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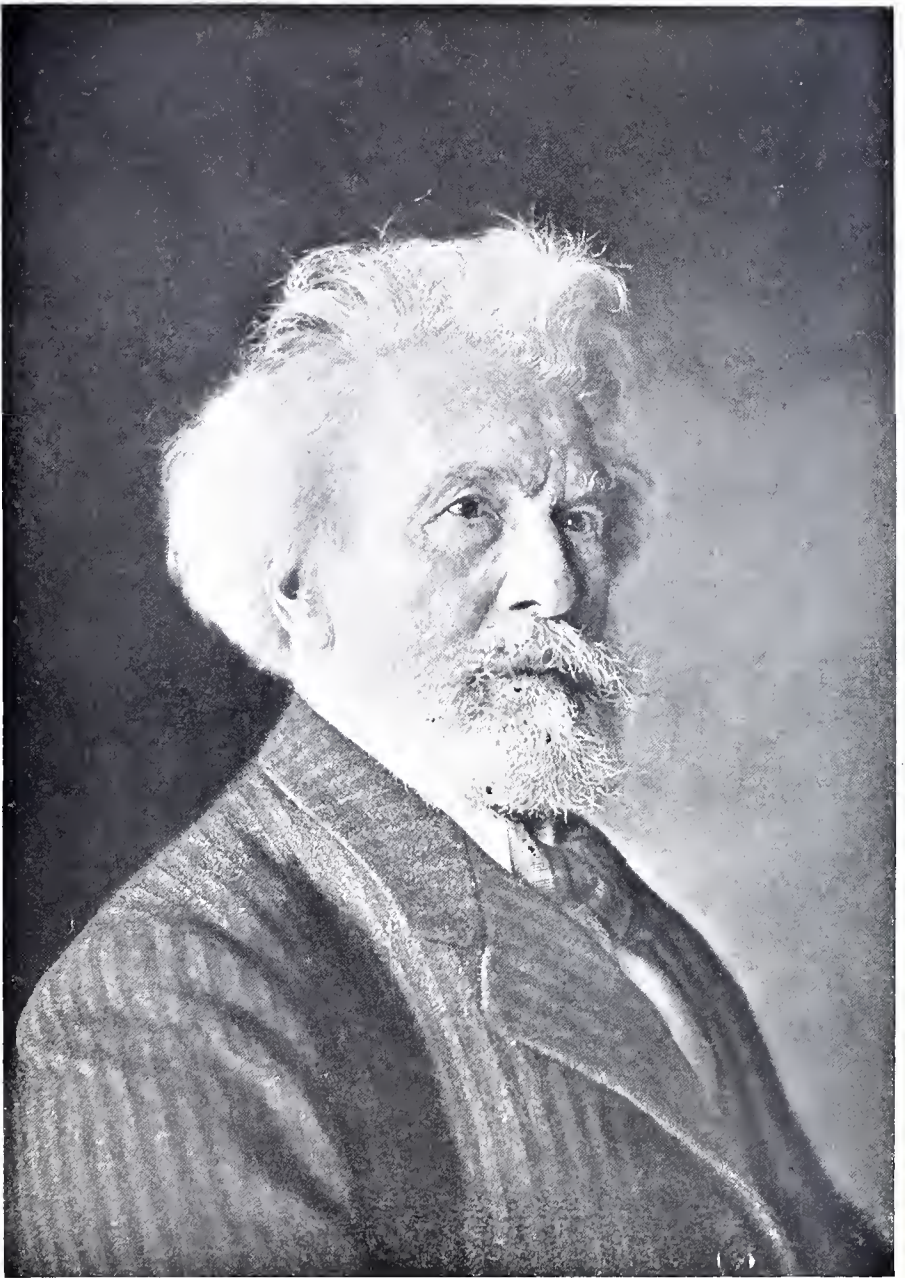
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CAMILLE FLAMMARION.

1922

PROCEEDINGS

OF THE

Society for Psychical Research

PART LXXXIX.

OCTOBER, 1923.

I.

DISCOURS PRÉSIDENTIEL¹

DE MONSIEUR CAMILLE FLAMMARION

Fondateur et premier Président de la SOCIÉTÉ ASTRONOMIQUE
DE FRANCE,

Directeur de l'Observatoire de Juvisy,
Commandeur de la Légion d'Honneur.

MESDAMES, MESSIEURS, CHERS COLLÈGUES.

MON plus vif désir eut été de me rendre personnellement auprès de vous pour vous présenter mes profonds et sympathiques remerciements de l'honneur que vient de me faire la célèbre Society for Psychical Research, mais il me serait extrêmement difficile de m'éloigner en ce moment de Paris et de Juvisy, et je tiens tout d'abord à vous en exprimer mes très sincères regrets. Heureusement, nous pouvons converser ensemble, de loin comme de près, et, en réalité, je suis auprès de vous, par l'esprit et par le cœur.

J'ai lu un grand nombre de discours académiques, et notamment les 24 que la Psychical Society a publiés dans son beau volume des Presidential Addresses, et j'ai

¹The English translation of this Address was read by Sir W. F. Barrett at a General Meeting of the Society on June 26, 1923.

constaté qu'en général celui qui a l'honneur d'être reçu dans le cénacle d'une illustre Société commence son discours de réception en exprimant son humble reconnaissance d'être admis dans une compagnie dont il n'est pas digne. Ce serait assurément mon devoir particulier ici, plus que pour aucun de mes prédécesseurs, puisque je suis, avec mon savant ami Charles Richet et avec le philosophe Henri Bergson, l'un des rares étrangers qui ont été appelés à cette présidence, depuis 41 ans que votre Société existe. J'avoue que je suis un peu ébloui par votre constellation d'astres de première grandeur, où brillent les noms de William Crookes, de Balfour Stewart, d'Arthur Balfour, de William James, d'Oliver Lodge, de William Barrett, de Frederic Myers, d'Henry Sidgwick, de Gerald Balfour et de leurs émules.

Parmi ces discours, la première phrase de celui du spirituel philosophe William James m'a particulièrement frappé, parce qu'elle répondait exactement à mon impression lorsque votre éminent fondateur et ancien président Sir William Barrett est venu dans ma retraite d'astronome solitaire me proposer cet honneur assurément inattendu. J'y ai répondu, comme Sir Oliver Lodge en 1901 : "It is the wish of your Council," mais en ajoutant, comme William James, en 1896, que c'était là . . . un piège à souris, "a mouse-trap," et que quand on y entre on est pris, sans se douter de ce qui vous arrive !

Ai-je une excuse de m'être laissé prendre ? Peut-être. L'année même où cette Société de Recherches a été fondée—en 1882—j'ai fondé moi-même, en France, *l'Astronomie*, Revue des Recherches astronomiques, d'où est sortie, cinq ans après, la Société Astronomique de France, où j'ai eu comme successeurs à la présidence les plus célèbres astronomes de l'Institut, Faye, Janssen, Tisserand, Callandreau, Poincaré, Lippmann, Deslandres, Baillaud, Puiseux, Appell, savants illustres, dignes d'être comparés aux gloires de votre Conseil. En même temps que vous, je travaillais donc à la fondation d'une œuvre ayant pour mission d'élever les hommes au-dessus des intérêts matériels et de les inviter à vivre dans la contemplation de l'infini.

Animés du même esprit, nous voulions, vous comme moi, le progrès et le développement des connaissances humaines, sachant que :

Croire tout découvert est une erreur profonde ;

C'est prendre l'horizon pour les bornes du monde.

Peut-être me rattachai-je à vous par des liens encore plus anciens. En 1869, vos prédécesseurs en recherches psychiques avaient fondé à Londres la Société dialectique, avec le concours de Alfred Russel Wallace, de l'ingénieur Varley, du Prof. De Morgan, de William Crookes, qui me demanda un article astronomique pour son *Quarterly Journal of Science*, et précisément aussi, en cette même année, prononçant un discours, le jour de ses obsèques, sur la tombe d'Allan Kardec, grand maître du Spiritisme en France, j'ai pris soin de dire que le spiritisme ne doit pas être considéré comme une religion, mais représente l'aurore d'une science nouvelle, tout entière à créer. L'affaire de la science n'est pas la croyance, mais l'investigation.

Ainsi, mes chers Collègues, il me semble que nous sommes frères depuis longtemps et que nous marchons la main dans la main.

Un souvenir plus ancien encore se rappelle en ce moment à ma pensée. En 1861, j'étais élève astronome à l'Observatoire de Paris, et je passais tous les jours près de l'Odéon, pour revenir au domicile de mes parents habitant l'intérieur de Paris, et comme tous les amateurs de livres, je m'arrêtais sous les galeries de ce théâtre pour feuilleter les publications intéressantes. J'en ouvre une, et mes yeux tombent sur une page portant pour titre *Pluralité des mondes*. Or, précisément, à cette époque, je travaillais à mon ouvrage sur ce sujet, publié l'année suivante. Je regarde le titre du volume et je lis *Le Livre des Esprits*, par Allan Kardec. Le chapitre qui m'intéressait était présenté comme "dicté par des Esprits." Cette énigme pouvait intriguer un étudiant de 19 ans. J'allai rendre visite à l'auteur, qui m'inscrivit (le 15 Novembre 1861) dans sa Société parisienne des Études spiritistes, et j'assistai aux réunions hebdomadaires où s'exerçaient diverses formes de médiumnité, notamment

l'écriture automatique. J'essayai moi-même, et, de semaine en semaine, j'écrivis, dans une demi-conscience, plusieurs dissertations astronomiques signées Galilée, que Allan Kardec a publiées plus tard dans son livre *La Genèse*. Un étudiant plus âgé que moi, qui se fit auteur dramatique et membre de l'Académie française, Victorien Sardou, s'exerçait, de son côté, à un autre genre de médiumnité, et dessinait des habitations imaginaires sur la planète Jupiter, signées Bernard Palissy, dessins fort curieux que l'on peut voir dans mon ouvrage sur les *Forces naturelles inconnues*. A cette époque, les astronomes pensaient que Jupiter était un monde habitable, supérieur à la Terre par son printemps perpétuel et ses années douze fois plus longues que les nôtres. Je ne tardai pas à remarquer que nos communications médiumniques reflétaient simplement nos idées personnelles, et que Galilée pour moi et les habitants de Jupiter pour Sardou étaient étrangers à ces productions inconscientes de notre esprit.

C'était en 1861, au temps de Napoléon III. et de la reine Victoria. C'est déjà loin ; mais nous pouvons remonter plus haut encore.

Puisqu'on l'a rappelé récemment à la fête officielle dont les Savants Français m'ont honoré à la Sorbonne au mois de juin dernier, je me permettrai de me souvenir ici que le problème de la survivance de l'âme m'a préoccupé depuis ma plus tendre enfance. Le Ministre Reibel, représentant le Gouvernement, a raconté que dans le village où je suis né, voyant, à l'âge de sept ans, passer un convoi funèbre, j'ai interrogé un camarade plus âgé qui m'apprit qu'on allait enterrer un homme mort et que je lui ai répliqué : " Cesser de vivre, ce n'est pas possible . . . on ne meurt pas." En rapportant ce souvenir dans mes Mémoires, j'ajoutais : " J'ai rêvé plusieurs heures, plusieurs jours, plusieurs semaines, plusieurs mois ; la conviction que la mort n'existe pas a continué de dominer mon esprit ; nous ne pouvons pas être détruits."

* * * *

Si je rappelle ces souvenirs, chers Collègues, c'est pour m'excuser d'avoir accepté cette présidence et pour vous

dire que nous travaillons dans la même voie. Vos fondateurs étaient Sir William Barrett et Frédéric Myers, auxquels ne tardèrent pas à s'associer Henry Sidgwick, Balfour Stewart, Edmond Gurney, Stainton Moses, Massey, Podmore, Sir William Crookes, Sir Oliver Lodge, Arthur Smith et d'autres chercheurs. Le premier de ces fondateurs est toujours là, dans son infatigable activité, et nous admirons tous sa permanente jeunesse. Le nom de Frédéric Myers reste uni au sien comme le symbole du travailleur indépendant auquel la science métapsychique a dû ses principaux progrès. Vous avez tenu, Messieurs, à appliquer dès l'origine à vos recherches les principes sévères et absolus de la méthode expérimentale proclamée par votre Baëon.

Vos progrès ne se sont pas réalisés sans luttes et sans obstacles. Personnellement, je les ai affrontés de près, même à Paris, là surtout peut-être, car dans le pays de Voltaire, on a un peu l'habitude de se moquer de tout. Tandis que vous luttiez contre Faraday, nous luttions contre Babinet. Ces deux physiciens avaient tort de nier. Tout le monde sait qu'il y a des imposteurs, des farceurs, des menteurs, et également des crédules, des illusionnés, des faibles d'esprit, et même des imbéciles. Est-ce une raison pour ne pas étudier les problèmes non résolus ?

Plusieurs d'entre vous peuvent se souvenir d'un écrivain charmant, le Prof. de Morgan, le subtil auteur du Budget of Paradoxes. J'ai été en relation avec lui dans le cours des années 1864-1867, lorsque je rédigeais le Cosmos. Nous pouvons dire avec lui, comme avec mon ami regretté A. de Rochas, auquel notre science doit tant d'observations ingénieuses, que : refuser de s'occuper de certains phénomènes quand on est convaincu de leur réalité, par crainte du *Qu'en dira-t-on*, c'est à la fois s'abaisser soi-même en obéissant à une faiblesse de caractère méprisable, et trahir les intérêts de l'humanité tout entière. Nul ne saurait, en effet, prévoir les conséquences d'une découverte, quand il s'agit de forces nouvelles. L'ambre des Grecs, qui a donné son nom à l'électricité, ne paraissait qu'un jeu d'enfant, et les grenouilles de Galvani ne paraissaient qu'une curiosité insignifiante.

La connaissance des forces de la nature a avancé graduellement, lentement, avec des flux et des reflux, depuis les temps les plus anciens, et sous toutes les latitudes, sans distinction de patries. Les séparations géographiques sont aussi inexistantes devant la science que les limites des constellations dans la carte du ciel. Il n'y a pas de séparations entre les peuples, pour les astronomes—même pour les aéronautes. Dans mes voyages aériens, j'ai plus d'une fois traversé des frontières, et j'ai toujours eu la plus grande difficulté à les discerner sur le sol glissant à mes pieds. Cependant, il est agréable de rencontrer des compatriotes partout où l'on va, et je suis particulièrement heureux et fier de saluer ici mes prédécesseurs en cette noble présidence, MM. Bergson et Richet, qui, depuis longtemps aussi, font planer les études de l'esprit au-dessus de tous les fugitifs intérêts matériels. Tous les présidents de cette Association ont suivi le même programme philosophique.

On travaille partout à la recherche de la vérité ; mais la branche des études psychiques est encore la plus faible, la plus jeune. L'arbre de la science classique est un chêne qui domine tout supérieurement, et la science nouvelle n'est qu'un roseau. Mais ce roseau deviendra un arbre, et le vieux chêne se transformera, au point de n'être plus du tout le même arbre, avant cent ans seulement. Nous avons encore quelques luttes à soutenir contre les habitudes invétérées. Tout est à renouveler.

Votre association scientifique, si indépendante, si loyale, si active, a joué un rôle important dans cette évolution, et elle est universellement estimée. Pour ma part, dans tous les ouvrages psychiques que j'ai écrits depuis sa fondation, je me suis fait un devoir et un plaisir de célébrer ses travaux, ses conquêtes, ses précieuses observations.

Avouons qu'il faut avoir un courage souvent mal récompensé pour agir envers et contre les opinions dominantes, qui sont celles de l'ignorance.

Nous savons que la science classique n'a pas découvert toute la vérité contenue dans l'univers et que presque tout reste, au contraire, à découvrir. Non seulement

toutes les forces de la nature ne sont pas connues, mais la plupart échappent à nos sens imparfaits et incomplets. Ce qu'il importe de ne jamais perdre de vue, c'est l'appréciation exacte de la nature de nos connaissances. Les analystes scientifiques savent, depuis plus d'un siècle, que l'observation s'arrête à l'apparence, au phénomène sensible, sans jamais pouvoir pénétrer la substance, ni rien connaître de l'essence réelle des choses. Malebranche avait établi ce principe avant Emmanuel Kant. Mais la science avance graduellement dans ses investigations. Elle avance vite, surtout actuellement par les applications merveilleuses des ondes invisibles, de la télégraphie et de la téléphonie sans fil. Avant un demi-siècle les découvertes dépasseront autant nos connaissances actuelles que l'aviation et la radiotéléphonie de 1923 dépassent l'aérostation et la télégraphie d'il y a 50 ans.

* * * *

La curiosité est-elle un défaut ? Je ne le pense pas, quoique l'on ait fait un crime à notre mère Eve d'avoir voulu goûter au fruit défendu, malgré la défense de Jéhovah, ou plutôt, sans doute, à cause de cette défense ! La curiosité est la source de toutes les découvertes, et nous ne pouvons qu'y applaudir. Pourtant d'éminents savants ne ressentent pas ce sentiment subtil, et même le désapprouvent. Un jour, le fondateur actuellement survivant de votre belle Société psychique, l'éminent professeur Sir William Barrett, ayant eu des preuves personnelles des transmissions psychiques à distance, amena la conversation sur ce sujet avec le célèbre physiologiste allemand Helmholtz, alors à Dublin.—“ Je ne puis y croire, lui répliqua celui-ci ; ni le témoignage de tous les membres de la Société Royale, ni même celui de mes propres sens ne pourraient m'amener à admettre la transmission de pensée d'une personne à une autre, en dehors de l'opération de nos sensations normales, car c'est évidemment impossible.” Nous pouvons remarquer avec Sir William Barrett que Laplace raisonnait plus sagement en distant, dans sa *Théorie analytique des probabilités* : “ Nous sommes si loin de connaître tous les agents de la nature et leurs divers modes d'action qu'il serait peu philosophique de

nier les phénomènes uniquement parce qu'ils sont inexplicables dans l'état actuel de nos connaissances. Seulement, nous devons les examiner avec une attention d'autant plus scrupuleuse qu'il paraît plus difficile de les admettre ; et le calcul des probabilités devient indispensable pour déterminer jusqu'à quel point il faut multiplier les observations afin d'obtenir en faveur des agents qu'elles indiquent une probabilité supérieure aux raisons que l'on peut avoir, d'ailleurs, de ne pas les admettre." ¹

Ces réflexions de Laplace s'appliquent exactement à nos recherches métapsychiques et nous confirment dans notre interprétation de la valeur du nombre des observations. Remarquons que l'illustre géomètre les a émises à propos du Magnétisme animal et de la baguette divinatoire, alors particulièrement discutés.

Or, la continuité des études scientifiques nous a conduits à penser que tout est dynamisme. Le dynamisme cosmique réagit les mondes. Newton lui a donné le nom d'attraction. Mais cette interprétation est insuffisante : s'il n'y avait que l'attraction dans l'univers, les astres ne formeraient qu'un seul bloc, car elle les aurait réunis depuis longtemps, depuis toujours ; il y a, de plus, le mouvement. Le dynamisme vital régit les êtres : dans l'homme évolué, le dynamisme psychique est constamment associé au dynamisme vital. Au fond, tous ces dynamismes n'en font qu'un : c'est l'esprit dans la nature, sourd et aveugle pour nous dans le monde immatériel et même dans l'instinct des animaux, inconscient dans la majorité des œuvres humaines, conscient dans un petit nombre.

