

## EXPERIMENTAL INVESTIGATIONS OF TELE-PATHIC HALLUCINATIONS.<sup>1</sup>

### I.

"*Acta non verba.*"

IF there is a problem that occupies mankind more than any other it is undoubtedly that of death, or rather of the further side of that eternal trance and its probable to-morrow. Primitive man, like his fellow of the twentieth century, was hypnotised by this sudden cessation of organic vitality and the destruction of a brain in which were sighing so many dreams and slumbering so many desires, especially the consciousness of endless existence. The psychology of this contemporary of the past ages of mankind when society was not yet organised, so far as we are able to conjecture it by more or less exact inductions, speaks conclusively for this need of immortality, a need which possesses us of more civilised times to such a degree that we very easily grow daft over the crudest reports which hint at the persistence of our *ego* beyond the terrible bounds of death.

Life, or the adaptation of our organism to its environment, is of such a nature that the persistence of our individuality is, as Spinoza said, a psycho-physiological and psycho-social necessity, which represents the essence of our nature and is at the same time the only force that directs and shapes our aims, a vague obsession that is mournfully projected during each stage of life into a distant and

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<sup>1</sup> C. Flammarion, in his work *L'Inconnu* (p. 223), accuses M. Marillier of having misrepresented the sense of the title of the English book *Phantasms of the Living* by translating it "Telepathic Hallucinations." But the phrase seems to me well chosen and exact, and I shall employ it as adequately suggesting the scientific and psychologic value implied in these psychic phenomena.

ever more distant future, an intangible chimera. Yet despite all the deceptions and all the griefs endured by all the past generations, despite the conclusive demonstration that in this obsession we are but dreaming, amusing ourselves with more or less subtle argumentation, reveling in one illusion only to mourn another, despite the experience of thousands of generations we continue persistently and constantly to dream, to beat upon this mysterious gate of the unknown which down to the present day has but returned a distant echo of our prayers in the form of legends, dreams and beliefs, which have intoxicated our mental life and actually systematised our thought on this topic.

The end of the nineteenth century will mark an important date in the history of this branch of science, for never until now have these vague suppositions, these light and tenuous tissues of false judgments, of legends, emotions, dreams, and beliefs been subjected to a scientifically methodical and systematic investigation by specialists. Fantastic hearsay-reports, the value of which varies with every temperament that intercepts and transmits them, can be made to render up their truth, if they contain any, only by experience and observation. For we must not pass over in silence this need of eternity, this hunger for survival, which, to say nothing of the logical intellectual necessity for giving account of oneself, has always been fed, and continues to be fed increasingly, by facts and marvels confirmed by the first comer and accepted by everybody else. And the facts have become so numerous, as confirmed by this great human public, that they have entered into the hackneyed domain of "facts that are not even discussed."

To this stock of common rumors has been added the authoritative opinion of many thinkers who while masters of experimental science have not ceased for a moment to give credence to these beliefs that border on the miraculous. Consequently there must be something in the matter, even if it be no more than a systematic hallucination, conscious or not, which forces itself like a pathological obsession upon every thinking being.

What, then, is this question? It is difficult, if not impossible, to formulate it; however, it is necessary to do so if one is to treat

the question in a scientific manner, *more geometrico*, as Spinoza said. The undertaking is logical, and scientific methods imperatively demand it.

If we study it close at hand with the strict technique of the exact sciences, we become convinced that even in the public mind and in the everyday general conception the problem has two aspects: the first deals with the possibility of annihilating space, putting oneself into relations with another living being who is breathing, sighing, or suffering in the torrid atmosphere of India, on the smiling plains of Lombardy, on the banks of the Danube, or anywhere else. The miles that separate two brains count then for nothing, and sensation, that inexplicable marvel, traverses space with miraculous speed to excite in the brain of the receptive person an image corresponding adequately to the original stimulus. The second aspect touches the apparition of the spirits or images of the dead after the dolorous stage of death and the dreadful sequestration beneath the burden of the sod. Death now amounts to nothing, and the image, the spirit, the soul—we cannot say just what—escapes this envelope of brute matter to assume the impalpable garb of a diaphanous phantom which rides upon the moonbeams, traverses the starry firmament and appears from time to time to those well beloved, to recall to them the memories of the past, the life of the time when like them it too was alive, a dreamer, an earthen vessel. And, more miraculous still, these phantoms have been photographed; consequently their impalpability is of the nature of ether, since their essence—an image—can make an impression on a photographic plate.

These perpetual problems in the brains of scholars have changed their data while retaining the strong metaphysical stamp, the diaphanous garb of dreams and of the supernatural. There is one very great excuse for this. The problem offers no immediate data, but presents itself in very vague form. Yet why should we not try to classify the facts that have been gathered, to bring a little order into this world of hallucinations, for who knows but there is a great truth here, something that may escape us. The diamond as

well as the ores of the precious metals need special reagents to bring out all their brilliant possibilities.

And what do we know of life? Whence come the limitations of our knowledge? The future may bring us so many surprises! In this connexion we cannot avoid reproducing some words from the beautiful preface which M. Charles Richet wrote for the French translation of *Phantasms of the Living*.

"When we compare our knowledge of to-day with that of our ancestors of 1490 we marvel at the conquering march of man within these four centuries. Four centuries have sufficed for the creation of sciences which had no existence even in name, from astronomy and mechanics<sup>1</sup> to chemistry and physiology. But what are four centuries compared with the future which is opening to man? Can we suppose that we have in this short time exhausted all that it is possible for us to learn? In four centuries more will not our great-grandchildren of 2300 A. D. be astonished at the ignorance of our day? And still more astonished at our presumption in denying without investigation what we do not understand?

"Yes! Our science is too young to have the right to be absolute in its negations. It is absurd to say: 'We shall go no further; here are facts that men will never be able to explain; here are phenomena that are absurd, and which we should never try to understand, because they pass the limits of our knowledge.' To speak thus is to limit ourselves to the small number of laws already established and facts already known; it is to condemn ourselves to inaction, to deny the fact of progress, to reject in advance one of those fundamental discoveries which open an unknown path and create a new world; it is to put routine in place of progress.

"In Asia a great people has remained stationary for thirty centuries because of having reasoned thus. There are in China mandarins who are very learned and very erudite, and who pass marvellously difficult and complex examinations, in which they have to show a thorough knowledge of the truths taught by Confucius and

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<sup>1</sup> The reference is doubtless to modern scientific and physical astronomy and to dynamics, since the ancients made considerable progress in astronomy and in statics and hydrostatics.—*Ed.*

his disciples. But these mandarins do not dream of going beyond or ahead of these teachings. They do not venture away from Confucius. He is their whole horizon, and they have become so fossilised that they cannot comprehend that there is any other.

"And yet, in our civilisations that are more friendly to progress there prevails a somewhat similar spirit; we are all more or less like mandarins; we should like to enclose the sphere of our knowledge in our classic books and prohibit going outside of them. We reverence science, and not without reason we pay to it the greatest honors; but we scarcely permit it to wander outside the beaten paths, the road laid out by the masters, so that a new truth runs a great risk of being treated as hostile to science.

