole sub-universe—of facts at present lying outside the confines of organised knowledge.

That he already has a mind which is opening to perception of deep underlying realities can be demonstrated by the passages already cited on page 96—from the conclusion of his great book; and I hope that his whole-hearted acceptance of the weird and puzzling facts, of prevision on the subjective side, and of ectoplasmic formation on the objective side, will cause him joy. That he will understand their possibility and theory much better, until after further years of experience, may well be doubted; but he will assuredly be glad that his instinct for truth had led him to overcome the prejudices of a lifetime, and admit unpalatable, or at least indigestible and unexplained, facts. In those acceptances he has shown his openmindedness and his strength; and he has not hesitated to uplift his standard before an International Congress of Physiologists, meeting this summer of 1923 in Edinburgh. Few, if any other, men of science would have been given a hearing on such an occasion and on such a subject!

And now in conclusion I must confess that in thus writing and arguing, and perhaps rather trampling on conventions, I am writing less for Richet himself than for others who may be influenced by the views expressed in his book. As regards his own philosophic attitude, he must choose his own time and his own modes of expression. Diversities of view are frequent in a nascent science; and conservatism has its advantages.

To go over too promptly from one camp to another would be unwise. As a matter of policy, slow and leisurely development is best; and the influence of Richet reaches where my own influence is already greatly discounted. Some, when they see truth clearly, feel constrained to embrace it whole-

heartedly and risk everything; others may think it wiser to penetrate still deeper into her mysteries before rising to the surface and waving a beckoning hand to loiterers on the shore. Far be it from me to judge which is best. Each must take his own line, and follow the course which to him seems wisest. If his lot is to encounter ridicule and hostility from his own generation, he is but sharing the experiences of a very honourable company of predecessors.

FAMILIAR SCIENTIFIC SCEPTICISM.

I know well how difficult it is to accept a fact for which one sees no sort of reason or explanation. Facts have been neglected or denied, times without number, because no rational explanation could be given. To take only two instances, one from Physics, one from Biology:—

Kepler and many others suspected some relation between the moon and the tides. Numerous facts suggested such a connexion; a Spring tide soon after new and full moon was the most obvious; the interval between consecutive day-tides corresponding more nearly to the lunar day than to the solar day, was another.

But what on earth could the moon accomplish, from its position a quarter million miles away! So the idea was regarded as superstitious; and Galileo, as an orthodox experimentalist and mechanician, chaffed Kepler for his fanciful and credulous belief.

Only when Newton displayed the machinery, and proved that even bodies at a distance really did influence each other, through some unknown intervening substance or mechanism, did the belief gain general acceptance. Thereafter its details could be and were worked out, until it became established as a commonplace of general elementary knowledge.

As the other example, I take the changes popularly supposed to be wrought in the fœtus, during pregnancy, by some influence or shock or other experience of the mother, so that the offspring bears signs of the functional disturbance.

That this has been regarded as a superstition, and perhaps in some quarters still is, hardly needs showing; but recently I learn, from Sir Arthur Keith's admirable lecture, in a supple-

ment to *Nature* of date 18th August, 1923, that Biologists are beginning to accept the fact; not because of specific instances, but because they see some chance of understanding how such reverberation or intercommunication could come about through a change in secretions, so that an impression on one individual could cause sympathetic response in another.

What I call attention to is that the numerous instances of its actual occurrence were insufficient to prevent their either being denied or else attributed to coincidence;—that broad-backed sustainer of anything we find it inconvenient or unattractive to believe. Sometimes the authority for the fact was unimpeachable, but that alone was not enough. I must quote from Keith's lecture:—

In 1868 Darwin related "the case of a cow in which one eye was injured when she was in calf. The calf was born with the corresponding eye small and blind. In more recent years Marey has recorded an identical result in a mare; one eye was injured when she was pregnant, and the foal was born with the corresponding eye small and blind. Hitherto we have been inclined to regard such cases as mere coincidences, but the well known experiments of Guyer and Smith provide a rational explanation."

This "rational explanation" was provided by the experiment—published in 1921—of injecting a substance, having a selective and toxic action on the lens of the eye, into the veins of doe rabbits at the end of the second week of pregnancy; and then finding that the young rabbits, when born, showed the defect to be expected, and that also many of their subsequent progeny were afflicted with cataract.

"These experiments show that the germ plasm can be reached from without."

Probably a few biologists must have claimed that the facts of observation had already demonstrated this, apart from special experiment; but they may have been set aside as cranks.

Another example might be found in the superstition which seemed to connect the effect of the *malaria* or "bad air" of the Campagna with the prevalence of a noxious insect.

Experiments in metaphysics are much to be desired. When we know the kind of secretion which, in a medium enables the formation of ectoplasm, and the consequent temporary

construction of organic forms which appear subject to intelligent control of some kind, general disbelief in the phenomenon will not continue to react adversely on the progress of science.

If it is surely reasonable to maintain that curious and puzzling and superficially incredible phenomena should be taken as hints for enquiry and suggestions for experiment. To deny and to ignore, is easy and popular and respectable, and personally advantageous in the present state of popular prejudice; but it is an unworthy attitude to be taken up by the heirs of those great precursors who overcame the danger of public opprobrium and first laid the foundations of free and unfettered enquiry into all the facts of nature.

The strength of Richet's position is that he fully accepts the phenomena, or such of them as have been well evidenced, without at all feeling that he has the clue to their explanation. To decline to contemplate facts, or to take such an *a priori* attitude that experience of them is impossible, is not the failing of Professor Richet; and by trying to abstain from any theory—or when that becomes impossible by showing a liking for a materialistic one,—his book may carry an influence into unlikely quarters.

Hence those who have the credit of science at heart, and have some hope that the next generation of scientific men will overcome the very natural hostile prejudice of their immediate predecessors, may appreciate the value of Prof. Richet's attitude, even if they feel constrained here and there to disagree with it; and in that spirit I for one admire the long years of attention which Richet has given to a despised subject, and cordially welcome the appearance of the *Traité de Métapsychique*.

OLIVER J. LODGE.