J'ai écrit dans *Uranie* (1888) : "Ce que nous appelons matière s'évanouit lorsque l'analyse scientifique eroit la saisir. Nous trouvons comme soutien de l'univers et principe de toutes les formes, la force, l'élément dynamique. L'être humain a pour principe essentiel l'âme. *L'univers est un dynamisme intelligent inconnaissable.*"

J'ai écrit dans *les Forces Naturelles inconnues* (1906) : "Les manifestations psychiques confirment ce que nous

¹ Laplace. *Théorie analytique des probabilités*. Introduction.

savons d'autre part, que l'explication purement mécanique de la nature est insuffisante et qu'il y a dans l'univers autre chose que la prétendue matière. Ce n'est pas la matière qui régit le monde : *C'est un élément dynamique et psychique.*"

Depuis les années où ces lignes ont été écrites, le progrès des observations psychiques les a surabondamment confirmées. Votre Société est à la tête de ce mouvement.

Mais revenons au professeur Barrett et à Helmholtz.

Helmholtz n'était pas curieux. Comme beaucoup d'autres, il avait sur certains points l'esprit hermétiquement fermé. Nous entendons assez souvent des hommes relativement intelligents nous dire : Je le verrais que je ne le croirais pas. Il y en a, d'ailleurs, qui n'aiment pas se donner la peine de réfléchir. Le professeur Barrett raconte aussi que Sir W. Rowan Hamilton, après avoir publié sa fameuse découverte mathématique des quaternions, en parla à l'astronome royal Airy et voulut lui exposer cette théorie. Après quelques instants, Airy l'arrêta : "Je ne vois pas cela du tout" fit-il. "J'ai étudié le sujet pendant plusieurs mois," répliqua Hamilton, "et je suis certain du théorème." "Oh !" répondit Airy, "je viens d'y penser pendant deux ou trois minutes et je vois qu'il n'y a rien là." Il en est souvent ainsi dans nos études.

J'ai eu moi-même l'occasion de voir à Greenwich le Directeur de l'Observatoire George Biddel Airy, et j'admira sa verte vieillesse ; mais je ne pouvais m'empêcher de penser à la découverte de Neptune par Le Verrier. Cette découverte ne serait pas française si Airy avait été plus curieux, car il avait le Mémoire d'Adams dans son tiroir depuis plusieurs mois lorsque Le Verrier annonça sa découverte à l'Académie des Sciences le 31 Août 1846.

D'ailleurs, Le Verrier avait fait cette découverte porté par sa passion mathématique, et, en dehors des mathématiques, n'était pas très curieux lui-même. Un soir, de l'année 1876, j'observais, au grand équatorial de l'Observatoire de Paris, une étoile double qui, par hasard, était voisine de la planète Neptune. Par curiosité, après avoir mesuré mon étoile double, je dirigeai la lunette sur Neptune, et cherchai à en apprécier le diamètre. L'illustre

Directeur était monté, ce soir-là, sur la terrasse, et me questionna sur mes observations : “ Vous mesurez vos étoiles doubles ? ” fit-il. “ Oui, Monsieur le Directeur, mais savez-vous ce que j’ai en ce moment dans le champ ? . . . Votre planète Neptune ! Elle est curieuse ; elle est bleue. Voulez-vous la voir ? ” — “ Oh ! non, ” me répondit-il. “ Du reste, je ne l’ai jamais vue. ”

Etait-ce une boutade ? Etait-ce vrai ? Ce qui est certain, c’est que l’astronomie physique ne l’intéressait pas du tout.

Tout le monde sait que Le Verrier et Adams ont découvert par le calcul la position de Neptune dans le ciel, et que c’est un jeune astronome de Berlin, Galle, qui, sur l’invitation de Le Verrier, dirigea une lunette vers cette région du ciel dont il construisait précisément la carte, et ayant reçu une lettre de Le Verrier, le 23 Septembre, constata le soir même, la présence de l’astre inconnu.

L’Astronomie, la noble science du ciel, n’est pas seulement l’étude aride des mouvements célestes et des lois de la gravitation. Ce n’est pas seulement la position des astres dans l’espace infini, qui nous intéresse, c’est encore, et c’est surtout, leur constitution, leur nature ; nous ne voulons pas seulement savoir *où ils sont*, mais *ce qu’ils sont*. L’astronomie physique est le complément de l’astronomie mathématique. Qu’est-ce que l’Univers ?

L’homme est un atome pensant au sein de l’infini et de l’éternité, vivant, sur la Terre, entre l’infiniment grand et l’infiniment petit. Les dernières découvertes astronomiques sont plus éloquentes que tous les poèmes. Qu’est-ce que tous les peintres, tous les poètes devant la réalité astronomique ?

Vos travaux ont apporté à la science les plus heureux résultats. Le 23 Avril 1887, votre Président le Professeur Balfour Stewart, membre de la Société Royale, a fondé avec vous un Comité spécial dans le but de vérifier “ the reality of such alleged spiritualistic phenomena as may be brought before them, ” comité composé de William Crookes, Oliver Lodge, William Barrett, E. Gurney et F. Myers. Tout le monde connaît aujourd’hui les

conquêtes obtenues par ces investigateurs indépendants. Les faits dont vous avez établi l'authenticité sont irrécusables. Il y a, assurément, des observations qui paraissent contradictoires ; mais mille faits négatifs n'infirmement pas un seul fait positif.

* * * *

Nous venons de dire que l'homme est un atome pensant, vivant au sein de l'infini, et que les découvertes astronomiques sont plus éloquents que tous les poèmes.

Cette réalité sublime, personne ne s'en doutait au temps d'Homère, au temps d'Hésiode, au temps de Pythagore, au temps de Moïse, au temps de Jésus-Christ, ni même au temps de Copernic. Hésiode croyait donner une grande idée de l'étendue de l'univers en disant que l'enclume de Vulcain avait mis 9 jours et 9 nuits à tomber du ciel sur la Terre, et qu'il lui en faudrait autant pour tomber jusqu'aux enfers. On peut calculer que cette prétendue hauteur du ciel ne représente guère plus que la distance de la Lune, l'astre le plus proche de nous ; elle est de 400.000 kilomètres et notre satellite gravite à 384.000, trente fois seulement la largeur de notre globe. Au temps de Copernic, les étoiles étaient supposées appartenir à une sphère équidistante de la Terre. Les comètes étaient encore des météores terrestres. Or, pensons, jugeons.

Le Soleil est 400 fois plus loin de nous que la Lune ; la dernière planète de notre système est 30 fois plus loin de nous que le Soleil ; l'étoile la plus proche est 9330 fois plus loin ou à 280.000 rayons de l'orbite terrestre. Ces mesures sont d'hier, historiquement parlant, ne datant même pas de cent ans. Le beau chant de la Bible : *Coeli enarrant gloriam Dei*, est centuplé dans la pensée moderne. Un palais prodigieux s'est substitué à une chétive cabane.

Supposons qu'au sein du spectacle silencieux d'une nuit étoilée notre esprit s'élève dans la contemplation céleste. Nous savons aujourd'hui que chaque étoile est un soleil et que la plus proche plane à une distance telle que la lumière, à la vitesse de 300.000 kilomètres par seconde, emploie 4 ans et 3 mois à parcourir l'espace qui nous en

sépare. Nous savons aussi que le Soleil est 1.300.000 fois plus volumineux que notre planète, et que les étoiles sont de même ordre. Ainsi notre esprit se forme une première idée des espaces célestes et des grandeurs.

Parmi les étoiles qui frappent le mieux nos regards dans les belles nuits d'été, choisissons l'une de celles que toutes les contemplatrices du ciel ont le plus souvent remarquée, la radieuse Véga de la Lyre, de première grandeur. Elle plane à 237 millions de kilomètres, à 25 années de lumière. C'est une splendide étoile blanche, dans laquelle l'hydrogène domine, plus blanche que notre soleil d'or. Pouvons-nous imaginer atteindre cette distance, par la pensée, en quelques secondes ? Peut-être.

Soit ! Allons plus loin dans la même direction. Regardons cette petite constellation de la Lyre. Elle est principalement composée de 5 étoiles (4 en losange formant une petite lyre dont Véga serait la tête). Entre les deux plus éloignées (β et γ de 3^e grandeur), il y a une nébuleuse particulièrement curieuse, en forme d'anneau. Elle est invisible à l'œil nu, mais en dirigeant notre regard vers ce point du ciel, nous la traversons. Au télescope, elle est "splendidissima." C'est un anneau elliptique (sans doute circulaire, vu obliquement) avec une étoile au milieu de son disque central. L'analyse spectrale y montre des vapeurs de fer et de zinc. C'est une genèse de système de monde en formation, qui gît à une distance immense au-delà de Véga.

Non loin de là ; notre regard peut plonger vers une autre nébuleuse, ou plutôt vers un amas d'étoiles, le célèbre amas d'Hercule, voisin de la Lyre ; la merveille des merveilles. C'est une agglomération de soleils. . . . De combien de milliers ? . . . Une pose photographique d'une minute en enregistre 820, une pose de six minutes 35.000. . . . C'est inénarrable !

Sa distance paraît être de cent mille années de lumière—946 quadrillions de kilomètres,—univers lointain, différent du nôtre, dont le diamètre est comparable à celui de notre Voie Lactée : mille années de lumière ! . . .

Eh bien, de Véga nous avons franchi, par la nébuleuse annulaire de la Lyre et par l'amas d'Hercule, des milliards

et des milliards de kilomètres, nous avons traversé d'immenses déserts sidéraux, nous avons parcouru des régions stellifères, nous avons salué, au passage, des mondes défunts et des cimetières d'astres, des tombes et des berceaux, et toujours devant nous les espaces sans fin se sont succédé . . . 384.000 kilomètres d'ici à la Lune, 4.500.000.000 d'ici à Neptune, 237.000.000.000.000 d'ici à Véga, 946.000.000.000.000.000 d'ici à l'univers lointain d'Hercule, abîmes après abîmes, immensités après immensités, la Terre est perdue de vue depuis longtemps, et tout notre système planétaire et le Soleil s'est éloigné au rang d'étoile imperceptible.

Où sommes-nous ?

Nous n'avons pas avancé d'un seul pas. Nous sommes toujours au centre de l'infini.

Pasteur était dans le vrai en rappelant dans son discours de réception à l'Académie Française les aspirations de la curiosité humaine cherchant à tout connaître : "Qu'y a-t-il au-delà? L'esprit humain, poussé par une force invincible, ne cessera jamais de se demander : "Qu'y a-t-il au-delà? Veut-il s'arrêter soit dans le temps, soit dans l'espace? Comme le point où il s'arrête n'est qu'une grandeur finie, plus grande seulement que toutes celles qui l'ont précédée, à peine commence-t-il à l'envisager, que revient l'implacable question et toujours, sans qu'il puisse faire taire le cri de sa curiosité. Il ne sert de rien de répondre, au-delà sont des espaces, des temps ou des grandeurs sans limites. Nul ne comprend ces paroles. Celui qui proclame l'existence de l'infini, et personne ne peut y échapper, accumule dans cette affirmation, plus de surnaturel qu'il n'y en a dans tous les miracles de toutes les religions; car la notion de l'infini a ce double caractère de s'imposer et d'être incompréhensible."

Après l'étendue, incommensurable et sans bornes, considérons les grandeurs.

Si nous prenons le globe terrestre comme terme de comparaison, nous voyons que :

Jupiter est 1295 fois plus gros que la Terre ;

Le Soleil est 1.300.000 fois plus gros que la Terre.

C'est la proportion d'une boule de 18 centimètres de

diamètre pour la Terre, d'une boule de 2 mètres pour Jupiter et d'une coupole de 20 mètres pour le Soleil (celle du Panthéon de Paris).

On est arrivé récemment malgré d'extrêmes difficultés, à mesurer le diamètre de quelques étoiles, et l'on a trouvé :

Pour Arcturus 24 fois le Soleil.

Pour Bételgeuse, 248 fois le Soleil.

Pour Antarès 460 fois le Soleil. Donc 500,000,000 fois la Terre.

C'est-à-dire que, dans la proportion précédente, le soleil Antarès serait représenté par un dôme de 9 kilomètres de diamètre.

Qu'est-ce que le monde terrestre à côté du monde d'Antarès ? Et que peut être le système d'Antarès ? Vous pouvez observer cette étoile du Scorpion, rouge et rutilante, les beaux soirs d'été, et découvrir à son contact, un petit compagnon vert émeraude de 7^e grandeur, soleil vert associé à un soleil rouge. Et quel soleil!!!!

Ces grandeurs nous stupéfient. Nous avons peine à nous les représenter. Que dirons-nous de l'étendue des amas stellaires et des nébuleuses !

Pour ces valeurs numériques, nous ne pouvons plus nous limiter aux évaluations kilométriques. Qu'est-ce qu'un kilomètre ? Que sont les 12.742 kilomètres du diamètre de la Terre devant les horizons infinis que nous considérons ici ? Rien ou à peu près. L'unité des mesures célestes n'est plus le kilomètre, ni le diamètre terrestre, ni la distance d'ici au Soleil (de 149.500.000 kilomètres) : c'est trop peu. Cette unité de mesure est le *parsec*, c'est-à-dire la parallaxe d'une seconde, la distance de laquelle on verrait le rayon de l'orbite terrestre (149.500.000 kilomètres) sous l'angle d'une seconde (l'épaisseur d'un cheveu éloigné à vingt mètres de l'œil). Cette longueur égale 30.800 milliards de kilomètres ou 3,26 années de lumière.

Jugeons, si nous le pouvons. Nous avons vu, tout à l'heure, que le diamètre de l'amas d'Hercule est estimé à mille années de lumière ou 308 parsecs. Ce diamètre est de l'ordre de celui de la Voie Lactée, composée de

millions de soleils, dont celui qui nous éclaire n'est qu'une modeste étoile.

Certaines nébuleuses sont incomparablement plus vastes que l'amas d'Hercule.

Dans la célèbre nébuleuse australe connue sous le nom de Nuée de Magellan, cinq amas globulaires de la même grandeur apparente se montrent en la région nord et font, sans aucun doute, partie du Grand Nuage. Leur distance a été estimée par l'étude des Céphéides de cette région. Le diamètre moyen de ces cinq amas est de 1',8, et leur parallaxe a été calculée de 0'',000029, ce qui correspond à 35000 parsecs ou 110,000 années de lumière.

Le rayon lumineux qui nous en arrive aujourd'hui est donc parti à une époque où l'humanité terrestre en était encore à l'âge de la pierre. Quel sera l'état de l'humanité lorsque le rayon qui s'envole actuellement de cette nuée céleste arrivera ici ?

Remarquons que l'on détermine aujourd'hui la position d'un astre dans l'espace avec la précision de l'épaisseur d'un cheveu vu à mille mètres de distance.

Et les masses ! Ne vient-on pas de peser une étoile binaire spectroscopique de la Licorne dont la masse est 160 fois supérieure à celle du Soleil, c'est-à-dire, surpasse de 5 millions de fois le poids du globe terrestre !

Or, tous ces univers lointains sont en mouvement de translation, en mouvement rapide.

Comment nous représenter ces mouvements ? Que penser du mouvement fantastique, inimaginable, de ces créations sidérales ?

Telle nébuleuse en spirale vient d'être mesurée tournant sur elle-même en 45.000 ans, telle autre en 58.000, telle autre en 85.000, telle autre en 160.000. . . .

Les vitesses de translation révèlent 800, 900, 1000 et jusqu'à 1200 *kilomètres par seconde*, pour certaines nébuleuses en spirale. 1.200.000 mètres par seconde ! Figurons-nous, si nous en sommes capables, une formation cosmique large de millions et de millions de kilomètres, se transportant avec cette vitesse au sein du vide infini . . . non pas une nébuleuse, mais dix, cent, mille, un million, oui, un million de nébuleuses voguant dans tous les sens . . .

animées de vitesses les plus variées, depuis 50 jusqu'à 100, 500, 700, 1200 kilomètres *par seconde* ! . . .

Le Grand Nuage de Magellan, qui contient 278 nébuleuses, s'éloigne de nous à la vitesse de 560 kilomètres par seconde, et le Petit Nuage à la vitesse de 603.

L'aspect de l'univers est entièrement transformé, métamorphosé, dans la pensée humaine. Qu'est-ce que l'immobilité silencieuse apparente de la nuit étoilée ?

Notre Voie Lactée elle-même dans laquelle le Soleil lui-même n'est qu'une faible étoile, paraît se déplacer dans l'immensité au taux de 600.000 mètres par seconde, emportant dans son cycle, le soleil et son système, notre minuscule Terre et ses destinées, en ajoutant un 14^e mouvement aux 13 que nous connaissons déjà.

Et qu'est-ce que toutes ces vitesses ? A quel repère fixe les rapportons-nous ? . . . A aucun !

Et les immenses nébuleuses noires ? Et les astres obscurs ? Et les solcils éteints ? Et les mondes défunts ? Et tout l'invisible qui peuple anonymement l'immensité sidérale ?

Nous venons de prendre une idée des étendues, des grandeurs et des vitesses. C'est l'infiniment grand pour l'homme terrestre. Descendons maintenant dans *l'infiniment petit*.

Revenons ici, à Pascal, à sa définition célèbre du ciron microscopique :

“ Qu'un ciron offre dans la petitesse de son corps des parties incomparablement plus petites, des jambes avec des jointures, des veines dans ces jambes, du sang dans ces veines, des humeurs dans ce sang, des gouttes dans ces humeurs, des vapeurs dans ces gouttes ; que, divisant encore ces dernières choses, l'homme épuise ses forces en ses conceptions, et que le dernier objet où il peut arriver soit maintenant celui de notre discours ; il pensera peut-être que c'est là l'extrême petitesse de la nature. Je veux lui faire voir là-dedans un abîme nouveau ; je veux lui peindre non seulement l'univers visible, mais l'immensité qu'on peut concevoir de la Nature, dans l'enceinte de ce raccourci d'atomes. Qu'il y voie une infinité d'univers,

dont chacun a son firmament, ses planètes, sa terre, en la même proportion que le monde visible ; dans cette terre des animaux, et enfin des cirons, dans lesquels il retrouvera ce que les premiers ont donné, et trouvant encore dans les autres, la même chose, sans fin et sans repos, qu'il se perde dans ces merveilles, aussi étonnantes dans leur petitesse que les autres par leur étendue, car qui n'admira que notre corps, qui tantôt n'était pas perceptible dans l'univers, imperceptible lui-même dans le sein du tout, soit à présent, un colosse, un monde, ou plutôt un tout, à l'égard du néant où l'on ne peut arriver ?

“ Car enfin qu'est-ce que l'homme dans la nature ? Un néant à l'égard de l'infini, un tout à l'égard du néant : un milieu entre rien et tout. Infiniment éloigné de comprendre les extrêmes, la fin des choses et leur principe sont pour lui invinciblement cachés dans un secret impénétrable.”

Ainsi parlait Pascal au XVII^e siècle, Les découvertes du vingtième siècle sur les atomes nous ont ramenés dans sa sphère de méditation en montrant l'absolue réalité, et l'étude de la lumière nous a conduits à exprimer l'échelle de l'univers en unités optiques qui descendent depuis les étendues incommensurables dominant la longueur de l'année-lumière (9 trillions 467 milliards de kilomètres) devenue le mètre des mesures sidérales, jusqu'au milliardième de millimètre, qui exprime les longueurs d'onde du spectre solaire.