"And yet there are new truths, and strange as they may appear to our customary mode of thought, they will be scientifically demonstrated some day. This is unquestionable. It is a positive fact that we overlook startling phenomena which we are unable either to observe or to call forth. The well-attested hallucinations which are the chief object of this book constitute doubtless a portion of these phenomena, difficult to see because our attention has not been sufficiently directed to them, and difficult to accept because we are afraid of what is new, because old and brilliant civilisations are dominated by neophobia, because we do not wish to be disturbed in our indolent calm by a scientific revolution which would upset commonplaces and official data."<sup>1</sup>

This beautiful page of M. Charles Richet's cannot but inspire the impartial investigator with a different conception of the poverty of our knowledge, and brings before his eyes a different ideal from that of the famous *ignorabimus* of Dubois-Reymond. *Ignoramus*, yes, but not *ignorabimus*, for why and to what end, limit so positively the condition and the power of our knowledge for all time, by the poor brain of the twentieth century? What we know, a priceless and wonderful treasure, is not sufficient to put a *veto* upon our judgment and our investigation. All these brains that are

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<sup>1</sup> *Les hallucinations télépathique par Gurney, Myers et Podmore*, an abridged translation of *Phantasms of the Living* by L. Marillier. *Bibl. de Phil. contemporaine*, 1899, 3 ed., Vol. I., p. v.

searching and working in all parts of the world, and which are growing keener with every century, armed with more delicate and ingenious methods, will probably analyse even the true nature of a sensation, and will be able to follow the evolution of thought in time and space. What is a miracle for one century becomes a commonplace for another, and nothing is inherently impossible. Everything is probable, and the best scientific attitude is to confess our ignorance regarding a fact before denying it, and not to exclude its possibility until it is shown to be utterly incompatible with the body of our well-established knowledge—and not even then.

## II.

Let us divide the subject into two chapters: The first will deal with the problem of the *transmission of thought* between living individuals, and the second that of the appearance and manifestations of the dead, which subject will be treated in another article. We shall review briefly the investigations already made, the state of the question before exploiting our own results from the observations we ourselves have made. The state of mind that will guide us, while leaving the widest range for every probability and for the demonstration of the most fantastic hypotheses, will be to see whether an observation tallies, in however slight a respect, with current scientific standards and at the same time refuses to submit to the logic demanded by all investigation and observation. Nature teaches us every day the mighty truth that there is no effect without a cause, and that there are general laws which govern in every mechanical, psychical, organic, or other manifestation.

What are we to think of the transmission of thought at a distance? A series of studies has been made by the committee of publication of the London Society for Psychical Research, the soul of which was the late G. B. Gurney, an English psychologist of great worth.

The inquiry pursued by Gurney, Myers, and Podmore at the request of the committee of the Society for Psychical Research, which had furnished to these authors the greater part of the documents used, is very remarkable. It is known that the Society for

Psychical Research, founded in 1882, aims "to devote itself to the study of new questions, without prejudices or preconceptions of any sort, in the same spirit of exact and impartial research which has enabled science to solve so many questions equally obscure and debated with equal warmth." This programme is sufficiently explicit: the bulletin which has appeared regularly ever since, has formed the archives in which numerous and minute observations on telepathy, theosophy, apparitions after death, and many other phenomena more or less close to the borders of our knowledge whether scientific or practical, are catalogued with pains and perseverance worthy of all honor.

The inquiry has been taken up in England, in France, and in the United States, and had as its aim: (1) "To collect documents relating to telepathy; (2) to determine the proportion of hallucinations which coincide with an actual occurrence to the total number of hallucinations in normal subjects; (3) to determine the proportion of persons who have experienced one or more hallucinations to the total number of the population."

A circular of questions was drawn up to this end and the following instructions, which we reproduce from the Prospectus of M. Marillier, were sent to persons desiring to communicate telepathic facts:<sup>1</sup> "(1) It is highly desirable to obtain from the identical person who experienced the hallucination a detailed account of the facts. The accounts should be signed (the names of the persons will not be published in any case without an express authorisation in writing). (2) The date of the event which is alleged to have coincided with the hallucination should be confirmed as far as possible by the testimony of persons independent of the subject. (3) It is very desirable that persons who have heard of the facts from the time when they took place, or who have known of them in any way, should add their accounts to that of the subject. As far as possible it is necessary that there should be no concert among those who make the reports or between them and the subject, so that their accounts may serve as checks and corrections for one

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<sup>1</sup> *Op. cit.*, p. xv.

another. (4) If the person who experienced the hallucination or those who have heard of it took notes about it at the time of its occurrence, it is desired that they furnish copies of these notes to the Commission. (5) It is particularly necessary that dates and hours be reported with great accuracy."

The Society for Physiological Psychology in Paris organised about ten years ago a commission for the study of telepathic phenomena, the members being M. Sully Prudhomme, president; G. Ballet, professor and fellow of the Faculty of Medicine in Paris; H. Beaunis, honorary director of the Laboratory for Physiological Psychology in the École des Hautes-Études; Ch. Richet, professor in the Faculty of Medicine in Paris; Lieutenant-Colonel de Rochas, director of the École Polytechnique, and M. Marillier, secretary.

The Society for Psychical Research reckons among its regular and honorary members scientific authorities of the first rank, among whom we mention: Mr. Wm. Crookes, H. Sidgwick, Alfred Russell Wallace, Myers, Adams and others, while Gladstone, John Ruskin and Gurney were of their number. Among the corresponding members in France we may name: H. Beaunis, Bernheim, Féré, Pierre Janet, Liébeault, Ribot, Richet. In America the same investigation is carried on under the direction of the great psychologist Mr. Wm. James, and in England under that of Mr. H. Sidgwick. In France M. Marillier had begun some time before 1892 a similar investigation, but so far as we know there has been no publication of results.

The outcome of this tremendous amount of research, directed, as it seems, with great tact and with every possible precaution, has been most interesting and most definite. Telepathic hallucinations do exist, are genuine facts and correspond to actual sensations. By this expression, "telepathic hallucinations," Myers, the author of the *Introduction to the Phantasms of the Living*, meant to indicate "phenomena which may give us some reason for supposing that the mind of one man acted upon that of another without the utterance of a sound, the writing of a word, or the making of a sign." Along with this category of phenomena have been classified, not apparitions of the dead, but only apparitions

of the dying ; the investigation has applied itself very methodically and published the investigations collected. The apparitions of the living are manifested in the following cases : Either at the point of death, or while a person is passing through a grave crisis he has appeared to another person.

The tabulation and abstracting of the responses received as a result of this inquiry has led the authors appointed by the Society for Psychical Research to draw the following conclusions :

1. Experience proves that telepathy, that is, the transmission of thoughts and feelings from one mind to another without the intervention of the organs of sense, is a fact.

2. The testimony proves that persons who are passing through some great crisis or are about to die appear to their friends and relatives, or express themselves to them with a frequency that cannot be explained as mere chance.

3. The apparitions are illustrations of a supra-sensible action of one mind upon another.<sup>1</sup>

Indeed, the facts published by these authors seem to be conclusive ; they have sufficed to convince such an authority as M. Charles Richet. The analysis and the criticism of the observations is very ingenious, and we recognise on every page the effort of the authors to give a genuinely scientific aspect to their work and to utilise all the facts of biology and the data of experimental methods.<sup>2</sup>

<sup>1</sup> *Ibid.*, p. 12.