L'infiniment petit est peut être plus difficile à concevoir que l'infiniment grand. Que l'espace soit sans bornes, en n'importe quelle direction, que nous puissions voyager en esprit, avec n'importe quelle vitesse, pendant l'éternité, sans approcher d'aucun terme, nous le comprenons. Le contraire nous est clairement inadmissible, puisque quelle que soit la barrière que nous imaginons, notre esprit saute par dessus. Mais l'infiniment petit ! Considérons les feuilles d'or, par exemple. Les batteurs d'or fabriquent des feuilles dont l'épaisseur n'est que le dixième du micron, c'est-à-dire le dixième du millième de millimètre. Ils s'arrêtent

là parce que, pratiquement, ils ne peuvent pas aller plus loin. Le diamètre des atomes de l'or qui compose ces feuilles est donc inférieur au dixième de micron, et leur masse inférieure à la quantité d'or qui emplit un cube de ce diamètre, c'est-à-dire 1 cent-milliardième de milligramme. Ajoutons, avec M. Jean Perrin, que la masse de l'atome d'hydrogène est environ 200 fois plus petite, et si faible qu'il en faut 20 trillions pour constituer un milligramme. La discussion conduit même à conclure que les diamètres des atomes sont inférieurs au millionième de millimètre, et leur masse au cent-millionième de trillionième, de gramme. . . . Il paraît, d'après des calculs rigoureux et des expériences très précises, qu'un milligramme de radium, contient deux millions de trillions d'atomes. . . . C'est l'invisible dans l'invisibilité, l'extra-invisible dans l'extra-invisibilité,—et j'ajouterai : l'incompréhensible dans l'incompréhensibilité.

Arrêtons-nous. Je prie les auditeurs qui m'ont suivi jusqu'ici de m'exeuser de les avoir entraînés aussi loin. Mais c'est l'éblouissement même de la splendeur de la vérité.

Maintenant, pensons que dans cet univers, du plus formidable des mondes au plus minuscule des atomes, tout est en activité, en mouvement, en vibration.

* * * *

Dans la contemplation des grandeurs astronomiques résumées tout à l'heure, nous avons été transportés un instant à travers l'infini de l'espace et du temps, et nous avons senti que l'Astronomie est la première et la plus importante de toutes les sciences, parce qu'elle nous apprend quelle place nous occupons dans la création et comment l'univers est constitué : ceux qui l'ignorent vivent sans savoir où ils sont. Mais la connaissance de l'univers matériel ne suffit pas à une instruction qui souhaite être complète. Les recherches sur la nature et la destinée de l'âme humaine, m'ont toujours paru associées directement à la connaissance astronomique. D'ailleurs le ciel a toujours été associé aux vues religieuses sur la vie future. Les études psychiques se présentent à nous comme le complément naturel de la connaissance du ciel.

La pluralité des mondes habités pose devant notre pensée, en même temps que le spectacle de la vie universelle, le problème de la pluralité des existences de l'âme. Sur la planète que nous habitons, la vie est le but suprême, impérieux, auquel tout obéit. Chaque étoile est un soleil. Les systèmes de mondes sont innombrables. Que devient l'âme après la vie terrestre ? Existe-t-elle indépendamment ? N'est-ce pas, comme le prétendent les matérialistes, une fonction du cerveau, qui naît et croît avec lui, et s'éteint au dernier soupir ? La connaissance de l'âme nous importe autant que celle de l'univers et doit faire partie de la science intégrale. Les diverses religions ont affirmé, jusqu'ici, avoir le monopole de cette étude et ont pris la juridiction de l'autre monde. Les Asiatiques, les Grecs, les Egyptiens, les Hébreux, les Chrétiens, les Musulmans, les diverses écoles spiritualistes modernes ont décrit les conditions de la vie future, chaque système suivant ses idées et ses croyances, mais n'ont rien découvert de réel dans l'Empyrée, dans l'Olympe, dans les Champs-Élysées, dans les enfers, les limbes, le purgatoire, les régions inconnues de l'immortalité. Quelle est la nature de l'âme, quelles sont les conditions de sa survivance ? Qu'est-ce que le temps ? Qu'est-ce que l'espace ? Si je rappelle que dès l'année 1866 j'ai posé ces questions dans mon petit livre *Lumen*, je rappellerai, en même temps, que je les ai associées aux études astronomiques, à des voyages dans l'infini et dans l'éternité, faisant pressentir toute la complexité du plus grand des problèmes.

Si l'âme continue d'exister après la mort du corps, elle doit être quelque part. Sans doute, la monade psychique vit en dehors de nos jugements sur l'espace et sur le temps, et nos idées terrestres sont, comme nos sens terrestres, incomplètes, imparfaites, et erronées, et on a dit que l'âme n'occupe aucune place. Mais on pourrait conclure que, si elle n'est nulle part, elle n'existe pas. Il y a là un paradoxe à éclaircir. Lorsqu'à l'âge de douze ans, j'étais en 6^e classe des études latines, on nous enseignait que dix mille âmes pourraient tenir sur la pointe d'une aiguille. C'était là une image assez

pittoresque, mais que je trouvais incompréhensible. En même temps, les conférences religieuses nous montraient le paradis céleste, la Trinité au sommet, les chœurs de anges et des archanges, les chérubins, les séraphins, les puissances, les dominations, les trônes et toute la milice céleste célébrée dans les Écritures et dans l'Apocalypse de Saint Jean. Plus tard, la lecture de la Divine Comédie de Dante m'a mis sous les yeux la mythologie chrétienne du paradis, du purgatoire et de l'enfer, tels qu'on se les représentait au moyen-âge et tels que nous les voyons sculptés aux portails de nos belles cathédrales, monuments d'une pieuse foi anthropomorphique et séculièrement crédule. Copernic, Galilée, Képler, Newton, Laplace d'Alembert, Euler, Herschel et leurs successeurs sont venus ensuite développer sous nos regards émerveillés l'immensité opulente d'un tout autre ciel, peuplé de millions de systèmes, de millions de mondes habitables, en même temps que la Vie nous apparaissait sur notre planète comme la loi suprême de la nature, et que cette médiocre et minuscule planète, si imparfaite à tous les points de vue, se montrait à nous comme une coupe trop étroite d'où la vie déborde de toutes parts, avec des parasites se multipliant partout au détriment de la vie elle-même. Alors l'immensité sans bornes des cieux infinis nous atterrés par sa grandeur, la notion de l'éternité a inter-pénétré celle de l'infini, et la prévision des destinées inconnues qui nous attendent s'est imposée à notre méditation comme le plus grand et le plus grave de problèmes, précisément par l'association de la psychologie à l'Astronomie. Que deviennent les âmes ? Comment vivent-elles ? Où sont-elles ? La pluralité des existences est elle le corollaire normal de la pluralité des mondes. En 1865, un philosophe français, André Pezzani, lauréat de l'Institut, a publié un ouvrage (*La Pluralité des existences de l'âme*) faisant suite dans sa pensée à mon ouvrage *La Pluralité des mondes habités*, et dans ce livre au chapitre intitulé Jean Reynaud, Henri Martin, Flammarion, il présente cette doctrine comme scientifiquement établie. Voilà près de 60 ans de cela, j'y ai toujours pensé depuis, et il me semble que la démonstration n'es

pas encore faite. La réincarnation sur la terre et sur l'autres mondes est probable ; mais non démontrée ; il n'est de même de la préexistence ; nous existions avant de naître ici, comme nous existerons après ; mais la preuve scientifique n'est pas apportée.

Nous sommes tous dominés par nos idées et nos images anthropomorphiques : l'Astronomie doit en affranchir la métapsychique d'outre-tombe. Lorsque nous envisageons le problème de la continuation de la vie de l'âme sur l'autres planètes, nous ne devons pas nous la représenter en des formes humaines terrestres, car les différences cosmiques dans la pesanteur, la densité, les atmosphères respirables, les modes d'alimentation, la lumière, la chaleur, les radiations diverses, interdisent la possibilité de ces formes. Malgré toute notre admiration pour les Vénus et les Apollons des Musées anciens et modernes, et pour leurs types vivants plus suggestifs encore, nous avons le regret de penser qu'il n'y a sur les autres planètes ni hommes ni femmes identiques aux indigènes terrestres. Il nous est impossible de nous figurer ces réincarnations. Quant à l'existence de l'âme non incarnée, à l'état d'esprit, suivant immédiatement la mort, dans l'atmosphère terrestre ou dans l'espace interplanétaire, il est difficile de nous la représenter sous forme de monade sans dimensions, et certains indices nous conduisent à admettre qu'un corps éthéré fluide se détache du corps matériel et demeure quelque temps, corps invisible qui devient perceptible en certaines conditions.

Qu'est-ce que la vie ? Qu'est-ce que la mort ?

Visitant un jour l'Abbaye de Westminster, j'ai lu sur le monument élevé à John Gay, l'inscription suivante :

Life is a jest ; and all things show it.

I thought so once ; but now I know it.

Devons-nous tous attendre comme John Gay d'avoir passé de l'autre côté pour pénétrer le mystère de la vie et de la mort ? N'est-ce pas, au contraire, l'une des études qui nous intéressent le plus à faire ? Vous le pensez, et c'est la raison d'être de votre Société.

Dans sa préface à l'ouvrage *Love and Death*, Sir William

Barrett a remarqué avec raison combien il est surprenant qu'un grand nombre des instructeurs chrétiens désapprouvent les recherches psychiques, sans paraître comprendre que ces recherches renversent les fondations du matérialisme, et sans reconnaître que la télépathie démontrée par notre Société, la transmission de la pensée, suffit seule à prouver que l'âme existe indépendamment du cerveau matériel et peut, par conséquent, lui survivre.

Grâce à vos travaux, et principalement à ceux de William Barrett et de Frédéric Myers, les transmissions télépathiques sont irréfutablement prouvées. La télépathie est certaine, quoique encore exceptionnellement étudiée, aussi certaine que l'existence de Londres, de Sirius et de l'oxygène, et pourtant elle rencontre encore des dissidents qui l'ignorent. Elle paraît universelle, s'exercer même entre les hommes et les animaux. Ses applications dans le monde moral seront peut-être plus vastes encore que celles de la gravitation dans le monde physique. Et tout nous autorise à affirmer qu'elle s'exerce même entre les morts et les vivants. Dans son discours du 18 Mai 1900, Myers lui-même nous a fait sentir son immense ampleur.

Quel est son mode de transmission ? Devons-nous penser, avec Crookes, que sa vitesse de propagation égale celle de la lumière, avec 9 trillions de vibrations par seconde ? M. Marconi n'a-t-il pas dit, récemment, dans son discours présidentiel de Birmingham, que, d'après Sir Oliver Lodge, la télépathie,—sur laquelle il n'a pas d'opinion personnelle,—n'est pas due à des vibrations physiques, à la façon des vagues électriques ? Pour nous, quelle que soit sa nature, elle existe, et se montre indépendante de l'espace, et j'ajouterai qu'il me semble qu'elle agit, non pas entre les cerveaux, comme le croyait le Professeur Flourenoy, mais entre les esprits.

Sir Oliver Lodge disait, en 1892, dans son Discours au Congrès scientifique de l'Association britannique pour l'Avancement des sciences : "La grande majorité des savants est hostile aux recherches sur les transmissions de pensées, et délibérément opposée à leur discussion. Et cela non pas après un long examen, ce qui justifierait l'opposition, mais souvent sans aucun examen." Lodge

a parlé comme l'avait fait Copernic en 1543 dans la dédicace de son livre au pape : "Mathematica mathematicis scribuntur. Si fortasse erunt ματαολογοι qui cum omnium mathematicum ignari sunt, illorum iudicium contemnam. Les vérités mathématiques ne peuvent être jugées que par les mathématiciens. Je méprise le jugement des mathéologues ignorants." Chacun ne devrait se permettre de juger que les choses qu'il connaît.

Malgré tant d'obstacles, vous avez fondé les bases de la science intégrale de l'avenir, car l'univers n'est pas un assemblage matériel de mondes inertes et une combinaison d'atomes mécaniquement associés, mais un édifice organisé et régi par des forces invisibles agissant selon des lois intelligentes. Une force spirituelle, infinie et inconnaissable, est la cause première de toutes les autres causes ; elle est l'âme de l'univers ; mais il est impossible à des êtres finis de comprendre l'infini. Mens agit molem, écrivait Virgile au VI^e chant de l'Enéide : Un principe spirituel anime le monde. Cette affirmation était proclamée éloquemment trente ans avant la naissance de Jésus-Christ. Elle l'avait été bien des siècles auparavant par Bouddha Çakya-Mouni, par Confucius, par Pythagore, dont la maxime était Numeri regunt mundum. Mais les apparences matérielles, les impressions de nos sens physiques, incomplets et trompeurs, ont éclipsé cette vérité fondamentale, et nos sciences actuelles instituées sur l'étude des apparences, depuis l'astronomie jusqu'à la chimie et la physiologie, sont incomplètes. Vous les complétez. Les noms de Crookes, de Myers, de Lodge, de William James, de Barrett, de Balfour, de Bergson, de Richet, s'ajoutent à celui de Newton.

En France, on travaille aussi. Des progrès dignes d'attention ont été récemment réalisés dans ce pays voisin qui n'est séparé du vôtre que par un étroit canal, inexistant pour la télépathie. Parmi ces progrès en faveur de l'avancement des sciences psychiques, je me fais un devoir et un plaisir de signaler la fondation de l'Institut métapsychique international et la réorganisation de la Revue spirite. La méthode expérimentale est enfin appliquée à la discussion scientifique de faits trop long-

temps demeurés dans l'ombre crépusculaire des rêves et des illusions, et qui méritent par leur incontestable réalité, d'être inscrits dans le cadre de la science positive.

Un ami de l'humanité, M. Jean Meyer, a compris cette nécessité moderne, et c'est à lui que nous devons ce double progrès. L'Institut métapsychique est établi sous la haute direction du savant docteur Gustave Geley, avec la collaboration du professeur Richet, de M. Santoliquido, du Comte de Gramont, du Docteur Calmette, et de plusieurs éminents psychistes. La *Psychical Society* peut féliciter M. Jean Meyer de cette œuvre, et émettre le vœu que l'avenir de ces institutions soit assuré en France comme elles le sont en Angleterre.

Je pourrais ajouter ici que, cette année même, la littérature psychique vient d'être signalée en France par la publication des expériences faites autrefois par Victor Hugo. Il y a longtemps que cette publication était attendue. Ces expériences datent de 1853, 1854, et 1855. Depuis 1855, 68 années se sont écoulées, et 38 depuis le départ du poète. Tout vient à point à qui sait attendre ; mais cette attente a été vraiment un peu longue.

J'avais donné dans mes Mémoires un avant-goût de ces communications transcendantes. Nous sommes heureux de les voir publiées aujourd'hui presque in extenso. Elles exposent devant nous le plus inextricable des problèmes. Ni la subconscience, ni l'auto-suggestion, ni la transmission de pensée, ni l'hypothèse spirite de l'identité n'en donnent la solution. On y entend Eschyle, Shakespeare, Molière, Mahomet, Moïse, Platon, Socrate, et même Jésus-Christ ; mais on y entend aussi la Mort, l'Ombre du Sépulcre, l'Idée, le lion d'Androclès et autres entités inexistantes. D'admirables inspirations poétiques nous y éblouissent. Mais partout on y sent l'influence de Victor Hugo qui, pourtant, n'a jamais voulu se mettre à la table dictant ces phrases et s'est contenté du rôle de secrétaire. L'éditeur de ces pages mystérieuses, M. Gustave Simon, a bien voulu conclure en citant mon humble et sincère opinion que *nous ne savons à peu près rien sur la nature réelle de ces phénomènes.*

Je me permettrai de me souvenir que Victor Hugo a

toujours associé les contemplations astronomiques aux recherches psychiques, et qu'à la publication de mon premier ouvrage (*La Pluralité des Mondes habités*) il m'écrivait de Jersey, le 17 décembre 1862 : " Les matières que vous traitez sont la perpétuelle obsession de ma pensée, et l'exil n'a fait qu'augmenter en moi cette méditation en me plaçant entre deux infinis, l'Océan et le Ciel."

Oui, la pensée française a travaillé et travaille comme la pensée anglaise dans la même sphère d'études, et actuellement plus que jamais les esprits soucieux de connaître sont unis dans le même labeur intellectuel ; ils préparent en commun l'établissement de la science nouvelle. Partout, dans toute l'Europe, aux États-Unis, dans l'Amérique du Sud et même en Chine et au Japon ; partout, surtout, depuis cette guerre effroyable et sauvage qui a supprimé 15 millions d'existences humaines et causé des ruines irréparables, partout les pensées frémissent d'un nouveau réveil, les élevant vers une ascension spirituelle.

Oui, nos études métapsychiques complètent désormais les investigations astronomiques pour notre connaissance intégrale. Je crois pouvoir formuler, en terminant, quelques principes qui me paraissent aussi inattaquables que les vérités astronomiques.

* * * *

Soixante années d'observations, intermittentes, mais assez régulièrement suivies, de ces phénomènes, m'ont conduit aux déductions suivantes :

L'être humain est doué de facultés encore inconnues à la science, manifestées notamment par les transmissions télépathiques, par la vue sans les yeux à distance, par la vue d'événements à venir. Ces facultés psychiques formeront un des chapitres les plus importants de la science future. Elles ne sont pas une production du cerveau ; elles sont essentiellement intellectuelles, appartiennent à l'esprit.

Il y a des doubles de vivants.

La pensée est productrice d'images.

Des courants psychiques paraissent traverser l'atmosphère.

Nous vivons au sein d'un monde invisible.

Les facultés de l'âme humaine survivent à la désagrégation de l'organisme corporel.

Au moment de la mort, ces facultés transcendantes se manifestent par un certain nombre d'actes variés, les uns de transmissions mentales, les autres de production de phénomènes physiques. Le passage de la vie à la mort est signalé au loin, soit—ce qui est le plus fréquent—par des bruits et des mouvements matériels, soit par des émotions de l'âme.

Il y a des manifestations de morts et même des apparitions, dont le mode de production est à déterminer.

Il y a des maisons hantées.

Les manifestations de défunts sont rares et exceptionnelles, et d'autant plus rares que l'on s'éloigne davantage du décès. Malgré leur rareté, un strict examen ne laisse aucun doute sur leur réalité.

La télépathie existe entre les morts et les vivants comme entre les vivants.

Les transmissions télépathiques entre vivants, les manifestations et les apparitions de mourants ne sont plus niées que par ceux qui n'ont pas eu le temps d'étudier le sujet ou qui tiennent à les ignorer de parti-pris. Il n'en est pas de même des manifestations et apparitions de *morts*. Ce scepticisme est excusable, attendu que celles-ci sont plus rares et moins faciles à prouver. Pour ma part, j'ai été longtemps à les admettre, et je ne l'ai fait que sur un ensemble d'observations concordantes et convaincantes.

Il me semble, mes chers Collègues, que ces diverses affirmations, établies sur une longue étude, doivent être admises comme scientifiquement fondées et dignes d'être associées aux connaissances astronomiques contemporaines. J'ai tenu à exposer ici tout cet ensemble, persuadé que l'époque actuelle marque une date importante dans l'histoire de la philosophie. J'ai un peu abusé de votre attention, et je m'en excuse sur l'importance du sujet. Le but de notre vie intellectuelle à tous, n'est-il pas la

recherche de la Vérité intégrale et complète ? La science n'est qu'à son aurore, et ses progrès prodigieux sont l'indice de progrès prochains plus prodigieux encore. Les générations se succèdent, les découvertes s'ajoutent. Répétons avec Bacon : Multi pertransibunt et augebitur scientia.

II.

ON HINDRANCES AND COMPLICATIONS IN TELE-
PATHIC COMMUNICATION.

BY MRS. HENRY SIDGWICK.

CRITICS of the evidence put forward for communication from the dead often demur not only to the frequent failure to get "messages" at all, but to the confused quality of the "messages" for which the dead are supposed to be responsible—to the fragmentariness of the truthful elements in communications about matters concerning which the alleged communicator must, it would seem, be well informed, and the amount of irrelevant matter and actual error in which the truthful elements are liable to be imbedded. "Why," say the critics, "cannot the dead, if they communicate at all, say what they mean."

Now it is very difficult to obtain adequate evidence of communication from the dead, and many reasons may be urged for caution in the acceptance of alleged communications as genuine. But the confused quality of many of the supposed "messages" when received is not one of these reasons. Communication from the dead is presumably of the same nature as telepathic communication between the living, and similar confusion is exhibited in what appear to be indubitable instances of the latter. I do not think that anyone experienced in psychical research doubts this. But it has occurred to me that an examination of cases of telepathy between the living, from the point of view of imperfection of transmission, might be interesting and might throw light on the process of telepathy. Particular cases have often been commented on, but I do not think they have been collected and compared.

A *soi disant* Myers communicating through Mrs. Holland's automatic writing, once said, "The nearest simile I can find to express the difficulties of sending a message—is that I appear to be standing behind a sheet of frosted glass—which blurs sight and deadens sound—and dictating feebly—to a reluctant and somewhat obtuse secretary."¹ This analogy from indistinct perception and consequent misinterpretation of impressions derived through the senses, is as applicable to telepathic communications between the living as it is to supposed communications from the dead. But what I want to examine as far as possible, is what part of the failure, when a telepathic message is incompletely transmitted, is due to what we may call the sheet of frosted glass—that is, the inherent difficulty in the passage of an idea from one mind to another without the use of the senses—what to the feeble dictation—that is, want of power in the agent—and what to the reluctance or obtuseness of the secretary—that is, obstacles in the percipient's own mind.

As regards the frosted glass—some hindrance to free transmission between two individuals, A and B, there must be so long as they retain their individuality. If there were no barrier A and B would be merged into one. But I may say at once that I do not think we have evidence of obstruction, apart from A and B themselves (as we should have, for instance, if the transmission were a physical phenomenon like the passage of light). If we stick to our analogy, the "sheet of frosted glass" must symbolize the aggregate difficulties due to the minds, embodied or unembodied, of agent and percipient and cannot be studied separately from these. The one piece of evidence suggesting obstruction outside the two minds is the apparent influence of the spatial relation between agent and percipient in some telepathic experiments—experiments when agent and percipient are in different rooms succeeding less well than when they are together.²

¹ *Proceedings*, Vol. XXI., p. 230.

² Examples of this will be found in the Brighton experiments reported in *Proceedings*, Vol. VI. and VIII. For discussion of it see Vol. VI., pp. 156, 157, and Vol. VIII., p. 544.

This is undoubtedly a fact in certain cases, whatever the explanation. In other experimental cases, however, distance appears to be no hindrance, nor does it, so far as we know, affect spontaneous telepathy, and I am disposed to think that in experiments where it does operate adversely this is due to a subjective effect in the mind of agent or percipient or both, arising perhaps from self suggestion or the lack of necessary exciting stimulus.

Practically our investigation will then be confined to what we can learn about the telepathic process in the minds of agent and percipient. As regards the latter, there are some preliminary remarks to make before proceeding to telepathic cases.

We shall find that an important difficulty in the emergence of an idea telepathically conveyed, appears to lie in the passage of the idea from one stratum, as we may call it, of the percipient's mind to another. My readers will doubtless grant me the existence of these strata and will admit that often, and probably always, there are in us two or more streams of memory and intelligent mental action existing concurrently, which are more or less separate and more or less independent of one another, though ideas may pass from one to the other. Any such stream of which our ordinary waking consciousness is not at a given moment aware, may be spoken of as at that moment subliminal to it. We get glimpses of double mentation at work in dreams, in automatic writing, in sensory hallucinations such as crystal visions, in hypnotism, and otherwise. Assuming this granted I need not here go into the evidence for it. This will be found in many papers in our *Proceedings* and elsewhere. The problems about the nature of human personality suggested by these divisions of consciousness are of course of great importance, but do not concern us at this moment, and for simplicity I want to avoid them as far as possible.

What I want to show is that in emerging from a subliminal stratum an idea or intention may be distorted or curtailed; and it will be best to show this in the first instance in cases where there is no question of telepathy. Examples may be found among interesting experiments

described by Gurney in *Proceedings*, Vols. IV. and V.¹ and by F. W. H. Myers in *Proceedings*, Vol. VIII.,² though in neither case were the experiments tried exactly with a view to throwing light on the question now before us. In the particular experiments I am about to quote, ideas were impressed on persons in hypnosis, who were found on being immediately awakened to have no conscious recollection of the said ideas. Gurney's subjects while hypnotised were instructed to write with a planchette a prescribed sentence or sometimes a line rhyming to a given one. After waking, their hand having been placed on the planchette, which was screened from their eyes, they were set to read aloud—the idea given to the hypnotic consciousness emerging meanwhile in planchette writing. In Myers' experiments a post-hypnotic crystal vision was prescribed and duly experienced. In one case, therefore, the idea emerged in motor, and in the other in sensory automatism. In some of Gurney's experiments the reading aloud did not seem to interfere with the performance of the task set to the subliminal self, but in others there was some mutual interference; the following is a case in point.

P—H was told several times [in hypnosis] 'It has left off snowing'; and then, when woke and set to planchette, he was made to read aloud. The writing which appeared was,

It has left sn——

and while this was proceeding, the reading was bad and stumbling. When the writing stopped, the reading became appreciably more correct and fluent. Re-hypnotisation afforded a glimpse of the condition in which the secondary intelligence had found itself. Asked what he had been doing, the 'subject' replied, "Trying to write 'it has left off snowing.'" Asked if he had been reading, he said, "Reading! No, I haven't been reading," and added, "something seemed to disturb me." "How was that?"

¹ *Peculiarities of certain Post-Hypnotic States*, *Proc.*, Vol. IV., p. 268 and *Recent Experiments in Hypnotism*, *Proc.*, Vol. V., p. 3.

² *The Subliminal Consciousness*, Chap. V., *Proc.*, Vol. VIII., p. 436.

“Something seemed to keep moving about in front of me, so I got baek into bed again.” “Didn’t Mr. Gurney hold a book and make you read aloud?” “No, somebody kept moving about. I didn’t like the looks of them. Kept wandering to and fro. Horrible, awful! I thought to myself ‘I’ll get into bed.’ It looked so savage—quite unnerved me,” etc., etc. (*Proc.*, Vol. IV., p. 319.)

Here we have an illustration of a train of thought and action impressed on the hypnotic stratum of the mind, working itself out, but in an imperfect manner, when that stratum (on awaking from hypnosis) has become subliminal. The waking intelligence knows nothing of it unless and until it is shown the automatic writing that has been produced without its participation. It has been aware, however, of some disturbing element, some interruption to its own proceedings. On re-hypnotisation, it is found that the intelligence which has been writing, now no longer subliminal, has been still more aware of disturbance, though unconscious of the action of the waking intelligence which has produced it. We have not here any reception of a message from the subliminal stratum to the supraliminal except through the automatic writing, but we have evidence of mutual interference between the two strata working independently. This may have been due only to the two sections of the mind having simultaneously to use a common organism to express themselves. It seems possible that it was the movement of the print before the eyes, or rather of the eyes along the lines of print, that produced in the subliminal self, unaware of the reading aloud, the nightmare-ish impression of the disturbance.

In Myers’s experiments we also have the two strata at work, but as it were in co-operation, not antagonism. As in Gurney’s experiment, an impression with instruction as to action is given in hypnosis to that mental stratum which, as soon as the hypnotised person is awakened, becomes subliminal. But the action prescribed does not involve outward bodily action like the writing. The subliminal is told to produce a visual hallucination, a

crystal vision,¹ representing a subject described to it. This duly occurs and the waking intelligence without knowing the origin of the picture has to observe and interpret it. Myers writes (*Proc.* Vol. VIII., p. 460):

“Next time I suggested [in hypnosis] a *hippopotamus*—an animal which P. had never seen in the flesh. On being awakened he saw on the card what he called a *rhinoceros*. He complained that it was rather indistinct; he was not sure whether it had horns or tusks. There is a certain interest in this as indicating that the hallucination was founded upon a mental picture suggested by my words, rather than on the words themselves. One might have supposed that, since my whole suggestion consisted of the word *hippopotamus*, the awakened subject, however vaguely he saw the beast, would have known that it was meant for a hippopotamus. But the picture, vague as it was, seemed to be more communicable from the hypnotic to the supraliminal self than the word which had originally generated it. A *picture* was what had been ordered and a picture came.” (*Proc.*, VIII., p. 460.)

I next told P. (hypnotised) the story of Robinson Crusoe finding the foot-print and fearing savages. . . . Awakened and set before the glass of water, P. at once exclaimed, “Why, there’s Buffalo Bill! He’s dressed in feathers, and skins round him; almost like a savage. He’s walking about in a waste place. . . . I can see something else coming from another part,—it’s a blackie. . . . Look at them now, how they’re arguing! Buffalo Bill and his black man.” . . .

Observe that . . . the *footmark*, which was the point on which I had chiefly dwelt, was not observed. . . . P. had read *Robinson Crusoe*; but Buffalo Bill

¹I call it crystal vision as the hallucinations were of the nature of visions in a crystal; but in the cases quoted, what was actually aimed at and obtained was in one case a hallucinatory picture on a blank card, and in the other a moving picture in a glass of water.

was plainly fresher in his memory.¹ *Proc.*, Vol. VIII. p. 461.

In the first of these two experiments by Myers, we have indistinctness in the picture evolved and transmitted to the supraliminal intelligence—probably owing to indistinctness in the idea which reached the hypnotic consciousness, for I do not think Myers's idea of a hippopotamus would have been distinct, and the percipient was not acquainted with the animal. In the second experiment the hallucinatory vision seems to have been distinct as far as it went, though not apparently completely representing the scene prescribed. In both the "message" which reaches the supraliminal intelligence is misinterpreted by it, for in the first it did not mean a rhinoceros and in the second it did not mean Buffalo Bill.

I have assumed that the misunderstanding was supraliminal. It is, however, conceivable that it occurred subliminally. The idea derived by the hypnotic stratum from Myers's words *may* have been in the first case a rhinoceros and in the second Buffalo Bill. But in these particular instances—at any rate the second—I think it highly improbable that there was subliminal misunderstanding of what Myers said. The hippopotamus impression was perhaps too vague to be worth discussing from this point of view, for the same picture might have come if Myers had said "rhinoceros" and therefore if the subliminal had wrongly understood "rhinoceros." But the idea "Buffalo Bill" by itself would I think have produced a different picture, and one less appropriate to Robinson Crusoe than that produced by Myers's story.

I think then that these cases (and others might be quoted) sufficiently indicate that an idea, even when successfully impressed on one stratum of consciousness, is liable to get distorted before it emerges in another, at any rate when the transmission is effected by means of

¹ "Buffalo Bill" was an American, touring the country at this time with a show representing the Wild West of America—a show which was having a great success in this country.

Both the above experiments are quoted by Myers in *Human Personality*, and the first is quoted also in *Proceedings*, Vol. XIII. p. 593.

what Myers calls sensory or motor automatism. And I think we may add that if an idea reaches the waking consciousness by such means, it is practically certain that it has been transmitted from a subliminal stratum. In automatic writing, at any rate when not followed at the time by the waking consciousness,¹ this is plainly so, for the intelligence using the hand is subliminal at the moment, so that if the writing contains ideas not in the supraliminal stratum, they must issue from the subliminal. That the same is true in the case of ideas expressed through sensory automatism—say a hallucinatory vision—is hardly less obvious. For a vision which is first seen and then independently interpreted by the supraliminal consciousness, must have been made up, so to speak, subliminally. The supraliminal intelligence is not aware that such a hallucination is being constructed until it perceives it.

All this we shall have to take into account in examining the hindrances encountered by telepathic messages. It is possible that all telepathic communication from outside first reaches a subliminal stratum of consciousness and therefore has to run the gauntlet of passage from one stratum to another before the supraliminal consciousness is aware of it. That it has to do so when it emerges through sensory or motor automatism is I think certain. It is worth noting that we are more accustomed than we sometimes remember to a want of complete understanding between two parts of our minds even when there is no question of any abnormal state. When, for instance, in writing a letter, we write "there" for "their," it is not because we do not know which we mean, or how to spell what we do mean. It must be because the part of our mind occupied with the spelling is attending to the idea of the sound, and not to the idea of the meaning. This seems to imply a subliminal element in the ordinary operation of writing, which is co-operating imperfectly with the waking intelligence.

¹The extent to which in automatic writing the waking intelligence of the automatist is aware of what is being written varies through almost all possible degrees.

Before concluding these preliminary observations and turning to particular cases of apparent obstruction in telepathic messages, I must remark on a very important difference in the evidence possible for telepathic messages from the dead, and similar messages from the living. In the latter we not only know the message received, but in some cases (such as experimental ones) have independent knowledge of the message sent; and in others (such as apparitions at the time of the death of the person seen) at any rate know independently of some coinciding crisis in the supposed sender's state. And in fact the coincidence between the message and what we know of the supposed agent at the time, constitutes a very important part of the evidence for telepathy. But in the case of messages from the dead we can have no independent means of knowing what passes on the supposed agent's side. All we know is the message as received, and we can only judge from this whether a message was really sent and what its contents were.

Even in messages from the living we cannot tell whether the message emerges in a truncated, or distorted, or otherwise altered form, unless we know exactly what message was sent; and this we can seldom know except in experimental cases. It is chiefly, therefore, to experimental cases that I shall refer in this paper. No experiments have, so far as I know, been tried with a view to discovering to what kind of alterations messages are liable—indeed it is difficult to see how such experiments could be carried out—we, therefore, have to examine those tried with the object of ascertaining the existence of telepathy.

I shall illustrate what I have to say chiefly from the following series of experiments published in our *Proceedings*.

- I. Those made by Mr. Guthrie and friends of his with Miss R— and Miss E— as percipients and published in *Proc.*, Vol. I., pp. 263-283; Vol. II., pp. 24-42, pp. 189-200; Vol. III., pp. 424-452 (see also *Phantasms of the Living* and Myers's *Human Personality*).

- II. Mr. and Mrs. Newnham's experiments, *Proc.*, Vol. III., pp. 7-23 (see also *Phantasms of the Living* and Myers's *Human Personality*).
- III. Experiments by Messrs. Schmoll and Mabire, *Proc.*, Vol. V., pp. 169-215.
- IV. Experiments by Dr. von Schrenck-Notzing, *Proc.*, Vol. VII., pp. 3-22.
- V. Experiments at Brighton in which I was myself concerned. Two series, *Proc.*, Vol. VI., pp. 128-170, and Vol. VIII., pp. 536-596.
- VI. Mr. Rawson's experiments, *Proc.*, Vol. XI., pp. 2-17.
- VII. Miss Tipping's experiments, *Proc.*, Vol. XXVII., pp. 415-457.
- VIII. Prof. Gilbert Murray's experiments, *Proc.*, Vol. XXIX., pp. 46-110.

In all of these except V. agents and percipients were awake and apparently in their normal state of consciousness. In V. the percipients were hypnotised.

In II. though both agent and percipient were in possession of their normal consciousness during the experiments, the response of the percipient to unseen questions was expressed in automatic writing of the purport of which she was as a rule unaware until she read it afterwards.

For the sake of clearness and brevity I do not propose to discuss the evidence for the operation of telepathy in the cases quoted, but shall assume that the precautions taken to exclude the conveyance to the percipient of the desired impression through the senses were adequate. Readers who wish to know what the precautions were must in each case refer to the paper in *Proceedings* quoted from. But I must warn my readers against regarding the experiments I shall quote as intended to present an evidentially convincing case for the existence of telepathy. They are selected with an entirely different object, and the best and most startling successes in transferring ideas and images, would often be useless for my purpose. The mere fact that the idea gets through promptly and completely and without perceptible intermediate stages, prevents any light being thrown on obstacles that may have been overcome.

On the other hand the cases where the "message" does not get through at all, and the percipient receives no conscious impression concerning it, are also, as a rule, useless for our present purpose, for they do not reveal where the obstacle is.

A distinction must be drawn, however, between cases where a particular would-be agent, or a particular would-be percipient fails persistently, and the cases where, with apparently unchanged conditions, failures occur in the midst of successes. In the former telepathic incapacity in agent or percipient would account for failure, but not in the latter. And one would expect in failures amid successes, to be able to discover the difference in conditions which must exist and be the cause of failure. Practically, however, little or nothing has been done in this direction as yet. These failures amidst successes remain unaccountable and are at present of no assistance in our present quest. And the same is I think true of another class of case, still more difficult to explain—those in which the percipient does have an impression which to him has all the appearance of being veridical, but which is in fact entirely wrong. In the Brighton experiments it was noticed that some expectation of success seemed required to produce any impression—wrong or right. At any rate, in sets of experiments where agent and percipient were separated by a greater distance than usual (which, as already said (see p. 29) for some reason hindered success), the absence of any impression was more frequent than in unsuccessful sets with agent and percipient together.

Impressions are sometimes accompanied by a feeling of the operation of some sort of influence, the absence of which may be noticed by the percipient when the "message" does not get through. When this happens it seems possible that the want of success is due to the agent failing to give the message some necessary impulsive quality. What I mean is well described by Sir Oliver Lodge in discussing experiments with Mr. Guthrie's subjects, Miss E. and Miss R. He says:

With regard to the feelings of the percipients when receiving an impression, they seem to have some sort of consciousness of the action of other minds on them; and once or twice, when not so conscious, have complained that there seemed to be 'no power' or anything acting, and they not only received no impression, but did not feel as if they were going to. . . . They both say that several objects appear to them sometimes, but that one among them persistently recurs, and that they have a feeling when they fix upon one, that it is the right one. Sometimes they seem quite certain that they are right. Sometimes they are very uncertain, but still right. Occasionally Miss E. has been pretty confident and yet quite wrong. *Proc.*, Vol. II., p. 200.

It would be interesting to know whether the nature of the percipient's impression—visual, auditory, or mere idea, etc.—depends on the agent. It depends partly on suggestion and expectation, and no doubt partly on the percipient's habit of mind; but is there also some effect produced directly though unintentionally by the agent, and which would vary with different agents? In the Brighton experiments, one of the percipients—T.—made a remark which may be instructive on this point. With Mr. Smith as agent trying to transfer numbers, T.'s impressions, whether right or wrong, were generally (owing I think to our suggestion) visual, though he sometimes complained of the numbers being "such a long way off that you can hardly see them." But when Mr. Myers or Dr. Leaf took the part of agent—in which, experimenting with T., they were entirely unsuccessful—T., when asked whether he saw or heard the number he named, said "No, I seem to imagine it" (*Proc.* Vol. VI., p. 161). The non-success of these agents makes it, however, improbable that their influence had any direct effect in producing this result. It is more likely that T.'s subliminal represented to him in this way the absence of telepathic influence.

If we turn now to particular telepathic experiments, and look first for light on the agent's part in the process,

something can perhaps be learnt from cases where two or more agents acting simultaneously produce a mixed effect, or when an involuntary idea of one of them seems to confuse or supersede the impression it was intended to convey. The following case illustrates such superseding. I give an abstract of Sir Oliver Lodge's report in *Proc.*, Vol. II., p. 198, concerning an experiment with Mr. Guthrie's percipients :

Agents :—O J. L., Dr. Herdman, Miss R——d, Miss R. *Percipient*, Miss E. Object, “a teapot cut out of silver paper.” (Contact.)

Miss E. [said] “Something light . . . No colour . . . Looks like a duck. . . Like a silver duck. . . Something oval . . . Head at one end, and tail at the other” . . . She drew a rude and perverted copy of the teapot, but “didn't know what it was unless it was a duck.”

Dr. Herdman then explained that he had been thinking all the time how like a duck the original teapot was.