<sup>2</sup> Mr. J. G. Piddington, of the Society for Psychical Research, who has had the kindness to read my article, has called my attention to a work of Dr. Parish, published in 1892, who, it seems, has made some similar critical studies on the subject of investigation cultivated by the honorable society. For myself I know nothing at present directly of this work of Mr. Parish, and I learned something of its contents only a few days ago through a *résumé* given by M. Franck Hales in the conference conducted at the Institut Psychologique International on the history of the Society for Psychical Research in London (*Bulletin de l'Institut*, No. 2, I. année, Avril, 1901). Mr. Parish has assumed an individual point of view and discusses the investigation of the Society, while I discuss and criticise the mental condition of any subject about to reply to any circular whatever that demands of him a response to such a transcendental question. We agree indeed in several points, and I congratulate myself on this confirmation. As for the replies of Mr. Sidgwick, I know them ; they are judicious and skillfully formulated but err in

Since the publication of the *Phantasms of the Living* the London Society publishes regularly in its *Proceedings of the Society for Psychical Research* new observations, all of them documents of great value. In France *Les annales des sciences psychiques*, edited by Dr. Dariex and published every other month by Alcan, is likewise a record of the highest distinction for observations of this kind. Whoever is interested in these curious problems will scan the ten volumes of this publication with much gratification.

Moreover, the question has been discussed before several congresses of psychology, and recently at the Third Congress of Psychology, which was held at Munich in 1896, Professor Sidgwick made a report of new observations which were positive and conclusive.<sup>1</sup>

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their very eloquence and want of scientific precision. I have only to say that even if the person who replies to the inquiry gives his address and his profession, the value of his reply does not thus gain enough from the point of view of the individual mental criterium, and it is exactly toward this point that my investigations are directed.

I wish to thank Mr. Piddington especially for his kind advice and particularly for his obligingness in putting at my disposal the *Proceedings* of the Society for the detailed illumination of my personal investigations.

I limit myself for the present to this summary and synthetic exposition, intending in other publications to return to the details of my researches with the plentiful documentary evidence that I possess and of which I have given here but the essence. I shall lay particular emphasis (1) upon the psychology of the mental state of the mediums in which it has been possible to carry on this investigation; (2) on the beliefs caused by actual hallucinations; (3) on the part played by the emotions in the systematisation of an hallucination; (4) on the localisation of memories in time and space; (5) on mental synthesis and on psychic polarisation, if the expression may be permitted in connexion with metaphysical and transcendental data.

Mr. Piddington has kindly called attention to the value of these points: in his opinion they are "of great value" and worthy of the attention of the Society for Psychical Research in London (this from a personal letter). It is true that in these points lies the chief originality of my investigations on telepathic hallucinations, and I am indebted to Mr. Piddington for having called attention to them. Paris, April 20, 1901.

<sup>1</sup> "On a statistical inquiry into sensory hallucinations experienced while awake by persons in ordinary health." *Dritter Congress für Psych.* München, 1896, pp. 390-394.—"Experiments in involuntary whispering and their bearing on alleged cases of thought-transference." *Ibid.*, pp. 404-408.—"Ist es möglich, durch eine internationale Hallucinations-Statistik einen Beweis zu erbringen für die Existenz telepathischer Einwirkungen?" Dr. Bager-Syögren, Upsala. *Ibid.*, pp. 394-404.

## III.

I am aware that Messrs. Gurney, Myers, and Podmore in their review try to refute every possible criticism and appeal even to the theory of probabilities in order to elucidate and bring out the value of the proportion between the negative and the affirmative responses. They reveal very clearly what they mean, and in no wise exaggerate the bearing of their thought, studying with truly commendable care the causes of possible error. In respect to transmission of thought they even go so far as to make preliminary experiments, zealously taking into strict account the probability of divination, suggestion, chance, etc.; and every fact is sustained by numbers, whose probability is always stated. The result is always that the number of affirmative cases greatly exceeds that of the probable cases.<sup>1</sup>

Such rigorous supervision ought to inspire confidence in all sincere men. But let us pause a moment to discuss the value of the data, the facts which served as the elements in this delicate calculus of probabilities. A probability opposed to a certainty is far from being a paradox, and despite the paradoxical appearance of the problem, one can calculate perfectly something that one does not know, or rather the value of what one might know and recognise. The vague instinct, common sense, is far from being in condition to set at nought the support of these learned calculations which establish well enough within certain limits the bearing of the conclusions that they involve and the application of the theory of probabilities in the realm of psychic science. Although far from having that necessary intervention which it has in purely scientific problems, all the sciences being but unconscious "applications of the theory of probabilities", it may nevertheless yield some assistance. However, we must remark that in psychology we are far from the mathematical sciences, where one may even propose prob-

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<sup>1</sup> Read on this topic a most instructive article by C. M. Richet published in the *Revue philosophique*, 1884, Dec., "La suggestion mentale et le calcul de probabilité."

lems in probability. The initial stage often escapes us in psychology, and is in fact for the greater part of the time a subjective probability, a very different thing from that other objective probability on which the physical and mathematical sciences depend in the solution of the greatest problems, making it possible to foresee phenomena that are only partly probable.

There has been, and still is, much discussion concerning the application of the calculus of probabilities in the mathematical and physical sciences, and many problems are reduced to definite terms only through the antecedent calculation of probabilities that were foreseen and figured out in advance and then verified by experiments that were more directly determinable. The theory of games of chance has been made the subject of several monographs since it occurred to Chevalier de Méré in connexion with "a cast of dice"; great geometers and scientists have studied the question, among them Pascal, Fermat, Euler, Ampère, John Bernoulli, James Bernoulli, Lagrange, Laplace, De Moivre, Poisson, and even Huygens, to mention only those of the past. Recently M. H. Laurent has published in a monograph of the collection of "Aides-mémoires" a valuable synthetic study on the subject, entitled *Théorie des jeux d'hasard*,<sup>1</sup> with a lofty moral application. The conclusion from all this rich harvest, the fruit of so many choice minds, is that the probability of an event due to chance can be calculated very well and distinguished very clearly from a necessary and logical probability. This probability due to chance is equal to "the ratio of the number of cases favorable to the occurrence of a given result to the total number of cases that may be possible when we are awaiting this result, provided that all the cases, favorable or not, are equally liable to happen."<sup>2</sup> The questions raised by games of chance such as rouge et noir, roulette, lottery drawing, dice, valet de pique, brelan, target-shooting, etc., have been almost completely solved despite their complexity, and the conclusions are

<sup>1</sup> One volume, 176 pages, with extensive bibliography. See also Laurent: *Traité du calcul des probabilités*; Laplace: *Théorie analytique des probabilités*; Fermat, *Correspondence avec Pascal*.

<sup>2</sup> Laurent, *op. cit.*, p. 6.

morally salutary. "Gambling," says M. Laurent, "can never be perfectly fair; if it is so at the moment when the players are equally rich, it ceases to be so as soon as one of them wins."