It may be objected that as Dr. Herdman had no intention of transferring his irrelevant idea of a duck to the percipient and there was therefore no voluntary effort to project it, he cannot have been the effective agent. This raises the whole question of the efficacy of voluntary effort, and it is a difficult question. We can say at once that voluntary effort is at any rate not always necessary. For instance in the series of experiments carried out by Mr. Wales and Miss Samuels (see *Proc.*, Vol. XXXI., pp. 124-217), the agent Mr. Wales made no effort to transfer any particular ideas. Miss Samuels, however, had impressions corresponding unmistakably to thoughts of Mr. Wales or events in which he was concerned. The activity and effort here seem to have been entirely on the percipient's side. The same apparently happens in some non-experimental cases. Compare for instance a case in which Mrs. Verrall was apparently the agent, described in *Proc.*, Vol. XXVI., p. 44-46. It is too long to quote in full here, but Mrs. Verrall sums up her account of it by saying that it is “I think, indisputable that they [her daughter and a cousin, who were

table tilting] tapped thoughts of mine which I had deliberately refrained from communicating to them." On the other hand in Mr. and Mrs. Newnham's experiments the questions which of course he intended she should apprehend though she had no normal access to them, reached her almost without fail. But answers unknown to her, which might have been got out of his mind, only appeared in her script in a very slight and fragmentary way. Is it possible that he inhibited them—not voluntarily, but because they were Masonic secrets, and thus as it were locked up in his mind? Intentional agency at any rate serves to mark a particular idea in the agent's mind, and to associate it with the percipient, and it is possible that this makes it more available to the latter, even if voluntary effort on the agent's part has little effect.

Returning for a moment to the duck and the teapot, we must not ignore the possibility that Dr. Herdman contributed little or nothing to the result. The percipient may have been struck with the resemblance of her impression to a duck independently, though if so the idea of "teapot" was apparently entirely obliterated by that of "duck." In a case of Professor Gilbert Murray's, however, the percipient must have caught by mistake an irrelevant idea of a lady present. He got the impression of "kangaroos" when, as she thereupon reported,¹ she had been thinking that a kangaroo or a bear with a visiting book (the idea came from *Punch*) would be a good subject for experiment. The actual scene the idea of which it was intended to transfer was "Mr. L— beating an egg at Siena." (*Proc.*, Vol. XXIX., p. 98, Exp. 66).

I have already suggested that telepathic messages first reach the percipient subliminally. From analogy it is not unlikely that it is in a subliminal part of the agent's mind also that the effective action in telepathy takes place. If so we can see that somehow the spontaneous

¹ It is of course an evidential weakness, in the case of both duck and kangaroo, that the supposed agent's idea was not mentioned till after the percipient had spoken. At the same time a pseudo-memory does not seem probable in either case.

subliminal impulses conveying the ideas "Duck" and "Kangaroo" in the experiments just described may have been more powerful or more accessible to the percipient than the deliberate impulses conveying the ideas intended.

The complication of simultaneous transference of different ideas by different agents, or the transference of two ideas from the same agents, does not necessarily produce confusion. Sir Oliver Lodge tried two experiments illustrating this. The following are accounts of them abstracted from his records :

In one (*Proc.*, Vol. II., p. 196) two agents were set to look at different drawings—a square and a cross like an \times —neither knowing what the other was looking at. The percipient Miss R., who did not know that anything unusual was being tried, said, "I see things moving about . . . I seem to see two things . . . I see first one up there and then one down there . . . I don't know which to draw . . . I can't see either distinctly." Told anyhow to draw what she had seen, she drew first a square, and then said, "Then there was the other thing as well . . . afterwards they seemed to go into one," and she drew a cross inside the square from corner to corner, adding afterwards, "I don't know what made me put it inside."

In the second the object was a tetrahedron outline rudely drawn in projection—a triangle with lines from the angles meeting in the middle (*Proc.*, Vol. II., p. 199). The percipient Miss E. said "Is it another triangle" [A triangle had been the subject of a previous experiment.] No reply was given, but Sir Oliver silently passed round to the agents a scribbled message, "Think of a pyramid." Miss E. then said, "I only see a triangle . . ." then hastily, "Pyramids of Egypt. No I shan't get this." Asked to draw, she only drew a triangle.

A source of confusion occurs when in a series of experiments the impression intended to be transferred in one experiment does not emerge till the next—the agent having meanwhile given up the first and passed on to something else. But in such cases, when not due to

chance, the delay may be entirely in the percipient's mind and thus be a case of gradual emergence. Some instances will be found below. In the Brighton experiments, in attempts to transfer double numbers, such deferred impressions occurred on one occasion with two numbers in succession, in the course of a rather successful set of experiments.¹

There are cases which suggest that attention devoted successively to different parts of the object to be transferred, by the agent or percipient or both, led to success when the attempt to transfer the whole had failed. The following is a curious one. The attempt was to transfer a name selected by Mr. Guthrie. I abstract from his account :

He had just tried with the imagined name *Patrick*, with the result that the percipient said, "Is it Peter or Patriek?" He then thought of the name *Jemima*, this time apparently writing it down. Mr. Guthrie began as sole agent but there were three or four others in the room. In what follows the remarks in brackets are Mr. Guthrie's. The percipient said, "Is it Lawrence? No—it looks like a long name but I cannot see what it is a bit . . . No . . . Angelo is it?" (All were now shown the name and called upon to think.) . . . "It begins with a J . . . Oh! I see a J. (Mr. G. "Do you see the letters as a whole?") "I'll try to look at the letters. Oh! I can see five or six letters, but can't get the name." (Mr. G. "Then you see the letters. Well, take it letter by letter. You've named the first letter; now what is the next?") "Is it E?" (Mr. G. "Right. Now the third letter.") "M" ("Right—the fourth letter?") "I" ("Right—next letter?") "Two more, like C.A." ("A is right. Now look at the last letter but one.") "E, I think." (N.B.—The subject had no idea of the name nor of what letters had passed through her mind so as to get the name.) (*Proceedings*, Vol. I., pp. 279, 280.)

It seems certain here that when the spelling letter by

¹ See *Proc.*, Vol. VI., p. 161.

letter began the agents (as well as the percipient) must have concentrated on the letter required and that this may have helped the percipient; but her failure to grasp the word as a whole combined with the almost complete success in getting the individual letters is curious and shows how very vague the picture of the whole, which yet apparently existed in her mind, must have been. This contrasts with the previous experiment (Peter or Patrick, guessed for Patrick) where the guess seems to have been made from a perception of at least part of the name as a whole. Note also the dream-like amnesia for the impressions that had just passed through her mind. It almost looks as if the percipient had fallen into a semi-trance state.

This experience brings us to the percipient's side in the experiments, but before leaving the agent's side it will be well to give a list of the kind of subjects it was attempted to transfer in the various series under consideration. In a large number of cases it was simply a visual sensation derived from gazing at some small object—*e.g.* an apple or a key or a card or a number or a diagram. It is a matter of some interest, but not always easy to determine, whether when an impression reaches the percipient, it is the idea, or the image, or the name of it that reaches him first. To eliminate the name some experiments have been successfully tried with nameless diagrams—combinations of lines or irregular shapes that cannot be described by a word or even by several words. Sometimes the object gazed at was a rough drawing by the agent, who thus probably reinforced the impression on his mind. At other times there was no actual external object before the agent, but he endeavoured to transfer an imagined or remembered object or scene. In such cases there was probably at least a visual element in his mental impression and with some agents perhaps a very strong one. In Mr. and Mrs. Newnham's experiments there may have been a visual element in the agent's impression as he wrote down the questions which the percipient, without sight or knowledge of them, was to answer by automatic writing. But so far

as we know there was no transference in visual form of any such visual element. The percipient had no conscious impression of the question, nor, except on one occasion, of the answer,¹ till she read what the planchette had written (see *Proc.*, Vol. III., p. 12). Perhaps attempts to transfer quotations, of which there are one or two among Professor Gilbert Murray's experiments (see *Proc.*, Vol. XXIX., p. 102. Exps. 86 and 87) should be classed with transfereces of questions, as in both the agent's impression, if visual, is of words. In some of the experiments in which Miss L. Tipping was the percipient (*Proc.* Vol. XXVII., pp. 415-457) the agent not only looked at an object but handled it and herself executed movements in connection with it, and the impression of these movements seems on several occasions to have been transferred to the percipient in another room.

Of course this list of kinds of transference attempted is far from exhaustive, even if we confine ourselves to the series of experiments from which I have drawn illustrations. Nor of course do these series include all the series in our *Proceedings*. I have selected those series and those individual experiments which seem to me to throw most light on obstacles or aids to telepathic transmission. I do not think that we have evidence to show that among methods and objects of transference, one kind is in itself more likely to succeed than another. But there is little doubt that some kinds are better adapted to some agents and percipients, and other kinds to others. Such differences are very likely to arise both from self-suggestion and from the degree of interest different kinds of experiments may excite in different people.

I now turn to what is the more interesting and instructive part of our investigation—the percipient's side of the transmission.

¹The one occasion was when, in answer to the unseen question, "What name shall we give to our new dog?" the name 'Nipen' (from *Feats on the Fiord*), not, by the way, thought of by the agent, shot into the automatist's conscious mind, just as she was in the act of automatically writing it down. (*Proc.*, III., p. 23.)

I believe, as already said, that what happens in the typical case is that the telepathic impression first reaches a subliminal part of the mind. From this it is transmitted to the waking consciousness, emerging in various ways—as by automatic writing, or in a visual or other hallucination, or in a quasi-sensory mental impression, or simply as an idea or otherwise. The impression thus transmitted is often indistinct or otherwise obscure and needs interpretation. There are obviously in this process several opportunities for error to intrude. The impression as subliminally received may be imperfect, there may be defect or addition or distortion in the transmission from the subliminal, and there may be misinterpretation of the impression of which the percipient ultimately becomes conscious. This misinterpretation moreover—due perhaps to guessing or to irrelevant association of ideas—may react on and modify the impression.

Further complication is added by the fact that the impression sometimes is received, or at least emerges, gradually, and premature transmission from the subliminal, or premature interpretation may produce errors. For instance, in one of Mr. and Mrs. Newnham's experiments Mr. Newnham who had to preach on the following Whit-Monday on the occasion of a Masonic ceremonial, asked the question (unknown of course as usual to the percipient) "Give me a text for Whit-Monday's sermon." Mrs. Newnham wrote with the planchette, "If I go not away, the Comforter will not come to you." Mr. Newnham writes :

The selection of a subject suitable for *Whitsuntide* is plainly the first idea caught by the intelligence; so I proceeded:—"That will not do for my subject. I want a text for the *Monday's* sermon." Answer: "Let brotherly love continue." (*Proc.*, Vol. III., p. 21.)

Here the question was apprehended in two stages.¹ If the experiment had been stopped after the first, the

¹ Perhaps in this case the impression first received by the subliminal was Whit-Sunday—a mishearing as it were, for Whit-Monday. The idea of Whit-Monday may only have reached it when the question was mentally repeated.

answer given would have been wrong, though it would have shown a partial apprehension of the question.

Again with the same experimenters the unseen question asked being, "What do I mean by chaffing C. about a lilac tree?" Planchette replied, "Temper and imagination." Now this answer apparently implied apprehension of the fact that there was something about chaff in the question, for we are told that these two words formed part of habitual family chaff, but the question as a whole had seemingly not been grasped. Mr. Newnham therefore proceeded, "You are thinking of somebody else. Please reply to my question." The answer given was "Lilacs," showing a further fragment of apprehension of the previous question though still incomplete (*Proc.*, Vol. III., p. 23). It seems to have been a delayed impression, for Mr. Newnham's second question did not contain the word lilacs though he was of course thinking of lilacs.

Another complication is introduced in experiments in which the subliminal mind of the percipient operates, by its unwillingness at times to admit ignorance. Mr. Newnham was much interested in Masonic archaeology, of which Mrs. Newnham was completely ignorant. He on several occasions asked questions relating to this which required for their proper answer knowledge of Masonic secrets. Answers more or less appropriate were generally written, but were never correct. They were obvious inventions, though sometimes showing fragments of knowledge beyond Mrs. Newnham's, of Masonic things. Here is a specimen. The unseen question was:

Q. "Write out the prayer used at the advancement of a Mark Master Mason."

A. "Almighty Ruler of the Universe and Architect of all worlds, we beseech Thee to accept this, our brother, whom we have this day received into our most honourable Company of Mark Master Masons. Grant him to be a worthy member of our brotherhood; and may he be in his own person a perfect mirror of all Masonic virtues. Grant that all our doings may be to Thy honour and glory, and to the welfare of all mankind."

[Mr. Newnham continues] This prayer was written off instantaneously and very rapidly. It is a very remarkable production indeed. For the benefit of those who are not members of the craft, I may say that no prayer in the slightest degree resembling it is made use of in the Ritual of any Masonic degree; and yet it contains more than one strictly accurate technicality connected with the degree of Mark Mason. . . . I proceeded to inquire as follows:

Q. "I do not know this prayer. Where is it to be found?"

A. "Old American Ritual."

Q. "Where can I get one?"

A. "Most likely none in England."

Q. "Can you not write the prayer that I make use of in my own Lodge?"

A. "No, I don't know it."

In these . . . answers we see a new moral element introduced. There is evasion, or subterfuge, of a more or less ingenious kind; and totally foreign to the whole character and natural disposition of the operator. A similar attempt at deliberate invention, rather than plead guilty to total ignorance, is contained in the following answers." [Another case is then given by Mr. Newnham.] (*Proc.*, Vol. III., pp. 14 and 15.)¹

The telepathic experiment here succeeded completely. Each question, though unknown to her supraliminal consciousness, was evidently entirely apprehended by the subliminal intelligence of the automatist and an answer appropriate in form was written. But the answers were pure invention, though the first one incorporated some fragments of information which the percipient probably found in the agent's mind. We seem to get here a lurid light on the untrustworthiness of the subliminal self when uncontrolled by the normal waking self—and serious

¹The whole of Mr. Newnham's report on his experiments, as edited by Myers (*Proc.*, Vol. III., pp. 7-23 and also quoted in *Phantasms* and in *Human Personality*) should be read by those interested in the subliminal working of the mind here revealed.

possibilities of deliberate distortion of telepathic messages to gratify subliminal vanity suggest themselves.¹

If any one questions our right to attribute the futile attempt at deception to the percipient's subliminal self, as it might have been the work of another spirit, I should reply that the writing intelligence when questioned as to its identity always asserted that it was Mrs. Newnham—"wife" as it expressed it; and secondly that no true information was included which was unknown to both agent and percipient. One of the things most puzzling and difficult to explain is the question raised by Mr. Newnham, why, when the percipient could get from the agent's mind the question asked, she could not also get from it the expected answer. This I have briefly dealt with above, on p. 41.

There was at least one occasion when Mrs. Newnham did apparently learn telepathically the answer as well as the question, but the answer was very short. A pupil of Mr. Newnham's, sceptical about the whole thing, was allowed to suggest a question on condition that Mr. Newnham saw it in writing. Mr. Newnham and his pupil went outside the closed door of the room where Mrs. Newnham was sitting with her planchette, and the young man wrote "What is the Christian name of my eldest sister?" On returning to the room they found the answer already waiting for them—"Mina." This was the family abbreviation of Wilhelmina, and was unknown to Mr. Newnham. It is implied that it was unknown to Mrs. Newnham also, and unless by some accident she had at some time happened to learn what the sister was called, she must, it will be observed, have learnt the answer telepathically from the brother, even if the question was transmitted as usual by her husband (*Proc.*, Vol. III., p. 12).

An advantage of the percipient's impression emerging in automatic writing is that there is little or no room for

¹ It seems just possible that the frequent naming of a wrong number when an impression of a number was expected—in *e.g.* the Brighton experiments, may have been partly due to a strong subliminal dislike of admitting failure and a determination to transmit to the conscious intelligence, something, even if only a guess.

misinterpretation at the stage at which the waking intelligence becomes aware of it. When the impression emerges as a sensory hallucination, this is otherwise—as we have already seen in cases where it had not been received telepathically (see above pp. 33-35). The possibilities of misinterpretation are of course liable to be increased, when the hallucination develops gradually. In some of the Brighton experiments, the percipient hypnotised by the agent, Mr. G. A. Smith, was set with opened eyes to look at a blank card, on which he was told he would presently see a picture. The agent then tried to concentrate his mind on an imaginary picture, of which the subject had been chosen by Miss Johnson or myself and communicated to him in writing. The development of the picture was as a rule slow. The following (see *Proc.*, Vol. VIII., p. 561) is the case in which it was, I think, slowest and most fragmentary. The subject was *A Christy Minstrel with a banjo*. The percipient (Miss B.) said, “There’s something long, something round in that one—a little cage of some sort—something that looks like a cage; yet there’s something like a handle.¹ A can! Oh, it’s a can! It’s quite clear now.” Without remark about her impression we gave her a fresh card, and continued to try to impress on her the same subject. She said, “Something here dark—a hand.” I asked, “Is it a woman’s hand or a man’s?” To which Miss B. replied, “A black hand.”—which seemed a partial success. At this point Mr. Smith had to wake Miss B. in order to ask her when she had to go. Finding there was still a little time to spare she was re-hypnotised and another experiment tried. The subject this time was *A sailing boat on the sea*. This apparently made no impression at the moment and Miss B. presently said “A man—black—He’s got something in his hand—an instrument—sort of guitar thing.” Nothing had been

¹ Can she have been on the track of a banjo and have misled herself by the idea ‘handle’? As when P., given a hallucinatory picture of a choir boy (*Proc.*, Vol. VIII., p. 565) developed it at a certain point into a ghost dressed in white with hands up. “You couldn’t mistake it for anything but a ghost.”

aid about the Christy Minstrel and the banjo, so this ardy emergence of the picture was striking. The waking and re-hypnotisation was evidentially a weakness, as it involved contact between agent and percipient. But on the other hand the sequence of events strongly suggests that the full impression had reached Miss B. subliminally from the first, but had remained latent—only fragments being transmitted to the interpreting consciousness, until the final picture got through.¹

After this the attempt to make Miss B. see the sailing boat was continued, but twice produced nothing but a vague impression. Then Miss Johnson, who had remained in ignorance of the subject of the proposed picture in order that she might be able to talk to the percipient without danger of giving indications, asked whether it was anything like an animal. Miss B. said, "No—got some wrong sort of things—something at the bottom like a little boat—What can that be up in the air?—Cliffs I suppose—cliffs in the air high up—it's joining the boat—oh, sails—a sailing boat—not cliffs—sails." This was not all uttered consecutively but partly in answer to questions put by Miss Johnson in order to stimulate the percipient's attention (*Proc.*, Vol. VIII., p. 561).

In this case until the picture was grasped as a whole, the elements of it seem to have been seen rather vaguely. In the one to be now quoted (*Proc.*, Vol. VIII., p. 565), the elements of the picture emerged in a piecemeal manner, but each was definite when it came. The subject was *A sandwichman with advertisement of a play*. The percipient—P.—said, "Something like letter A—stroke there, when there." I said, "Well perhaps it will become clearer." P. continued, "Something like a head on the top of it; a V upside down—two legs and then a head.—A man with two boards—looks like a man that goes about the streets with two boards. I can see a head at the top and the body and legs between the boards. I couldn't see what was written on the boards, because the edges

¹The percipient being in hypnosis, neither the intelligence which sent up the sensory automatism, nor that which interpreted it, was Miss B.'s normal waking self. One, however, was subliminal to the other.

were turned towards me." This case is interesting, because notwithstanding the gradual emergence and tardy understanding of the hallucinatory picture there is strong reason to think that it was the *idea* of a sandwich man, and not a copy of the agent's mental image, that reached the subliminal stratum of the percipient's mind. For the agent—Mr. Smith—stated afterwards that he had pictured to himself the man and one board facing him. And this was the natural way to think of it, since the subject set included the advertisement of a play, which of course would only be seen if the board faced the spectator. The percipient's impression was incomplete.

Sometimes when, according to the percipient's description, the development of the picture has reached a point at which one would have expected the interpretation to be obvious, the latter lags somewhat. Thus (see *Proc.*, Vol. VIII., p. 562) the subject fixed on for the picture being *a man and woman dancing*, P. after long waiting said he saw "A man and a girl there—a lady and gentleman.—He's got his arm round her waist—they're valsing or dancing something or other"; each point being stated with an air of discovery, and the arm round the waist not at first suggesting the dancing.

On the other hand the idea sometimes came before the picture had completed itself. Thus (*Proc.*, Vol. VIII., p. 568) the subject for the picture being *A mouse in a mouse-trap*; P. said, "I can see something—some lines coming" (pause) "still those lines and something like—oh, I think I know what that's going to be. Is that meant for a mouse trap?" I asked, "Any mouse?" P. said: "I think it looks as if the mouse were trying to poke its nose through the bars. I don't think it's fancy."¹

It was possible to have a false picture competing more or less with the true one. Thus (*Proc.*, VIII., p. 267) the subject on one occasion was *A snake with its forked tongue out*. P. said, "I thought I saw something like one of those men with an ice-cream barrow—caught a

¹ This was seen, not on a card as usual, but with closed eyes.

glimpse of it"—then—"I just thought I could see something like a snake. I can see it now still—something like a snake-charmer there playing with it—isn't afraid of it a bit. I'm not going to say this is it yet, because I saw the ice-cream barrow just now. It seems a most silly thing to see a snake after an ice-cream barrow—but that went and this stays longer—still there." The whole experiment lasted ten minutes. We may observe that besides the irrelevant impression, there was what one may call embroidery on the telepathic idea—the addition of the snake-charmer to the snake. P.'s hypnotic imagination must have concerned itself actively with the impressions he received on this occasion. P. said once (*Proc.*, Vol. VIII., p. 563), "You could easily fancy anything that came into your head."

One evening we got Miss B. to see a hallucinatory picture and to write with a planchette at the same time (see *Proc.*, Vol. VIII., p. 262-3). Five experiments were tried, in two of which there was a visual impression (with closed eyes), but nothing legible was written. In a third there was no visual impression and the writing was wrong. In only two did both methods of externalising the impression operate. In one of these the results of the two methods differed markedly from each other and both were completely wrong. There was some approximation to the desired impression in the remaining case. The subject was *A cow being milked by a dairy-maid*. Miss B. said, "there's an animal I can see, a big one too—biggish looking—got some horns I think.—It's a buffalo." She saw nothing besides the buffalo and said it was standing up. In the meanwhile the planchette had written "Cow." A few experiments in number-guessing were also tried, in which Miss B., while trying for visual impressions of numbers looked at by the agent, at the same time had her hands on a table, tilting it, here too the results of the two processes were discordant.

The possibility of impressions developing differently according to the method by which they reach the interpreting intelligence, or of different impressions, whether

veridical or not, competing in this way for attention again opens up vistas of opportunities for confusion.

When we pass, as we must now do, from impressions emerging in sensory or motor automatism to those perceived as mental images or sensations, or simply as ideas or words, we can seldom trace the operation of the subliminal with the same certainty. The telepathic impact—so far as appears in many of these cases—may reach the waking intelligence direct. I am inclined to think however, from analogy, that telepathic communication is at least as a rule, a subliminal affair and that when the development of the conscious impression in the cases we are about to consider is gradual or incomplete, it may be due, just as in some of the cases above considered, to the difficulty in passing from subliminal to supraliminal and we shall find certain cases where the operation of the subliminal intelligence is strongly indicated.

I will begin with impressions visual but not hallucinatory—not externalised, and illustrate with two cases from Mr. Guthrie's experiments where the general form and appearance of an object gazed at by the agent seems to have been gradually apprehended by the percipient but not at first its name or meaning. Indeed the first was definitely misinterpreted.

Object looked at *Mr. B's watch held at some little distance behind the percipient*. Percipient says: "Is it bright . . . round . . . Is it a button." (*Proc.*, Vol. I., p. 266.)

Object looked at *a dark crimson apple*. Percipient says, "Is it round? . . . a dark red shade . . . like knob off a drawer. . . . It is an apple." (*Proc.*, Vol. I., p. 268.)

The interpretation "button" was, it would seem, a guess based on an imperfect visual impression. "Apple" may have been a guess too—not a real interpretation. We cannot tell. Moreover, it is probable that when a guess or an interpretation is made it reacts on the impression and makes this clearer. Some cases suggesting this will be quoted below; and we have had evidence above, pointing to this kind of action and reaction be-

between interpretation and hallucinatory pictures. And as a matter of fact the same thing happens to us in real perceptions of external things either not very clearly seen or heard, or capable of more than one interpretation.

I have distinguished between interpretation and guessing, but I must allow that the distinction is not a very well-marked one, whether we are concerned with perception of external objects or with mental images telepathically originated. Indeed in a certain sense our interpretations of sensory impressions might all be called guesses. I am, however, using the word guess to mean an interpretation which carries no conviction, at any rate before the guess is accepted and the image has adapted itself to it. Thus in the first of the above-mentioned experiments the mental image seems to have been of a bright round object at an uncertain distance and therefore of an uncertain size.¹ Casting about for an explanation, the idea of a button suggested itself as a possible one, but there was no feeling of certainty about it. The percipient's mental image was not obviously that of a button and recognised as such. In the second experiment, shape, colour and size (the drawer knobs of a chest of drawers being of much the same size as an apple) are apprehended, and the mental image becomes complete and is *recognised* by the percipient as an apple. Of course in thus figuring to ourselves the process in the percipient's mind, there is much of conjecture. All we know is what the agents intended and what the percipient is reported to have said, to which we may add the experience we all have of the process of ordinary sensory perception.

It may be worth dwelling on this last a little because of the importance of its bearing on the interpretation of mental images telepathically received. Perception of external objects is in effect the interpretation of sensory impressions. Taking for simplicity one sense only, the sense of sight;—when we say we see anything—a book for instance—we mean of course that certain sensations have affected the retina, which with the aid of previous know-

¹ For want of recognition of size and consequent confusion compare one of Miss Tipping's experiments quoted below p. 62:

ledge—such as what a book is like, the probability that a book would be in the place where it appears to be and so forth—we interpret as a book. Actually if the presence of a book in that place is expected, very slight sensory impressions will be perceived as a book, and we may in such a case interpret as a book something in most respects entirely different. Again, when there is little of expectation to guide us, and owing to bad light or other cause the visual sensation is unusually imperfect we are sometimes compelled to guess considerably beyond what our visual sensations justify. Mistakes are often made in semi-darkness in this way. Selection is another element in the process of perception which may either help or hinder correct apprehension. Most of our visual perceptions are effected by a selection of such lines and colours among those presented to us, as we can combine into the image of a probable object. Amusing use is made of this fact in those puzzle pictures representing in the same picture two entirely different subjects. One interpretation first strikes us as obvious, but when we have succeeded in perceiving the other, it is sometimes quite difficult to perceive the first again at all.

I will quote next some cases where I think it is pretty certain that no “guess” was made. The percipient’s experience seems to have been of the nature of a gradually developing visual image in the mind, interpreted as the development proceeded. In the first the image remained vague and indistinct to the end and it seems possible that an initial misinterpretation by the percipient about branches hindered the proper development. The impression may have been like the puzzle pictures just referred to.

Object looked at by agents, *A small toy dog, coloured light brown, with tail extended and in the act of leaping.* Percipient says:—“Is it green? . . . I can see something like a lot of branches. . . . Can’t count them—look too many—like a long stem—so—” (tracing a horizontal line in the air) “with things down” (tracing lines downwards) “Looks to be a lighter colour now . . . not green as at

first . . . but now it looks like an animal. Can't see any more." (*Proc.*, Vol. I., p. 268.)

Object. *A jug cut out of white card board.* Percipient says, "Cannot see any colour . . . looks all light . . . Is it a cup? There is a handle . . . oh it is a jug." (*Proc.*, Vol. I. p. 269.)

Object: *A pair of scissors, standing open and upright.* Percipient says: "Is it silver . . . No—it is steel. . . . It is a pair of scissors standing upright." (*Proc.*, Vol. I., p. 267.)

In the following case it is certain that there was no guess. There was an apprehension—probably vague—of a shape, but no idea attached to it. Experiments were being made with rough drawings as objects. When the percipient thought she had a correct impression she unbandaged her eyes and attempted to draw the impression she had had. On one occasion the agent drew and gazed at a rough representation of a horse. It was extremely bad, but nevertheless that it was meant for a horse or something like one was unmistakable. The percipient's reproduction, also extremely rough, unmistakably resembled the original, though not at all like a horse. Almost all that constituted the resemblance of the original to a horse had been eliminated. The percipient in fact cannot have had the idea of a horse in her mind, though she must have had a vague impression of the lines of the original. (See *Proc.*, Vol. II., p. 42, where the drawings are reproduced.)

In Baron von Schrenck-Notzing's experiments with roughly drawn diagrams there are instances where the correct impression is approached through two or three wrong ones, perhaps not derived from the original at all. This may be a mode of gradual development, but on the other hand it may merely be that the percipient has a multiplicity of impressions among which she, as it were, feels about for the right one. (See diagrams 14 and 15 in the sheets of diagrams following p. 22 of *Proc.*, Vol. VII.)

In the mental impressions discussed above, it was, I think, clearly the image of the object to be transferred

that reached the percipient. What she grasped, partially or completely, was the external appearance. But there are other cases where it is equally clearly the idea rather than the image that is apprehended. This is well seen in Mr. Rawson's experiments (*Proc.*, Vol. XI., pp. 1-17). In these the agent and percipient each sat with block and pencil before her and the latter tried to reproduce what the former, unseen by her, was drawing. Sometimes the reproduction was nearly exact (as in the two pigs on p. 4) and there is nothing to show whether it was the image or the name that was transmitted. Sometimes, on the other hand, it seems clearly to have been the idea or the name of the object that the percipient apprehended; as when she drew a hand (p. 4) in a totally different position from that drawn by the agent, and similarly a ring (p. 5), or a clock and again a chair, different in character from those the agent had drawn (pp. 10 and 11). It must, however, have been the impression of form that converted a waste-paper basket into a barrel (p. 10). And it is very difficult to say what happened when the agent drawing a match-box, the percipient drew what was even more suggestive of a match-box but in a different position, and then failed to interpret her own drawing (pp. 15 and 16). "I don't know what I have drawn," she said, "it is a kind of square inside a square." The "square inside a square," resembling the strip of luminous paint on some match-boxes, did not appear in the agent's match-box.

In one experiment in this series in which a nearly exact replica of the agent's drawing—a nose—was made, the percipient apparently first apprehended the idea of the object, or perhaps its function. She said, "I can think of nothing; I can only hold my nose," and presently proceeded to draw the nose herself (pp. 9, 10). In one of the experiments of Messrs. Schmoll and Mabire series it was pretty clearly the function of the object represented by the drawing—that of a musical instrument—that first reached the percipient's consciousness. The object was a rough drawing of a *lyre*—its frame resembling the outline of a vase with a foot. It had four wires up the

middle connected by a bar across the top. After two minutes the percipient said :

“ I have got the notion of a flute—or of some musical instrument or other.” (a little later) “ I see many lines. It resembles a vase, but it is not a vase.” She then drew and said “ Now it is like a harp ; there are several strings—like a little gridiron.”

At the end of the experiment she handed to the agents five drawings showing a progressive resemblance to the object or parts of it, and ending with one very fairly complete. Here although the *idea* of some musical instrument was the first thing apprehended by the percipient, subsequent impressions seem to have been almost wholly of form (*Proc.*, Vol. V., p. 190 and for faesimiles of drawings p. 213).

The point raised above of the reaction of the percipient's interpretation on his impression is illustrated rather clearly, I think, by an experiment in Messrs. Sehmoll and Mabire's series (*Proc.*, Vol. V., p. 181, and for faesimiles of drawings, p. 210). The object was *three horizontal lines of unequal lengths connected by a vertical line at their left end*. It was like a letter E with its horizontal lines enormously prolonged, and it was not intended to represent anything. After a few minutes the percipient said, “ I see three fish on a skewer.” Not being well understood she explained:—“ Three fish held by a skewer, that is as they are sold in the fish-markets ; but everybody knows that ! ” Then she took off her bandage and drew a very rough representation of three fish lying parallel, with a skewer through their heads. Apparently a mental image of three parallel lines, suggested three parallel fish and was then modified to fit the interpretation.

A more unfortunate example of development on wrong lines, due apparently to ideas introduced by the percipient in attempts at interpretation, is afforded by one of the experiments of the Misses Tipping (*Proc.*, Vol. XXVII., p. 420). The object experimented with was a *gold watch bracelet*. Miss K. Tipping sat at the table

holding the bracelet up and turning it round and round in her hands. Miss L. Tipping in another room (the experiments were made at the S.P.R. rooms) said :

“ You are sitting at a table in a well lit room—the fire seems burning brightly—great sense of comfort—and you are holding a small round smooth object, bright in colour. You have picked it up and keep turning it round, your hands seem moving much. It is glowing colour—orange is the colour I get and its colour is its attraction. The object seems very cold and smooth, and a great feeling of roundness comes to me.”

So far the description is fairly good and in some respects very good. But at this point the percipient gets off the right track altogether—misled perhaps by the idea of a round orange-coloured object. She goes on :

“ I sense a warm country and dark people moving about—picking up fruit—long groves of trees—blue sky—and very sunny. Is it fruit you are holding? I get many objects of the same shape. I can't make out if it is an orange, or some kind of fruit with plenty of juice. I seem to be tasting fruit of some kind.”

In the following experiment in Professor Gilbert Murray's extremely interesting series (*Proc.*, Vol. XXIX., p. 105) initial misinterpretation by the percipient affected all that followed. The idea to be transferred was “ *The little crocodile on the Captain's trunk and him showing it to Isabel and me.*” The percipient said, “ Where's Denis's lizard gone?—because I thought it was Denis's lizard pursuing you and Isabel—the lizard on a bed in a cabin and you and Isabel looking at it.” It was not unnatural to mistake a little crocodile for a known lizard, especially if the impression thus mistaken was a rather vague visual or semi-visual one. And it must be allowed that, notwithstanding this initial error, the percipient got remarkably near to the agent's idea.

Associated ideas sometimes impress themselves before the idea intended is grasped. Thus in one of Mr. Guthrie's experiments (*Proc.*, Vol. II., p. 35) the object

ooked at was a rough but rather spirited drawing of a fish, apparently swimming. The percipient said almost directly, 'are you thinking of the bottom of the sea with shells and fishes?' And then, "Is it a snail or a fish?" The figure she proceeded to draw was distinctly a very fair imitation of the original, but justified, in a way which the original did not, the doubt whether it was a snail or a fish. The idea of the bottom of the sea may of course have originated with the agent or the percipient.

In the next case the agents were probably responsible since the association of ideas was involved in the selection of the object to be transferred. Mr. Guthrie writes (*Proc.*, Vol. II., p. 30):

"One evening [during a visit to London] I called Miss E and a friend of mine . . . out of the room, and requested them to assist me in imagining the large stained glass rose-window in the transept of Westminster Abbey, opposite to which Miss E, Miss R, and I had been sitting at the service the same afternoon. I then asked Miss R to say what object we were thinking of. After a while she said, "I cannot tell what you are looking at, but I seem to be sitting in Westminster Abbey, where we were this afternoon." After another interval she said, "I seem to be looking at a window," and again, "I think it is the window in the chancel with the figures." When afterwards told which window it was, she said that she did not see any window distinctly, and certainly not the rose-window thought of.

In the following case association of ideas—Mr. Keir Hardie suggesting the Labour Party—misled the percipient Professor Gilbert Murray, though the result was an amusing derivation from the original. The impression to be conveyed was *Keir Hardie blacking boots*. The percipient said, "Hunter's shoes, Labour Party with exceedingly bright boots" (*Proc.*, Vol. XXIX., p. 99). One cannot, of course, be sure that what the agent actually transferred was what she intended to transfer, but if it was, it seems clear that though the idea of Keir Hardie failed to emerge in the percipient's conscious impression it must

have been there latent in his mind, and so must the idea of boots being blacked. It looks, in fact, as if the complete idea intended reached the percipient subliminally all right, but evolved itself otherwise in the course of emergence into consciousness.

There are other mental processes besides association of ideas which may interfere with the successful emergence of telepathically received impressions. One is a tendency to ignore or reject ideas that the conscious intelligence dislikes or that seem to it absurd or unlikely to be meant. This probably happens a good deal with some percipients and might easily happen without our knowing anything about it. Here are two instances where this kind of inhibition nearly prevailed:

In one of the Brighton experiments, P. was to see on a card a hallucinatory picture of *A spider in the middle of its web*. After some time he said:

“Now I can see something—funny shape—don’t know what it is either—not quite round—octagonal in some places—lines across it—more sides than eight—some broken. If I was to compare it with anything, it would be a spider’s web; but it can’t be that. There would never be a picture of a spider’s web.” (*Proc.*, Vol. VIII., p. 568.)

In one of the experiments of the Misses Tipping—agent and percipient being in different rooms—the agent occupied herself mainly with opening and closing an umbrella, dancing during part of the time while she did so. The percipient’s account of her impression began “your hand seems moving up and down,” and then diverged into what might be the description of a small table bell, the kind that is struck by pressing down a knob. She ended her written description with, “You lift up your hand and let it fall. Several times you do this. The shape seems like a doll’s umbrella, with a little slender stem.” She afterwards, but before receiving any hint of what the experiment had been, said:

“the impression she had got was of her sister moving her hand up and down rhythmically . . . She saw an

object like a mushroom, and, wondering what it was, had kept on thinking of a wee doll's umbrella which she had had when a child. She tried to banish the impression as irrelevant." (*Proc.*, Vol. XXVII., pp. 426-428.)

(It looks as if mushroom shape here had suggested mushroom size, and so the toy umbrella instead of a real one.)

Another source of confusion is liable to occur when the idea to be transferred goes beyond what the percipient's mind can construct from material at its disposal. Thus Dr. Ermacora tells us that in a dream impressed on a child between four and five years of age, a lamb figured. The child lived at Venice and had never seen a live lamb. The animal that duly appeared was accordingly interpreted by her as a light-coloured dog.¹ (*Proc.*, Vol. XI., pp. 251, 252).

But it is not only mental habits and associations that are liable to affect the impression that reaches the percipient's normal waking intelligence. Outside things actually occurring or existing contemporaneously sometimes seem to mix themselves in and play a part in the result. One of the quaintest cases was when the edge of the card P. was looking at, cut off part of the hallucinatory picture—a *vase with flowers*—which he should have seen. This is what P. said :

I see something round, like a round ring. I can see some straight things from the round thing. I think it's a glass—it goes up. I'll tell you what it is; it must be a pot—a flower pot you know with things growing in it. I only guessed that because you don't see things growing out of a glass.²—It's not clear at the top yet.

¹ The case in which this incident occurred is too long and complicated to quote here, but I strongly recommend those interested in telepathy, who do not happen to remember Dr. Ermacora's account of his Experiments in *Proc.*, Vol. XI., pp. 235-308, to read it. The experiments are of quite an unusual kind, and the fulness of telepathic contact manifested in them between the sleeping percipient and the secondary self (as it probably was) of the agent, is very remarkable.