The same rigorously scientific laws introduced into the study of psychic phenomena even in the time of Buffon, who left us the excellent *Essais d'arithmétique morale*,<sup>1</sup> trip, in our opinion, as we have said above, over the absence of perfectly precise primary data.<sup>2</sup> The theory of errors and the analysis of the law of Gauss may yield some help, but this help can only be reduced to differences in a feeble, a very feeble, measure of errors systematic and errors accidental. For the famous "bell-shaped curve" even in the physical sciences is far from being accepted in its entirety in our days, as we are assured even by M. H. Poincaré. A physicist will discuss with good reason the value of a good standard and the method of observation; he will prefer a good standard, having taken all the necessary precautions to avoid the least systematic errors, while the astronomer will reply to him, "But you cannot observe in this way more than a small number of stars; the accidental errors will not vanish." Hence no mathematical precision is possible, and the decision is reached, even while discussing the question, to "take sides" and adopt arbitrarily some fixed value.

In this connexion we cannot better express our thought than by transcribing some conclusions and reflexions of M. H. Poincaré, a mathematician who has studied the logic of the subject, and who is one of the most brilliant representatives of that mathematical philosophy which is so necessary to philosophers and in which Descartes, Kant, Leibnitz, Euler, and Newton, all the most generally recognised masters in philosophy and human thought, have distinguished themselves.

"In order to undertake any calculation in probabilities," writes M. Poincaré, "and even in order to give any meaning to the cal-

<sup>1</sup> Supplement to the *Histoire Naturelle*, Vol. I.

<sup>2</sup> See the interesting treatise of M. Bertrand, *Calcul des probabilités*, in 8vo, 1889. Also Poisson, *Recherches sur la probabilités des jugements*; and Cournot, *Exposition de la théorie des chances et des probabilités*; and Goureaud, *Thèse sur l'histoire du calcul des probabilités*, 1848.

culatation, we must recognise as point of departure an hypothesis or assumption, which always implies a certain element of arbitrariness. In the choice of this assumption we must be guided by the principle of "sufficient reason." Unfortunately this principle is very vague and very elastic, and in the hasty review we have just taken we have seen it assume many different forms. The form under which we have met it most frequently is the belief in the law of continuity, a belief which it would be difficult to support by apodictic reasoning, but without which all science would be impossible. In fine, the problems to which the calculus of probabilities can be applied profitably are those in which the result is independent of the initial hypothesis, provided only that this hypothesis is in harmony with the law of continuity."<sup>1</sup>

## IV.

If we have dwelt at such length upon the bearing of the theory of probabilities, it has been done primarily in order to bring out the scientific value of telepathic investigations, and especially in order to make some objections to those young psychologists of the new school, who, far from being masters of their initial facts, apply algebraic formulæ at cross purposes and enlarge upon simple explanations with more or less startling formulæ, which is often a proof of incompetent observation and of a lack of the critical spirit. Their only purpose seems to be to show that they can juggle wonderfully with  $\pi R^2$ ,  $\phi$ ,  $\theta$ , and all the rest of the Greek alphabet, and easily illumine the dry text, the small number of observed facts. Far, very far, from possessing the prudence of a Richet, these gentlemen juggle with cosines as with apples, forgetting nearly always that they are building up a system with facts of which the surface has scarcely been skimmed by observation.

Even in the quiet of a laboratory, with instruments of unheard-of delicacy, and with the most careful manipulation, you find difficulty in establishing a scientific psychical fact. Consider what must be thought of a testimony that comes from a distance, of a

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<sup>1</sup> "Réflexions sur le calcul des probabilités." *Revue générale des sciences*, 1899, p. 269.

casual observation made by *X* or *Y*, whose thought is predetermined according to certain laws of education, of environment, and of a host of influences and disturbing causes! We reduce everything to a system, and we are heedlessly led to seize upon a fact not only because it impresses our mind, but because it is the only one that we can establish. And every day we criticise crude causes of error which we take for some truth or other, while to-morrow this truth becomes in its turn a truth mixed with errors, and the crude cause of errors permits us to fix upon the true probable cause. It is useless to repeat the beautiful words of Claude Bernard, that we must let facts speak for themselves, but we must even go so far as to interpret them! The causes of error swarm in our conceptions and while looking toward a distant future, a paradise of truth and of light, an epoch in which we shall perhaps finally become perfect automatons, and in which the sun will no longer send forth its life-giving rays, we yet must resign ourselves to the conviction that our "sufficient reason" changes from day to day, and that the best observations may be but demonstrations of a fact correcting crude paralogsms. I purposely exaggerate the defectiveness of our observations, of our experiences, of our methods, being the first to believe in the value of experience compared with the fancies of transcendental metaphysics.

A set of questions is sent out. What is the state of mind of the person answering; what is his power of analysis; what is his education; what his competence? Of all the mortal beings that wear out their epidermis on the hard surface of the terrestrial globe, there are few that are capable of analysing themselves, very few. Moreover, mental types vary, and many a mathematician capable of solving the most important problems in mathematical physics, is not always and necessarily a scientific observer; his own psychic condition eludes him, and outside of his own domain which he masters admirably he is far from surpassing the state of soul of any simple mortal. Daily observation furnishes us at every step with typical corroborations, so that there is no need of further insisting upon this fact. From want of education, from organic incapacity, from unequal development of different cerebral centers,

we represent only a living fraction of the complete psychic life, and it is possible to interpret a phenomenon quite differently from what it is, and that unconsciously, despite the utmost honesty in recording the fact.

Our mental life revolves in a vicious circle, the narrower because there is no possibility of an incisive analysis and because it is subject to the action of numerous influences in our sociological environment. Let us suppose that the circular of inquiry fell into the hands of some one thus environed, a soldier, a financier, a teacher of gymnastics. The problems of life do not present themselves to such a man at all, and it is usually the case that he has no notion whatever of the least datum of life nor of his own endowments. Such a man will never be capable of distinguishing a false sensation from an actual one, and especially incapable of distinguishing a true objective hallucination from a subjective hallucination, the artificial and conscious fabrication of his own excited, wearied or anæmic brain. It even happens that competent persons, psychologists and psychiatrists of high standing, are unable to distinguish the real part from the projection of intellectual images while they are themselves absent-minded or occupied with ideas that possess them. There is here a preconception that amounts to a great deal, and beliefs very easily give rise to actual hallucinations and pave the way successfully for that other erroneous belief in the reality of cerebral projections, of chimeras originated in a feverish brain, whose centers of association have ceased to perform their functions normally, and in which the fixed notion prevents a stringent, exact and logical judgment.

The most learned of preachers inevitably believes in an apparition, and he has a large number of hallucinations in comparison with a scholar who has no other religion than that of the truth; he is in psycho-physiological conditions more favorable to an erroneous grasping and interpreting of his own perceptions. We know that perception is only a sort of hallucination, and we know that the mental life is intangible to a brain sealed up in *a priori* notions and especially of an emotional nature; and accordingly I ask myself, what guaranty we can have for testimony given under condi-

tions unsuited to experiment and when the subject is in the great majority of cases necessarily incapable of interpreting to himself the variations in his psychic condition. One who has barely learned to reason a little thinks himself capable of distinguishing *ipso facto* a true hallucination from a false one. The fact no longer seems surprising when the memory is called into play and the attempt is made to confirm the time, the hour and even the minute at which the phenomenon took place. The majority of well attested telepathic hallucinations, the very great majority, have to do with cases of misfortune, cases which I shall call emotional. Now, emotion upsets the intellectual condition, and exercises a considerable influence upon the memory and the judgment notably; investigations in this direction which I have carried on but not yet published enable me to declare unqualifiedly that this is so, though this is nothing new, for it is a matter of common observation and everybody can confirm it for himself. The notion of the death of a relative, the notion of a misfortune which may happen to some one dear to us, disturbs our minds in a measure proportional to our temperament, our sympathy, our impressionableness, our education, etc., and to the nature of the strange association which has appeared as it seems so suddenly. From this emotivity arises the great difficulty in giving full credence to a fact collected in this manner.

How can one fix the hour of an event precisely under such circumstances? Messrs. Gurney, Myers, and Podmore describe for us some of their methods and their checks, but it must be admitted that they are not completely satisfactory. I have been present during the arrival of many misfortunes in the course of my life, and having a passion for taking notes on whatever I may observe, I have made this general deduction, which is not without interest, that in undertaking to determine the precise time at which an event took place the errors are greater in proportion as the phenomenon is more intimate and more complicated. I was making an investigation on the localisation of memories, a work of which I published a portion in *L'année psychologique*,<sup>1</sup> and I established the fact that

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<sup>1</sup> *La localisation des souvenirs. Année Psychol. 3<sup>ème</sup> année. Pp. 199-224.*

the more remote the memory and the more closely it touches the emotional condition of the subject, the more difficult it is to localise it with precision. The fact becomes more susceptible to causes of error when it touches this very curious domain, which constitutes the profoundest depth of our souls, the marvellous. Few facts are susceptible of being presented free from chance suggestions and from all serious exaggeration, which from some vague grief, from some indigestion, some roaring in the ears, implies the sensation and even the perception of a most distinct hallucination. Inasmuch as there is no basis of criticism for the marvellous, the imagination indulges in the most fantastic caprices and the strangest sensations are acknowledged by orthodox clergymen, to whom everything is possible, even the sight of the actual configuration of an angel, the portrait of the Virgin Mary.

Let us finish the list of our objections by citing the mental state of the subjects as one of the chief sources of error. The imagination is constantly at work, even in a mediocre mind, and furnishes the daily bread for this flight toward the infinite, for this excessive persistence in a mediocre personality. Even in connexion with the most commonplace reasoning power the imagination, thanks to its little logic, persists in soaring, were it only to the height of barnyard fowls. In such a mind everything is distorted and confused, all the more because it is dealing with ill-defined memories, ill-perceived and recorded perhaps only in the imagination. I have known and studied closely a man of science and unquestioned worth, who needed, however, to keep a perpetual check upon himself in order not to credit the most insignificant and false perceptions. This scholar cultivated psychology, but fortunately he had his weakness fairly under control.

I pass over other sources of error and by no means the least. My object in referring to them is not to refute the material so carefully collected, but simply to present certain critical scientific objections to the method. The investigation yields valuable results since it is well directed, and especially when the more analysable phenomena are under consideration, such as have a real existence and constitute a part of our mental life; but it becomes liable to

criticism when it takes up a subject so indefinite in itself and so far, speaking *a priori*, from our normal intellectual condition.

## v.

We have given especial attention to this question, and during the six years that we have been reading the results of the inquiries of Messrs. Gurney, Myers, and Podmore, we too have been collecting a large number of observations which we shall briefly state. The conclusion of our investigations does not agree with the results of the *Society for Psychical Research*, and we shall give later on the explanation of these contradictions in the Society's conclusions, which are due, in our opinion, to ignorance of the condition of the subjects, of their natures, their education, etc., care being but rarely taken to secure truly scientific observations. Showing our facts such as they are, we are very far from assuming that truth is on our side; it is on neither side, I venture to say, for it is still in dispute. In science, as in everything else, it is necessary to compare facts, stating as minutely as possible, the conditions under which they are obtained and leaving the final criticism to the future. Far from denying the existence of a fact that seems incontrovertible even to the very best scientists, and seems the more so because it is not fundamentally impossible, we shall limit ourselves to publishing our observations. I am convinced with M. Richet, that we must not do like the mandarins, and that in science, as well as in life, our motto should always be: Face the future. But before taking a step, that step should be measured. We shall let the facts speak for us.

I now come to the second part of the problem: the apparition of persons under any sensorial excitement, undergoing some great crisis, or who are at the point of death, to some other person, a friend or a relative. As for the other part: the transmission of thought or feeling from one mind to another without the intermediary of the organs of sensation, the affirmation without being categoric has more probability. It must, however, be made very precise, and I believe that it depends largely upon psychic conditions, easily apprehended, without having recourse to transmission



from a distance through the ether. Investigations made on this topic, to which we shall refer at some other time, have convinced us that the psychological side of the question is generally too much neglected, due to a readiness to enter at once upon the field of the marvellous, now supposed to have become knowable, the veil of Isis being lifted.

My observations were made upon a limited number of subjects, but I venture to say that they have a certain value because of this very fact. My subjects are distributed as follows: 21 subjects of Roumanian origin, 8 men and 13 women; 11 subjects of French origin, 8 men and 3 women. Total, 32 persons. These persons I followed up very closely, and living their common life with most of them, I was able to keep a check upon the facts, to make the record of the observation, and to observe with my own eyes. Most of these persons were far from knowing anything of modern psychological studies or anything that could influence their mode of thought. None of these subjects was aware of my investigations, except two of my colleagues who finally, after I had made a great many observations, began to suspect the attention I was giving to their hallucinations. None of the facts observed has been accepted upon hearsay. Those will form a category by themselves, and we shall not enter into details regarding it, especially since the results agree.

Table I., on the opposite page, gives a complete account of our experiments; all the details have been noted with a purpose, each having in our estimation a special value.

TABLE II.

Number of subjects .....	21, women 13, men 8.
Number of determinations .....	1011.
Number of coincidences claimed by the subjects .....	981.
Number of exact coincidences .....	40.
Number of errors proven .....	941.
Number of true cases reported, per cent. ....	5.47.
Number of visual hallucinations .....	740.
Number of auditory hallucinations .....	198.
Number of tactile hallucinations .....	18.
Number of olfactory hallucinations .....	55.

TABLE III.