² The impression was evidently confused, which may have been due to distraction in the agent, who, while thinking of a vase with flowers, sat actually facing a pot with a growing india-rubber plant in it.

You see something going up and you can't see the top, because of the edge of the paper—it's cut off. I don't wonder, because it's no good wondering what Mr. Smith [the agent] does, he does such funny things. I should fancy it might be a geranium, but there's only stieks, so you can't tell. (*Proc.*, Vol. VIII., pp. 565, 6.)

Two cases of percipients being apparently aided or influenced by an object in front of them are recorded by Mr. Rawson. In the first the agent drew *a clock*. The percipient, Mrs. L, began drawing within ten to fifteen seconds and presently said, "I am drawing something I can see." She sketched the clock in front of her on the mantelpiece, which was, however, quite unlike the agent's clock—a wall clock with weights. (*Proc.*, Vol. XI., pp. 10, 11).

The second case was more curious. The agent's drawing represented *a sand glass*. This was unknown to Mr. Rawson. He writes:

Mrs. B. [the percipient] after waiting some three minutes said, "I can't think of anything." In about fifteen seconds more she called me and said, "Look here,"—pointing to a gilt four-leaved shamrock like this [drawing of it given] which formed an ornament at the corner of a picture frame in front of her as she sat at a table with her back to Mrs. L. [the agent] . . . "Look here, Mr. Rawson, I was looking vacantly before me and I noticed this. It's the only idea I have and I will draw it."

When I looked at her drawing I was astonished to see that she had only drawn two leaves of the shamrock, and those the two [opposite each other] which exactly resemble the interior of a sand glass. (See *Proc.*, Vol. XI., p. 15, where the drawings are reproduced.)

The mental process here is somewhat obscure, but it looks as if the idea¹ of the object to be transferred had

¹I say *idea* rather than form, because the percipient's drawing corresponded to the glass part of the sand glass—the essential part of it. It ignored the stand, which was prominent in the form of the agent's drawing. It is of course possible that the success here was purely

een grasped subliminally, and to get it apprehended upraliminally the subliminal intelligence had picked out the lines in the shamrock corresponding to the form of a hand and glass as one picks out lines and marks in glowing coal when one sees faces in the fire.

In Professor Gilbert Murray's experiments several cases were noted where some external fact or occurrence seemed to suggest or stimulate the right idea, not as it did in the above cases, but by some sort of association of ideas. I will quote three.

Subject to be transferred, *Ghost of Strafford coming in to see Charles I., when John Inglesant was page-in-waiting.*

Percipient says, "I think this is wrong. I'm going to guess it is a ghost. (A light through the window suggested a ghost.) I should say a sort of Cavalier ghost appearing in the evening. I should think it is in a book. Charles I. appearing to anybody—ghost appearing to Charles I.—(guessing) Strafford." (*Proc.*, Vol. XXIX., p. 94.)

Subject, *Cousin B—having his eyes examined by Mr. C—*. Percipient says: "An oculist, C—, examining the eyes of B—" (suggested by one of the company moving her spectacles). (*Proc.*, Vol. XXIX., p. 98.)

Subject, *Savonarola having the pictures burnt in Florence and standing up and a crowd round.* Percipient says, "It's Italian—I think it's something in a book. Well, this is the merest guess and may have something to do with the spark that came out of the fire—I get a smell of burning, the smell of a bonfire—I get Savonarola burning the pictures in Florence." (*Proc.*, Vol. XXIX., p. 104.)

Professor Murray in his *Presidential Address* discusses the influence of such external events. He says (*Proc.*, Vol. XXIX., p. 59):

Now for some experiments, where the subconscious impression chose some sense-channel by which to reach

accidental. The reason for thinking otherwise, besides the large amount of telepathy manifested in the series, is that the selection of the portion of the shamrock drawn is a very odd one if purely arbitrary, and is accounted for if prompted telepathically.

mc. First, the sense of smell. My daughter [the agent thought of Savonarola at Florence and the people burning their clothes and pictures and valuables in the square.—I first felt, “This is Italy,” then, “This is not modern” and then hesitated, when accidentally a small tarry bit of coal tumbled out of the fire, I smelt oil or paint burning and so got the whole scene. It seems as though here some subconscious impression, struggling up towards consciousness, caught hold of the burning coal as a means of getting through. (I am sorry to use metaphorical language, but exact language would be both difficult and cumbersome.) In this case then the information came through the sense of smell.

Mrs. Verrall, who reported on the whole series of experiments, makes some interesting comments on this passage in the address—she says (*Proc.*, Vol. XXIX., p. 85):

The subjective impressions of the percipient as to method are always valuable, and Professor Murray has given us concrete examples of each of the suggested processes. But a considerable familiarity with this type of phenomena, both as eritie and as pereipient, leads me to warn the reader that, though the subjective impression is no doubt accurately noted, we must not accept it unchallenged as an explanation of the process. In other words, while we may grant, for instance, that the smell of a tarry coal which fell from the fire was the means of translating a subconscious impression into a conscious thought of the burning pictures, it is not safe to infer that such an incident is a necessary part of the process. In the unusual condition induced by a deliberate desire to plunge below the threshold and bring back spoil from the depths, the mind grasps eagerly after something familiar, and—I speak at least of my own sensations—is relieved at seizing a solid fact, within normal experience, to which it may attach the half-apprehended object of its search. The percipient's mind being thus, so to say, on the look out for such a link, fastens on the falling coal, but had the coal not fallen, it is capable of finding some other

link, or even of forging one. Thus in one of his instances of a fictitious association of ideas, Professor Murray speaks of hearing a horse in the road outside: "I have a noise of hoofs. I expect it's the noise of hoofs in the street that makes me think of it." But in the contemporary record of the note-taker we read: "No noise of hoofs in the street."¹

It is a frequent feature of telepathic "messages," and the fact appears in a good many of the cases discussed above, that the percipient's impression, even when clear and correct as far as it goes, does not give the whole message." This is a very important thing to keep in mind when estimating the value of information telepathically received. Telepathy, as we know it, even if it were more readily available than it is, could not be relied on like telegraphy to convey a message accurately and fully; and the message often stops short of completeness for no obvious reason. I will conclude my examination of development of telepathic impressions, by quoting two cases illustrative of this fact. In both the transmission is very successful as far as it goes. In the first it is also very prompt. In the second the idea merged by stages.

The first is one of Baron von Schrenck-Notzing's experiments. He, in one room, drew *The staff of Æsculapius with the serpent*. The percipient, Fraülein A., in another room with the door closed drew at the same time a snake—or at least a wavy line with a head and a tail resembling the agent's snake. But there was no staff. Perhaps the percipient had not heard of the staff of Æsculapius, and so the idea failed to reach her; and the report leaves it uncertain whether she even interpreted her own rough drawing as a snake. In any case, however, it is certain that the staff was not represented either in form or in idea. (*Proc.*, Vol. VII., p. 12, and page 6; reproduction of diagrams).

The second incomplete impression I shall quote is one of Professor Murray's. The subject to be impressed—a

¹ For this experiment cf. *Proc.*, Vol. XXIX., p. 60 and pp. 92, 93.

purely imaginary one—was *Celia Newbolt under a gourd tree at Smyrna*. The percipient said, “Modern Greek of some kind—sort of Asia Minor place—a tree and woman sitting under it—a particular tree—girl sitting under it—she does not belong to the place—she is English—something to do with a poet¹—can’t be Mrs. Kipling—no it’s a girl—rather like one of the O—s—don’t think I can get her.” (*Proc.*, Vol. XXIX., p. 107, also p. 66.)

Here each item as it emerges is correct or immediately corrected, and the whole scene, as it were, is grasped; but the percipient fails to recognise either the identity of the lady or the exact place, though both are extremely prominent in the original idea, and though characteristics of both emerge in the impression.

I have now, I think, sufficiently shown that there are obstacles or at any rate difficulties in the way of telepathic transmission which easily may, and in fact often do, interfere with the process, and prevent a “message” being received as the sender intended. Apart from difficulties on the agent’s own side, and even when a message has apparently safely reached some part of the percipient’s mind, it may fail to pass successfully from that to the normal waking consciousness. And this not only because the impression is sometimes too feeble to prevail, but because as transmitted to the normal consciousness the latter may fail to interpret it. And the difficulties may be aggravated by differences in the results, according as different modes of externalisation—different methods of transferring the subliminal impression to the normal consciousness—are used, and even by deliberate invention in the subliminal mind.

The amount of light thrown incidentally in the course of our investigation on the telepathic process is I fear not very great. But I think there is some, and indeed enough to give good grounds for hope that, as our accumulation of telepathic occurrences, spontaneous and

¹ Miss Newbolt is the daughter of Sir Henry Newbolt, author of *Admirals All* and other poems.

xperimental, increases, we shall gradually acquire a more complete understanding of how telepathy works. In the meanwhile it is clear that extreme caution is needed in accepting telepathic messages as either accurate or complete when they reach us, whether the sender be incarnate or discarnate.

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 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 Psychological 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, this 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 judicious 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 psychical 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 unconseious 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 especi-

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 shirk 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 Haggitt case).

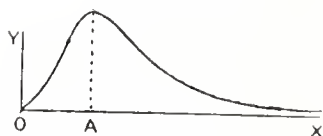
The discrepancy in time was a few hours.

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 pernickity 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 Riehet'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 Riehet 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 Riehet 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 Riehet'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.

MATERIALISATION.

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 acidity 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. Any thing 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

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 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 MÉTAPHYSIQUE."

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 in 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 round 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 trivialities; *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, we 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 wise 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 mechanic, 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^g in aⁿ 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 Méta-psychique*.

OLIVER J. LODGE.

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PART XC.

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FOR AND AGAINST SURVIVAL.

THE DIFFICULTY OF SURVIVAL FROM THE SCIENTIFIC
POINT OF VIEW.

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I.

IN my numerous writings I have resolutely adhered to the position of not admitting as demonstrated the survival of consciousness. Nevertheless, it may be that my negative attitude is somewhat more strongly represented in my writings than in my intimate thought. There are facts so unexpected, so perturbing, continually cropping up as we continue to study the subject, presenting themselves with such disconcerting rapidity and complexity, that it would be inexcusable for me to deny, without hesitation, all possibility of the survival of consciousness.

It therefore appears to me wise to make a reserve in my negation. If it is true—as I have often maintained—that the most reasonable hypothesis is the unknown hypothesis X, which it will be for the future to develop, it is very possible that this hypothesis X need not be

antagonistic to the spiritistic hypothesis. In fact, I do not wish to expose myself to the chance of seeing my negations suddenly reversed by new experiments; so, although I do not expect this to happen, my attitude of prudence may be pardoned. At the same time, in spite of my prudence, I am forced to regard the spiritistic hypothesis, not only as undemonstrated, but, still more, as being in formal opposition to a great number of facts.

Let it be well understood that I am not at all concerned to know whether survival is agreeable or disagreeable, nor whether I am in accord or discord with any particular brand of religious opinion: it is not things of that kind which occupy my mind, but only a question of fact—the truth.

II.

To what then is the spiritistic hypothesis in opposition?

First of all, very briefly, there is Physiology, that is to say a very precise science, rich in demonstrations, which have established by innumerable proofs a narrow rigorous parallelism between intellectual functions—otherwise called memory—and the brain.

Moreover, in the immense animal kingdom there is no gap, no hiatus. The monkey and the dog have a memory analogous to that of man: the hen and the tortoise can be compared with the monkey and the dog: then the fish and the octopus: then all the other animals, down to the worms. Consciousness, mobility, sensitiveness, are functions of the nervous system; so that it is necessary to suppose, not only the survival of the human consciousness, but also the survival of all animal memories. That is a grave consideration, and I am not resigned to it.

But the spiritists do not admit what my illustrious friend Oliver Lodge humorously calls “the fetish of the brain.” For myself, without being able to give a firm demonstration (for one cannot prove a negative), I cannot believe that memory can exist without the anatomical and physiological integrity of the brain. Whenever there

is no more oxygen, whenever the temperature is either too low or too high, when there are a few drops of atropine or morphine or chloroform introduced into the blood, whenever the course of cerebral irrigation is stopped—memory alters and disappears. Spiritists cannot deny these facts. They say merely that the brain is only an instrument, which is unable to respond unless it is intact. And it is by reasoning of another order that they try to prove that the instrument is not necessary.

But that is another grave consideration. It is as if I were to say that in an electric lamp the passage of the current and the integrity of the mechanism of the lamp are not necessary for the production of its light.

III.

But let us proceed and come to the direct proofs. Following the classification that I have formulated, they can be related to *subjective* metapsychics or to *objective* metapsychics.

Now in subjective metapsychics we have a great number of facts proving that human intelligence has means of acquiring information other than through normal sensory channels; and that it acquires this information under conditions which exclude the attribution of this super-sensorial knowledge (or cryptaesthesia) to the presence of an individuality which has survived the death of the brain.

When Ossowiecki reads the word "toi" that I have written on a scrap of paper held all crumpled up in my hand, or when he indicates a verse of Rostand that I don't know and that Mme de Noailles had enclosed in a carefully sealed letter, there is no need to suppose the intervention of the soul of a deceased person. There is perception or knowledge of reality: that is all.

And this perception or knowledge is profoundly mysterious. We might say that it has, so to speak, no limit known to us. We are not leaving the scientific domain if we say that cryptaesthesia *can reveal to us fragments of the real*—fragments which seem to have no connexion with space and time.

Since the facts are so, since cryptaesthesia in these cases is apparently not connected with the agency of any discarnate person, I do not at all see why, in spite of appearances—sometimes startling and disturbing—one should feel authorised to suppose that the individuality of some dead person has retained his consciousness, his memory, and is there in order to make revelations to us. It is a hypothesis which is not at all necessary, given the mysterious and vast extent of cryptaesthetic power.

Consequently, all the revelations of the discarnate about their old life can be logically attributed to this power of cryptaesthesia.

Nevertheless, I do not overlook two facts: (1) That genuine mediums have an invincible tendency to attribute their answers to a spirit of the dead: all their phrases are saturated with the spiritistic hypothesis; and it was so even in the beginning of their career, when they had practically no knowledge of spiritistic literature. (2) We must admit—what is not very satisfactory—that mediums have a way of selecting minute details in the life and habits of a definite discarnate person in order to utilise or adapt them in their answers. Sir Oliver Lodge and E. Bozzano have insisted on the difficulty there is in understanding this selection in the messages. So much so that in certain very rare cases the hypothesis of survival is much less far-fetched than the hypothesis of selective cryptaesthesia.

But these reasons, which I frankly bring forward in all their force, do not hinder me from concluding that by subjective metapsychics one cannot render likely the theory of survival.

One must here remark that we have not taken into account the wholesale nonsense furnished by automatic writing in thousands of experiments. Even for the most hardened spiritist there is not one communication in a thousand which is not ridiculous: it behoves one therefore to be very cautious about the thousandth observation, even when it has rather striking features.

IV.

Let us remain a moment longer in subjective metapsychics and consider the most extraordinary facts in the whole of known science, that is to say Premonitions. It must be understood that I by no means deny the reality of certain premonitions; I have quoted remarkable examples of them which have happened to me personally; and in the annals of our science there are astonishing examples. But premonition has nothing to do with survival. It remains an absolutely incomprehensible phenomenon for our puny intelligence. One cannot see how this phenomenon, which shocks so brutally our sense of free will, can ever be understood.

That matters little. It is an undeniable fact; and it proves to us the sheer impossibility, as yet, of finding any explanation for metapsychic phenomena. But I do not propose an explanation or a theory. When I speak of cryptaesthesia I indicate a fact—the perception of reality by extra-sensorial channels. I do not seek to go beyond that, and as yet science has no right to go beyond that.

V.

What strongly confirms this opinion, about our scientific powerlessness in coming to a conclusion, are the experiences of Objective metapsychics; for they prove to us that we are still plunged in thick darkness. When an ectoplasmic formation comes out of the body of Eusapia, of D. D. Home, of Miss Goligher, of Eva, or of Willy, we can only properly conclude that from the bodies of mediums can be disengaged sometimes forces having objective reality, which can be moulded, and photographed, and can assume the most diverse appearances. What connexion can there be between these materialisations of human forms and the survival of memory? I cannot see any.

Moreover, there are not only materialisations of human forms, but also materialisations of veils, head-dresses,

clothes, animals, various objects; to such an extent that we cannot doubt that the power of materialisation or of producing ectoplasm is not limited to human personalities.

I know well that in certain cases, in particular the case of Mr. Cushman (*American Journal S.P.R.*, April, 1922, pp. 132 to 147), the photograph of the phantom represents very exactly the face of the young deceased daughter of Mr. Cushman. But even in this remarkable case, if there is not some error or trickery, it is impossible to suppose that the body of this young girl had not been decomposed by the decay of the tomb. We cannot really suppose that the forms of living people perpetuate themselves after death. It must be the materialisation of *something which has existed and which no longer exists*.

To admit that is to enter a world absolutely unknown. It is possible that one day it may be admitted; but to-day we stand plunged into an abyss of deeper and deeper mysteries. It would mean, not only the survival of memory, but the survival of the chemical elements which constitute our body, and which retain somehow their molecular arrangement, in spite of incineration and putrefaction.

Thus objective metapsychics gives no support whatever to the theory of survival. It teaches us only this—that, so far, we have understood nothing, absolutely nothing, of all these phenomena.

VI.

And now to conclude. Unknown truths, immense unforeseen horizons, open before us. Let us not hasten to build up a fragile theory. The further we advance the more the shadows thicken. The old Egyptians had already supposed that a human being survived the disintegration of its human tatters. They put into the sarcophagus of their dead ones, cakes, toys, and jewels. The anthropomorphism of the spiritist is of the same order. Truth, under the profound veils which cover it, must be far more noble than this antiquated idea—the *prolongation of our miserable individual intellectuality*.

I deny nothing. I claim only that the theory of survival has some extremely feeble evidence in its favour, but against it a series of innumerable inductions. In view of the rapid progress of the sciences, and the profound change in all our conceptions, it must be held to constitute only a revival of very ancient superstitions. The evolution of science will lead us to more splendid truths.

FOR AND AGAINST SURVIVAL.

THE POSSIBILITY OF SURVIVAL FROM THE SCIENTIFIC POINT OF VIEW.

BY SIR OLIVER LODGE.

MY good and eminent friend Professor Richet has made an admirable statement or synoptic summary of the enlightened materialistic position in regard to the phenomena studied in Psychic Research, and recorded in his great book, *Traité de Metapsychique*. His statement would not be accepted by the great majority of his colleagues, who being unacquainted with the facts are therefore comparatively benighted; but the interesting thing is that though Professor Richet knows facts which in some of their aspects conflict with materialism, he yet is able to remain a materialist.

No offence is intended by this term: it is a definite philosophical position. It is well to have this position competently sustained, so far as the phenomena specially under consideration are concerned, and so far as it has a bearing on our acceptance or rejection of the possibility or reasonableness of human survival. If Professor Richet's stronghold can be stormed, it is unlikely that any successor will be able to entrench himself in a fortress of equal solidity.

Richet shows himself remarkably open minded, for he says, "I deny nothing"; he also shows himself a thorough agnostic, for he says that we are still plunged

in thick darkness and have no clue to these mysteries. But here is just where I differ from him. I am less open-minded, for I want to deny a good deal. I am less agnostic, for I have a working hypothesis, which I desire to verify or else explode.