ORDER	NAME	SEX	AGE	PROFESSION	EDUCATION	NUMBER OF DETERMINATIONS	NUMBER OF TIMES SUBJECT WAS CONVINCED OF COINCIDENCE	NUMBER OF EXACT COINCIDENCES	NUMBER OF CASES AT SECOND HAND	NUMBER OF ERRORS FOUND	PER CENT. OF TRUE CASES	NATURE OF THE HALUCINATION			TIME COVERED BY THE OBSERVATIONS	REMARKS	
												aud. vis.	tac.	olf.			
I	A'	Fem.	45	None	Average	36	33	1	0	32	3.3	14	20	2	0	3 yrs. 9 m.	No fixed opinion; very suggestive
II	B'	"	36	Teacher	"	21	19	0	5	19	0.	3	15	1	2	4 "	Fantastic imagination; spinster
III	C'	"	29	Artist	"	43	43	3	8	40	6.97	12	24	5	2	7 "	No general ideas; commonplace view of life
IV	D'	"	47	Publicist	University	19	18	0	0	18	0.	1	18	0	0	4 "	Distinct type; loves marvels; neurasthenic
V	E'	"	32	Landlord	Average	26	26	2	7	24	7.69	3	19	1	3	6 "	Orthodox; inclined to mysticism
VI	F'	Male	26	Student	University	81	79	1	10	78	1.26	26	50	3	2	5 "	Free-thinker; metaphysician; dreamer
VII	G'	"	28	Teacher	"	35	30	0	8	30	0.	15	19	1	0	3 "	Critical yet mystical; few ideas
VIII	H'	"	32	Overseer	Average	24	23	0	2	23	0.	3	12	7	2	2 "	Keen intelligence, but no dominant idea
IX	I'	"	49	Agricul.	Elementary	36	35	1	11	34	2.85	4	27	0	5	4 "	Orthodox; leaning toward occultism
X	J'	"	60	Landlord	"	8	8	0	1	8	0.	0	8	0	0	4 "	Confused mind; no data about life and nature
XI	K'	"	37	Literateur	University	9	7	0	0	7	0.	5	2	0	2	3 "	No scientific culture; dreamer
XII	L'	"	31	"	"	15	13	0	2	13	0.	6	8	1	0	3 "	Fatalistic; free-thinker
XIII	M'	"	39	Publicist	"	10	10	0	2	10	0.	8	0	1	1	3 "	Good head; a thinker
13		fem. 5 male 8	37.66 (av.)			363	344	8	56	336	4.36 (av.)	100	222	22	19	4 " 3 " average	

Table II. sums up the chief conclusions and contains the averages of the results. The age of these 21 subjects varies from 23 to 70 years, averaging for the women 37 years, for the men 41 years.

It must be added that the occupations of the subjects were distributed as follows: 9 women without occupation, 1 agriculturist, 2 teachers, 1 domestic; 4 men were teachers, 1 officer, 1 publicist, 1 agriculturist, 1 landlord. As for their education, it stood as follows: 4 elementary education, 9 moderate education, 7 university education, 1 lacking education.

Table III. gives account of observations made upon French subjects, and in Table IV. the general results are summed up.

The general averages contained in Table IV. harmonise with those of Table II., although it deals with subjects belonging to a different environment and having a totally different training and education. The number and the nature of the sensorial hallucinations corresponds to the total number of determinations.

TABLE IV.

Number of subjects.....	13; females 5, males 8
Number of determinations.....	363
Number of coincidences alleged by the subjects.....	344
Number of coincidences established.....	8
Number of errors demonstrated .....	336
Percentage of true cases .....	4.36
Number of visual hallucinations.....	222
Number of auditory hallucinations.....	100
Number of tactile hallucinations.....	22
Number of olfactory hallucinations.....	19

The coefficient of percentage of true cases becomes still more inconsiderable if it is based on the total number of cases, instead of taking the average: 1.68 instead of 4.36. Of the true hallucinations, those in which there was any sort of coincidence, 5 were visual, 2 auditory, 1 tactile and 1 olfactory; 3 before and the remainder after the actual occurrence.

The total number of our observations was 1374, made upon 34 subjects, 1325 of them being presented by the subjects themselves as affirmative, while 48 were established as coincidences occurring

within from 6 to 60 hours of the actual event, and 1277 cases established as errors. The visual hallucinations numbered 962, and the others in the order of their determination: auditory, 298; olfactory, 74; tactile, 40. The coefficient of percentage of true cases yields a general average of 5.10, but if it is based on the total number of cases it is only 2.25.

## VI.

Let us recall in a few words the manner in which we have collected this evidence; we insist on the value of the facts that we are publishing, and consequently, as in any biologic science whatever, that the method is the first consideration that ought to receive the attention of the experimenter. In order to make ourselves better understood, we shall take as an example case XIII., Table I., Madame N., without profession, aged 56 years.

We know Mme. N. intimately; much of our life was spent near her. During vacations we were in the country, and I spent long days beside her, working at my desk, and she sat embroidering or spinning huge distaffs of wool. From time to time she interrupted her work, we talked together, and she told me her thoughts and the ideas she was following while spinning. At times she stopped suddenly, the spindle fell from her belt, and sadly, with rigid features, she explained to me in figurative language that she had had a distinct vision of her husband, sick, suffering, and sometimes dying. It seems to me that I still see her as I write these lines, melancholy, analysing with remarkable intelligence her own mental condition, announcing to me an inevitable misfortune; then calm and collected at her spinning again, after sighing deeply a few times, and never forgetting to make the sign of the cross. While sympathising with her distress, the psychologist was always ready to note the case; one more piece of evidence, and after having written down the words almost from dictation, and noted the hour, the attitude, and my own impression, I carefully sought to ascertain whether there had been any connexion between the subject and the object of the hallucination.

And curiously enough, the testimony of the person that was

the object of the hallucination was inadequate, and whenever conversation turned upon it, or he was questioned by the person that had experienced the hallucination, the two nearly always came to an agreement, were it only with the corroboration that he had felt a deep moral suffering. The psychologic life of man is a tissue of lies, of illusions, of false perceptions, of beliefs, ideas and judgments seldom co-ordinated upon any fixed, well defined plan. Suggestions are readily received, and sometimes, if not always, under the influence of a tender word, of an emotion delicately whispered, the memory becomes blunted, the judgment more superficial, and the little analysis of which one is capable is lost. Very frequently the testimony of persons, whether learned or totally lacking academic education, was wholly inadequate to substantiate a fact. In the majority of cases self-analysis is poor, and then they forget so quickly, especially when they are not interested, as we psychologists are, in the mechanism of their feelings and actions. So then, after several disappointing corroborations, I always examined the social and psychic conditions of the persons under consideration.

We possess 78 telepathic hallucinations of Mme. N., which we witnessed or which were reported to us. In all of them Mme. N. had believed with absolute confidence, and those about her, fairly educated men, regarded her affirmations as veracious. Of course, as time went on the hallucination assumed a greater degree of verity, and was finally portrayed with a legendary halo that seemed, however, strictly correct to those about her, people acting in good faith and capable of testifying with their hands upon the cross, that every word, every detail of the story told by Mme. N. was correct. And yet out of the 78 hallucinations, 76 errors were proven, and only in 2 cases was there any agreement whatever, and the conditions and the cases as we were able to establish them are as follows:

First: The husband of Mme. N. had to go on important business to a town 25 kilometers distant from his home in the country, and he was obliged to employ the services of a drunken coachman. Mme. N. was very uneasy, but as the business was important, she consented that the man should drive the carriage, after she had

roundly lectured him. It was a day near the end of March and we were in the country with Mme. N. As was customary she took her distaff, arranged the winder for a servant, and began to spin quite happily. The wind was whistling boisterously outside, and, as it had rained for several days before, there had been tremendous inundations in the country. M. N., her husband, had to ford a considerable river on this journey. Three hours had passed since his departure ; Mme. N. with tears in her eyes told me that she seemed to hear the voice of her husband groaning. The sighing of the wind seemed to her to be the cause of this queer sensation. Late at night M. N. was brought to the house, half-fainting, with a fracture of the right leg. As he was about to cross the river on his return, after it had begun to grow dark, the driver having become drunk again in the town, the horses would not go into the water but ran away with the carriage across the fields. M. N. tried to jump, but his foot was caught in the wheel and he had fallen to the ground nearly dead. This happened toward 8 o'clock in the evening, and Mme. N. had had her hallucination at about 11:36 in the forenoon. So there had been a difference of about 8 hours between the hallucination and the reality, and strangely enough the hallucination preceded the unfortunate occurrence.

Second: I now give the second case in connexion with Mme. N., which I had the good fortune to observe under the following conditions: I was with Mme. N. at the city of B. and we were walking peacefully in a little garden of fruit trees toward the evening of a summer day. We were talking of her daughter, Mme. M., who was in the country with her husband, and whom at the time of her last meeting she had found somewhat ill, weak, and sad. In the city where we were there was an epidemic of typhoid fever, and already a considerable number of deaths had been reported. That evening at table Mme. N. told us that at the moment when she was about to eat her soup she had experienced a distinct vision of her daughter at the point of death, wrapped in white cloths and just about to render up her spirit. Two days later we received a letter from the husband of the daughter, announcing in fact that the daughter was seriously ill with typhoid fever, and that the phy-

sicians who had seen her some hours before the letter was mailed (3 hours, as we were informed) and who had watched her the whole morning three days before, from 3 till 5, gave no assurances of her recovery. Here was a vague coincidence, for the hallucination had occurred 15 hours after the existence of the typhoid crisis this time. Yet this fact did not prevent everybody from citing this case as verified. In this sort of hallucinations the marvellous seizes so promptly upon human thought that one forgets quickly the conditions under which it took place and even neglects to note whether it took place before or after the event, and whether 10 hours or 10 days after.

If these two cases had been collected by the usual method of psychological investigation, attention would certainly have been called to them, and I know even men with a university education who would have noted them in their memorandum as verified facts. Witnesses were not wanting to confirm the reality of the coincidence. Officials, magistrates, peasants, and university men are always ready to agree on anything that involves the marvellous. Never undertake to convince these sincere and honest witnesses of the truth of the facts, for you will not succeed, and besides you will lose the chance of observing the genesis of legends and especially of the senseless logic which pervades the judgments and the feelings of men.

For my part, this coincidence appears explicable on a purely psychologic hypothesis, but I will not insist upon it here, for I shall take it up again at the close. There is a considerable sub-conscious process which forces the subject to direct his thought upon the health of the one who is absent, and by an easily understood process the apprehension of misfortune or of death quickly insinuates itself, and all the more if it is supported by critical situations of which it may have knowledge, such as the critical condition of the coachman and the inundations in the first case, and the epidemic of typhoid fever and the knowledge of the ailing condition of Mme. N.'s daughter in the second case.

## VII.

It would be impossible to give all my observations, and to report the details of my evidence would require the whole of a volume with at least the dimensions of the investigations of the London Society for Psychical Research. We shall be satisfied with a sketch of the general results.

We have lived in close contact with a great part of our subjects both French and Roumanian; they are friends, relatives, or people with whom we sustained most cordial relations. I emphasise this fact, for I believe that an off-hand observation without any intimate knowledge of the person observed is altogether without value. Only on this condition of having a thorough knowledge of the person who relates his telepathic hallucinations or his pathological romance can the observation be regarded as scientific. In psychological investigations, and what is still more lamentable in mental and nervous pathology, this fact is unfortunately not taken into account. In this connexion I cannot neglect to express my admiration for my master, P. Janet, on account of the emphasis which he lays, and always recommends others to lay, upon the prolonged and patient study of a subject whether normal or pathological. The observations that I have had occasion to make on the subject of telepathy have taught me the value of this thorough verification, and when I read over my notes on the condition of my subjects and their private life I believe that I can succeed, thanks to them, in explaining the genesis and the meaning of their telepathic sensorial hallucinations.

Living beside them, aided by that important biological factor, chance, throughout the nine years during which I have pursued my observations and investigations in telepathy, I have been able on the one hand to grasp the hallucination in its entirety, and on the other to test and verify its basis of truth or error. Often I have been able in the case of my French friends to catch their hallucinations in the midst of an evening of labor, upon a promenade, or during a visit to the laboratory. Afterwards I endeavored to test the

fact by means of letters or by personal verification. Here I ought to confess that for certain cases of my French subjects the verification was made indirectly and to a certain extent under the direction of the subject, when we were dealing with persons whom we did not know at all and who lived part of the time in the colonies and part in foreign countries, but during the most of their cases lived in Paris or at least in France.

The observations upon French subjects have a capital importance for us, for they demonstrate that the telepathic hallucinations collected by us do not depend exclusively upon any influence of environment or of country. They prove once more that the psychic mechanism of man is about the same everywhere, and that the similarity is the greater when we approach the questions of transcendental metaphysics and the burning questions of death and immortality. I have had the opportunity of making observations in this line upon 3 Germans, 2 Italians, and 4 Spaniards, and while I was unable to apply the rigorous tests which I usually employ, I was enabled to confirm the truth of the paradox which we propounded a few lines above. The apprehension of misfortune and of death, and in general whatever borders on the miraculous, gains credence rapidly, and even choice intellects accept a commonplace narrative as gospel truth.

The acquaintance with the subject is important and even necessary, for in the first place it places checks at our disposal, and in the second place it puts us in the way of explaining the telepathic hallucinations.

As for the matter of proper checks, there is the great difficulty of connexion and relation which only psychologic common sense and the tact of the experimenter can evade or overcome. It is necessary in the first place to take care that the checks be applied promptly instead of allowing long weeks to pass between the steps of verification, for the subject and the object usually end by agreeing in their statements. Differences of days become hours, and hours scarcely lasted minutes! And this is true for all classes of subjects, for there is an interesting nostalgia to be studied in this love of the marvellous in the multitude. Therefore we must have

a system of checks applied promptly, skilfully, and with the greatest prudence. While self-esteem is in general ill-balanced, certainly among women, it becomes more irritable and more irascible in connexion with questions of the marvellous. A blind credulity meets a story told by any gentleman or lady whatever, provided it be well told and have something of the mysterious in its content!

The hallucinations observed by us have been sensorially of four varieties: visual, auditory, tactile, and olfactory; the most numerous, if only table I. be examined, are the visual, 740, and the others follow in their order: auditory hallucinations, 198; olfactory, 55; and lastly tactile, 18. The clearest of all and accompanied by the most details in their content were, in the opinion of all the subjects, the visual hallucinations, and after them the auditory. The person was seen in agony, with a sad countenance, a wound in the hand, his heart pierced by assassins, his legs broken, etc., or perhaps asking for help: he was seen speaking but the words not heard,—an interesting hallucination which so far as we know has not been pointed out by any one before. Among the auditory hallucinations we have verified: voices calling for help, incoherent words barely whispered, cries, counsels, words of tenderness uttered mournfully, musical airs generally in a melancholy strain, etc.

The olfactory telepathic hallucinations consist of olfactory sensations of gunpowder, the odor of the person, the odor of a corpse, an odor characteristic of the house in which the subject was, a favorite perfume, the taste of ether and the taste of chloroform, etc., associated in many cases with other hallucinations, yet having nevertheless this predominant feature. Of the 55 cases collected in Table I. we found 39 pure olfactory hallucinations which were not associated with any other sensorial telepathic hallucination. Gustatory hallucinations are rare: we have met them in 2 cases in 2 French subjects who are not represented in the tables, and which were accompanied by a number of other sensations. The first of the persons in question had the sensation of having a drop of poison on his tongue, the same poison (morphine) that the person at a distance, who was at the point of death, had taken in order to

express by the drop of poison his hopeless condition. In the second case the subject experienced the sensation of thirst, accompanied by the sight of blood. The tactile hallucinations generally consisted of the sensation of touch, of cold sensations in the back, of chills, of kisses, a slight passing breeze, something floating which warned the subject of the existence of some peril, the pressure of a hand, the feeling that some one is looking at your back, or is seizing you by the shoulders, etc.

Tables V., VI., VII., and VIII. contain the classification in the order of their numerical importance of all these different sensations, which are interesting enough to be catalogued.

TABLE V.  
SENSUAL TELEPATHIC HALLUCINATIONS.

QUALITY AND NATURE OF THE HALLUCINATION.	NUMBER OF CASES OF THIS HALLUCINATION FROM TABLE I.
I. Persons seen in agony in various forms.....	178
II. Persons seen with sad and rigid features.....	4
III. Persons seen walking, sad and pensive.....	10
IV. Persons seen at distance, sad and questioning look, face as of one dying .....	69
V. Persons seen at distance, with wound on hand, heart, or face .....	100
VI. Persons assassinated .....	21
VII. Persons seen crushed by a wagon, drowned, killed, strangled, etc. ....	160
VIII. Persons seen asking help with <i>gestures</i> , and <i>struggling</i> ..	78
IX. Persons seen speaking, but the words not heard.....	29
X. The head only seen, detached and shadowy, or some other organ detached but in a significant attitude ....	10
XI. The persons seen dead in a coffin.....	81

In this table we have only summed up the general lines, omitting all the details, each of these 11 classes that we have made up having numerous subdivisions. It is to be noticed that the most numerous cases belong to the state of agony (178) in its manifold forms; the least numerous are the telepathic hallucinations in

which only a detached head was seen like a shadow against a bright background, or merely a separate organ in a significant attitude. The sensations of class IX., when the object was seen speaking, and the sense of the words was understood by the movement of the lips and of the mouth, without having the sound of the words, were relatively numerous: 29. The subject claims that he hears nothing: "I know that he is threatened by a misfortune," said one of them to me, "for the words that he pronounced inform me of his condition." In another case a subject remarked that he saw a mute speaking.

The same observations apply to the auditory, tactile and other telepathic hallucinations; our groups represent types and each contains classes more or less similar.

TABLE VI.  
AUDITORY TELEPATHIC HALLUCINATIONS.

NATURE AND QUALITY OF THE HALLUCINATION	NUMBER OF CASES IN TABLE I.
I. Voice heard asking help under strange conditions . . .	30
II. Incoherent words stammered by one dying . . . . .	17
III. Words barely whispered in the ear, suggesting a being in distress . . . . .	25
IV. Cries of terror and despair . . . . .	29
V. Sweet and tender words spoken in a melancholy tone	6
VI. Music and song in sad strain . . . . .	27
VII. Tender reproaches in a familiar but altered voice . . .	9
VIII. Vague sounds; strange voices . . . . .	19
IX. Sighs accompanied by words and groans . . . . .	11
X. Intimate and tender memories roused by beloved voice of one absent, mingled with reproaches . . . .	12
XI. Counsels on conduct of life given by those dying . . .	7
XII. Spasms, convulsions, sufferings, painful dreams, sad	6

It is to be observed that the most numerous hallucinations are those of classes I., III., IV. and VI.: words asking help, words barely whispered, song heard in melancholy strain, cries of despair, etc., sensations which suggest in a general way the *tonus affectif*, as the Germans would say. It is to be noted that in the two classes

of cases we find the same relative proportion of the classes of hallucinations.

TABLE VII.

## HALLUCINATIONS BOTH TACTILE AND TACTILE-MUSCULAR.

NATURE AND QUALITY OF THE HALLUCINATION	NUMBER OF CASES IN TABLE I.
I. Kisses and customary caresses.....	2
II. A light wind passing .....	1
III. A floating object, warning the subject of a misfortune; vague and indescribable condition.....	2
IV. Familiar pressure of the hand.....	1
V. Familiar gesture.....	5
VI. Feeling that some one is looking at you from behind and touching you .....	1
VII. Sensation as of some one seizing you by the arm....	4
VIII. Sensation of heat, cold, effort, oppression, etc.....	2

The most numerous are the hallucinations consisting of a familiar gesture, and those of class VII., those of contact or of some one seizing you by the arm.

TABLE VIII.

## OLFACTORY TELEPATHIC HALLUCINATIONS.

NATURE AND QUALITY OF THE HALLUCINATION	NUMBER OF CASES IN TABLE I.
I. The peculiar odor of the person, suggesting distress, agony, suffering.....	21
II. The smell of a church; chrysanthemums and funeral flowers.....	9
III. The smell of a corpse; of something decaying, of blood .....	5
IV. Odor familiar to the subject.....	4
V. Favorite perfume, artificial odor.....	3
VI. Taste of drugs, ether, chloroform, medicines.....	8
VII. Indescribable perfumes mingled, suggesting impending grief and misfortune.....	5

I reserve the right to publish sometime all these curious records of telepathic hallucinations. The regret that I cannot bring

them out now comes back in treating of the olfactory hallucinations. Here there is an interesting domain to be made known, especially in regard to what the subjects call the "personal odor." The hallucination coming in the olfactory form suggests the reality of the person. "It is as if he existed," said one subject to me. "He is beside me, I perceive him by the peculiar odor emitted." "Why is this perfume of iris present in the air, with that sweet fragrance that Mme. X. exhales?" said another. "Every breath makes me think of her; by the perfume, and it is her favorite perfume, it is surely she." And this odor or some other fills the atmosphere in which the subject experiences the hallucination, suggesting a peculiar psychic condition of the distant or absent person, mostly a state of suffering, of sorrow, of a painful situation. Of what this peculiar personal odor consists is not to be discussed here; let us be satisfied to say that it exists and that it plays an important part in social life and the realm of the senses.

These hallucinations are mostly accompanied by other associated hallucinations; we have taken into account only the initial impact, the first hallucination, which suggested a whole series of mental activities; in other words, the sensation which had evoked any mental effort whatever. There were, very rarely, different sensorial hallucinations occurring at the same time: an auditory hallucination concurring with a visual one.

Our observations corroborate the predominance of visual hallucinations, a fact moreover clearly brought out by the inquiries of the London Society for Psychical Research.<sup>1</sup> The explanation given by Messrs. Gurney, Myers and Podmore as the true cause of this predominance, emphasising the distance covered by the excitation between the higher ideational centers and the sensorial centers, is a mere hypothesis that has no other quality than its ingenuity. In our opinion the cause is simply due to the fact that most men are dependent on the sense of sight, and that hallucinations are included only within the compass of subjective intellectual phenomena.

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<sup>1</sup> *Op. cit.*, p. 222 and *passim*.

Of these 40 cases in which there was a real agreement, there were 21 visual hallucinations, 10 auditory, 4 tactile, and 5 olfactory, and the time covered by them varied between 6 and 60 hours; and 19 took place before the actual occurrence, and 21 after the existence of the fact that might have occasioned the telepathic hallucination. Let us repeat once more that the predominance is on the side of the visual hallucinations.

[TO BE CONCLUDED.]

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