Now although Professor Richet is acquainted with the facts, I venture to say that he is not yet acquainted with my version of the spiritistic point of view; which I might call "our theory" except that I have no right to involve other people in a disputed and unorthodox position. Why should he be acquainted with it? If I have indicated my theoretical views at all, it has always been in a faint and apologetic manner, because I want to confront them always with the facts, and because I wish to emphasise the facts themselves rather than any opinion or theories about them. But with my friend Professor Richet I must take a different line. There is no need to weary him by insistence on the facts,—though about a few of the subjective kind I have a more favourable opinion than he has; just as on the objective side he has had advantages of investigation denied to me,—what is troubling him throughout is the lack of theory. He bravely faces the lacuna. He does not seek to devise opposition theories. He is content to say that the facts are mysterious and inexplicable and rather crazy, when interpreted as orthodox science feels bound to interpret them.

And with that limitation—the limitation which orthodox science at present imposes on itself—crazy and incredible is what they are. Still more crazy must our theories about them seem. But new facts often require new theory for their interpretation. There are things in the universe which biological science has not yet taken into account. If or when it does proceed to take another entity of physical existence into account, it will find its difficulties gradually disappearing. And Richet himself will feel sooner or later that he can have a clue to his facts, a link on which to thread them, a point of view which will enable him to interpret them in a more hospitable and less dumbfounded manner.

From his present point of view no wonder they appear strange, troubling, mysterious and incredible. The marvel is that his loyalty to truth and to fact has enabled him to accept them at all, as part of the reality of the Universe. That is just what they are: but then some other things are likewise part of reality. And when we accept and incorporate the Ether into our scheme—a thing at present totally ignored by biological science, and indeed ignored by all science except one-half of the science of Physics—the horizon will begin to brighten, the mist roll away, and a star, if not a sun, will begin to illuminate the darkness.

I said that I wanted to deny as well as to assert. Professor Richet refrains from denying, but some of his assertions are rash. He denies with hesitation: he asserts with vigour—a procedure in general quite admirable; but on this occasion I am going rashly to take an opposite course. I am going to deny with vigour and assert with hesitation. Only, for the sake of lucidity and brevity, I may find it best to throw my assertions into a positive and dogmatic form, which ill suits the subject were it not for this explanation. And I must trust my critics clearly to apprehend that when I turn from denials to assertions I am only formulating a working hypothesis, only making an effort to frame a rational conception of the manner and method of human survival.

The evidence for survival ought to stand on its own merits, without being hampered by effete superstitions. I wish to deny and repudiate some of those superstitions in a forcible manner; and in this I know that I am in agreement with all the more reasonable spiritists. Professor Richet, and perhaps some others in the physiological camp, seem to want to carry these superstitions over from "the dark ages" into the era of Science; but this must not be allowed. The subject is difficult enough without these unnecessary and impossible accretions.

My first denial then is of anything like the resuscitation

of a corpse. Humanity for many centuries has been accustomed to think of people being put into a grave, there to bide their time for some future event: and those who hold or try to hold that view would be indisposed to accept any appearances of the departed unless they could find their empty tomb. Now we maintain that the idea of a resuscitated body wandering about is absurd; although the history of folk-lore shows that beliefs of this kind were held: and a stake was sometimes driven through the body of a suicide in order to keep it quiet. The reason for this preposterous practice was no doubt similar to that which Professor Richet now expresses, viz. that the personality is so entirely associated with the material body that any visible and tangible appearance of that personality must necessarily be taken to mean that the corpse was used for the purpose. And during the Middle Ages some even of the Fathers of the Church apparently could not dissociate the idea of ultimate resurrection from the notion of an abandoned grave, a collection of the body's original particles, a composing of them together, and a revivification. But the facts give no justification for such an idea. And those who hold the spiritistic view are as willing as any Physiologist is to admit all the facts about disintegration, decomposition, incineration, and the rest. The materialistic survivals of folk-lore must be utterly discarded.

If it be found that an apparition or phantom has the features and bodily marks of the discarded instrument of manifestation, then those facts will have to be accepted, and an explanation sought elsewhere. No explanation based on the revivification of the corpse can be accepted for a moment. It is true that it seems like the obvious and childish explanation; but in the light of modern knowledge it ought to be discarded as extinct. *When we say that the facts uphold the doctrine of survival, we do not mean that!*

The ancient Egyptian practices, and their idea of death must have been troublesome and painful. The notion that the surviving soul or Ka required meats and furniture and appliances, which were therefore put into the tomb

for its sustenance and convenience, belongs to the childish age of humanity, and must have given great anxiety to survivors, especially poor survivors, lest they had forgotten something necessary, or lest they had not made adequate provision for their beloved's future existence.

Mediaeval ecclesiastical beliefs were in many respects better than that. It must have been painful to put the loved person into the earth and leave him in the cold and dark for unknown centuries; but at any rate they had faith that the bodily part would be at peace until summoned again and reconstituted by Divine Power. They had anxieties and troubles enough however about the soul, which they were told might be in torment unless they invoked the supernatural power of the priesthood. This fear must have given so much pain that really those beliefs were hardly superior to the more ancient beliefs of the Egyptians. It is known, however, that the phrase "resurrection of the body" is capable of adaptation and reasonable interpretation by believers; as explained *e.g.* in *Man and the Universe*, and in Part III of *Raymond*.

But with Ecclesiastical practices, science has nothing to do. It ought to regard the facts from a totally new and different aspect. We ought to maintain, and we do maintain, that the material body has served its turn and is utterly discarded and done with, that its particles can be used again for other forms of life, and that no sort of identity or personality remains associated with them.

As to what becomes of the personality, and what instrument now serves its turn, that is a matter for investigation; that is what we have to learn. No question of priestcraft should be associated with it: it is a straightforward scientific enquiry. It may be that we do not know. But on the other hand it may be that we can frame a working hypothesis. Such a hypothesis is growing in my mind: and the beginnings of it were in the mind of St. Paul, of Clement of Alexandria, of Origen, and other Greek Fathers of the Church. Very likely their ideas were condemned as heretical at the time: but that does not prove them untrue.

To avoid misunderstanding, I should like to say here

that in all I have said I am referring to ordinary bodies and ordinary people. If there is a case for an exceptional Body, and for a different treatment in one particular instance, so that one Tomb was really empty, that is not a matter to which I wish to refer here. I may have more to say about that in a proper time and place.

Meanwhile I am dealing with the apparitions and the fate of ordinary people. The facts suggest, what is rather the point at issue, that they do sometimes appear; but the fact is certain that their material bodies remain in the tomb, or wherever else they were deposited by survivors. If this is fully admitted and thoroughly accepted, a crude materialistic explanation of the facts is put out of court, and the ground is to that extent cleared. The enquiry may now proceed freed from this encumbrance of folk-lore. There is no survival of the material body!

Nevertheless, those of us who consider that we are really in touch, sometimes, with surviving personalities, are told by those personalities that they have "bodies" just as real and substantial as they used to have, that they find themselves signally unchanged, that they preserve the same appearance, so that they can be recognised; that it is by means of these bodies or instruments of manifestation that they are aware of and communicate with each other, and that by aid of them they occasionally communicate with us. How can these statements be reconciled with what has just been said? Well, that is where comes in my working hypothesis—a hypothesis not accepted by me alone but by many others who are feeling their way in the same direction, a hypothesis which we can read into many of St. Paul's words, and which we therefore think that that inspired genius caught some glimpse of, though he could not have formulated it in modern terms.

If I am tempted to call it "my hypothesis," it is because—apart altogether from psychical conditions—I have made a life-long study of the Ether of Space; so that to me it seems a more familiar and substantial and practical entity than it is likely to be to people who have not

made that study, and to whom it seems something indefinite, vague, and imaginary.

Among scientific men the Ether has only been studied by Physicists, and not by all of them. It has been ignored by Chemists, *qua* Chemists, and has probably never entered the thoughts of Physiologists, or Biologists of any kind, at all. And yet if it is a reality in the Universe it may have chemical and biological functions to perform, as well as its well known functions in the science of Physics. We know it familiarly in the phenomena of Light, of Electricity, of Magnetism. We are beginning to associate it also, rather definitely, with Elasticity, Cohesion, and Gravitation. And we are gradually learning that the greater part of the energy in the Universe, and certainly all potential energy, belongs to it, and not to matter at all. Atomic matter is one thing: the Ether is another. They may be related; in fact they are related. The link between them is electricity. But if it is possible ever to unify them, and to regard them as different manifestations of one thing, there is no doubt which is the more fundamental of the two. The Ether is the fundamental thing. Matter is a derived and secondary thing. And the electric charges which constitute matter are probably composed of modifications of the Ether.

This really is orthodox Physics, though it is not yet so substantiated that all Physicists must necessarily agree with it. There may be legitimate differences of opinion, but it is a recognised and reasoned scientific view. It is well founded, it is deduced from the facts, and is entirely independent of any psychic considerations.

Suppose then, for purposes of argument, that we allow the Ether in the physical universe to have the functions which most physicists attribute to it: then it becomes a definite question whether it ought not to be taken into account in philosophic discussion, and in the long run in biological theory too.

To explain all that I have said on the side of physics would need something like a treatise. In this discussion I must be brief, and must appear to be more hypothetical than

I am. Still when we come to Biology we are bound to be hypothetical. And the working hypothesis that I promulgate must be held lightly, until the facts, studied long and carefully, are found to substantiate it, and constitute it a reasonable clue to phenomena which, though real, seem otherwise inexplicable.

To Professor Richet the facts seem quite inexplicable. He feels that he is working in the dark, and that "the only safe statement is to say that we really know nothing, absolutely nothing, about the Universe." From this point of view, my agnosticism is not so deep as his. I feel that we have a clue, and that it is only by following it up that we shall find out whether it is a trustworthy clue or not. Any clue is better than none. Disconnected facts, not joined by any thread of theory, are intractable and confusing things. They can hardly be said to belong to Science, which means a system of organised knowledge. And it is because they lack the clue, that Biologists in general feel so hostile, and are conscious of such repugnance, to the facts themselves. To the honour of Professor Richet, in spite of his repugnance, he is ready to accept the facts. But it seems to me that he raises unnecessary difficulties about them by his insistence on matter alone. He will never understand them in terms of "matter" alone. Strictly speaking, we cannot understand anything fully and completely in terms of matter alone. By concentrating on matter we eliminate from our thoughts the greater part of the Universe. The Universe contains many things besides matter. It contains magnetism and electricity and light and ether; it also contains life and thought and mind and consciousness and memory and personality and character. None of these things are material; and yet, strangely enough, some of them have come into association with matter through the curious biological process of Incarnation. For a time intelligences do inhabit material bodies which, by barely known processes, they have unconsciously constructed. It is evident that there exists a *formative principle*, which is able to deal with the atoms of matter, or rather with the more com-

plex molecules into which the atoms have already grouped themselves: and thus, by aid of the energy which these molecules receive from the sun, non-material entities are able to manifest themselves familiarly in association with matter. So vivid is the connexion that we have learnt to identify them with their material modes of manifestation, and to imagine that they cannot otherwise exist.

We do not know why they require a habitation or instrument belonging to the physical universe; but we may assume that for some unknown reason they do. We know that they make use of matter, though we know not how or why. But the facts now show that association with matter is not essential to their existence. We may assume that they can make use of something else, if the facts point that way. My working hypothesis is that they are more closely associated with the Ether than with matter, that they act primarily and directly on the Ether, and only indirectly on matter, and that they are able to continue in their Ether habitations when the material particles are worn out and discarded. In justification for this I wish to say, as a physicist, that most, possibly all, of our actions on matter are exerted through the Ether: some obviously, like propulsion by electric motors, others less conspicuously, but just as really, wherever force crosses empty space. For atoms are never in contact.

But we have no sense organs for the Ether. To our present animal senses it is entirely elusive. Hence we shall know nothing about any personalities associated only with an Ether body unless they can operate on our senses in some way. To do this they must operate on matter. Let us suppose then that they can extract organised material and mould it, as a sculptor moulds his clay or as a painter treats his pigments, until they have fashioned a material representation which we may be able to see and touch, and which, if imbued with energy, may perform physical actions, such as the motion of objects.

This is not an unfounded guess; for we know that the familiar material body has been built up in its present definite shape out of food not in the least like it; that

the shape of the material body depends on the formative organising principle, not on the aliment provided. That is the peculiarity of live things. They are able to display themselves, to exhibit their own shape, by means of any kind of wholesome material. In this they are unlike crystals, of which the shape is entirely dependent on the nutriment supplied.

We have, therefore, only to suppose that this formative principle or constructive power persists. And we need not have any great difficulty in supposing, if the facts warrant and suggest the idea, that this same formative principle can continue to act occasionally even on matter when suitable organised protoplasmic material is provided and that the material can be moulded into the same likeness as of old, although imperfectly and very temporarily.

In this general way, therefore, I would seek to account for objective metapsychical phenomena. That deceased human beings are often thus engaged need not be assumed. The formative unconscious power or principle may be much more general than that, but it must also be specific. In an egg the formative principle exists which constructs a bird; from the ovum of a dog, a dog emerges; the formative principle in an acorn constructs an oak. The construction is in every familiar case specific. So if human hands and faces are produced, or even if things like garments and veils are imitated, it is not unreasonable to suppose that some human element—in the latter case perhaps a conscious element—is somehow concerned in the production.

Subjective metapsychics is still easier to associate with human survival. The controlling immaterial entity, the living personality, was known, while here, to be able to operate on the cells of its brain, so as not only to move muscles but thereby to convey ideas intelligible to other similar personalities who were acquainted with the conventional signs or language. And it is a question of evidence whether this power of operating on brains can be extended to other brains, so that a personality which has lost the use of its own instrument may be able, with difficulty and by permission, to work similarly on

the brain of some hospitable person who partially vacates his instrument in trance, or who allows part of it to be used for moving either his hand in writing or his organs of speech. If so, the ideas thus conveyed may mainly belong and be largely appropriate, not to the host or "medium," but to the actuating personality or "control." Though admittedly the habit and cultivation of the medium's brain may to some extent hamper free and unsophisticated and fully intelligent control, and may necessitate a judicious selection of topics or of language, such as the instrument may be able to transmit without undue and telergic effort.

It is unnecessary to elaborate this further, because these are the facts which more strongly than any others demonstrate survival. Whether the evidence, as yet, constitutes *proof* is a perfectly reasonable thing to discuss; and there may be differences of opinion. But no artificial objections need be raised by the difficulty of realising how it can possibly be done. The appearances are exactly as if the simple explanation were the true one. And there have been several cases in science where, after striving for a more complicated theory, we have found after all that Reality and Appearance were not so different as had been surmised. For instance, after much hesitation we had to decide that the red appearances round the sun at the time of an eclipse, which looked like flames, really were flames and not anything less familiar. Again, when in old days the Danish astronomer, Roemer, sought to explain certain curious anomalies in the motion of Jupiter's Satellites, by the supposition that light had a finite velocity and took a measurable time to bring the information—the suggestion was in most quarters scouted as too simple and *ad hoc* an explanation; and under the name "the equation of light," it was rejected and unused for the best part of a century; until an independent and quite different observation by the English astronomer Bradley required a similar explanation, and thereby established it beyond dispute. The messenger had lagged on the journey—that was all.

Let it not be supposed, however, that the discovery of

the finite rate of propagation of light is a small discovery; it has turned out to have the most portentous consequences; for, as we learn from Einstein, the velocity of light is perhaps the only absolute and unchangeable thing in the physical universe.

So I expect it will be with the spiritistic hypothesis in some developed form. Childishly simple as it appears seemingly more appropriate to primitive man than to Fellows of the Royal Society, it may turn out not only to be true but to involve consequences of tremendous moment to mankind; indeed it may outweigh all other discoveries in its influence on human will and conduct!

I have been led on in a more positive direction than I had intended, and have broken off my catalogue of denials, such as I thought Professor Richet's article called for. Denial is no pleasure to me: and I have nothing so fundamental to deny as the resuscitation and utilisation of corpses—a procedure which, if it were possible, might legitimately be stigmatised as necromancy. But there are a few sentences in Professor Richet's article to which I wish to oppose a negative. They are as follows:—

First, the implication (by the use of the word "cannot") that any reasonable holder of the spiritistic view would *like* to deny physiological and pathological facts if he were able. It is not a question of "cannot," it is a question of "do not": we accept them fully. If the instrument is out of order or interfered with or drugged, no sign of intelligence can be made. Injure a person's brain, and his mind is cut off from our ken. It is isolated, not annihilated. Mind and Brain belong to different categories. A brickbat is a curious weapon against a mind, but it is effective against a brain. Mind belongs to psychology, not to physiology.

Second, that any sensible people hold that an instrument is not necessary for communication and response. On the contrary, they hold that it is necessary, quite necessary, and that that is the use of a medium. If an

electric lamp is spoiled, the usual plan is to replace it by another. That other may be an inferior one, but the current must pass or you will get no light. Integrity of some instrument is essential to rational communication.

Thirdly, that 999 communications out of a thousand are ridiculous. If we eliminate obvious nonsense and lunacy, the statement is not true. If it were true it would indeed be a damning fact. Being a question of fact, it is important: and I maintain that communications obtained through reputable and tested and genuine mediums are nearly all of them sensible, are often of surprising interest, and are sometimes of value. In this matter I claim to have had more experience than my friend. The volumes of the *S.P.R. Journal* and *Proceedings* contain plenty of instances, and many more are known to me and to my readers. Indeed, in this country and in America the multitude of rational, and sometimes ingeniously devised and extremely evidential, communications is overwhelming.

But it will be objected, the facts as a whole will not be content with that simple idea—the idea of the vicarious use of other people's brain-nerve-muscle mechanism for the transmission of messages from a surviving etherially-embodied once-incarnate personality—even if that idea can be rationalized. The notion of human survival beyond bodily death is well able to account for simple personal communications to surviving relatives, messages of affection and advice, and things of that sort. Those are what have suggested the idea. It is obvious that that is their superficial appearance. The notion may also serve most naturally to account for the incidents of classical scholarship, and literary allusion, beyond the scope of the medium's learning or cultivation. But Subjective Metapsychics contains many other phenomena besides these. It contains travelling clairvoyance, for instance, when information is given about what is happening at a distance, or when apparently telepathic effects are produced across a continent; or, more puzzling still, when sealed documents and unopened books are read; and, most puzzling of all, when future events are predicted. Do

I seriously claim to have the beginnings of a working hypothesis sufficient to account for these things?

Well, I do! Let me try to expound it tentatively in a few words.

The dissociation of personality from the restrictions of the material body need not only occur at death. Some people may have rather loose connexion during life. Their animated ethereal vehicle, or some part of it, may indistinctly be conceived as able to wander during sleep, or to leave the main part of the body during trance. Usually only the spirit is supposed to leave at such times—by those who hold that there is such a thing as spirit—and possibly that may be sufficient for the purposes of travelling clairvoyance and for cryptaesthetic sensibility; but if it turns out that a spirit *must* have a habitation of some kind, I shall not be deterred from pressing an ethereal body into the service. The facts may not necessitate it, or they may. We shall see.

But how are we to account for the reading of sealed envelopes, the penetration of opaque obstacles? Well, opacity is a thing that can be treated physically. It means that waves of light cannot get through: they are either reflected back, or they are absorbed and turned into heat, by an opaque body. A conducting metal represents one type, a "black body" the other type of opacity; and there are all grades of obstruction to ether waves. But opacity does not mean that *nothing* can get through. I am not prepared with a physical explanation of how these clairvoyant things can be done. The phenomenon is to me the most puzzling of all. I doubt if it can be solved in terms of "matter." No adequate attempt has yet been made to solve it in terms of "Ether." X-rays give us a hint: but I am not sure that it is done in a physical way at all. There is some evidence—not much—that the contents of the book have to be, or have had to be, in some person's mind: and whether that which has once caused a mental impression can for that reason be more easily read, or whether the information is somehow mentally conveyed by other than a physical process, I do not know. I am not afraid of a

physical explanation, but prefer to wait for more knowledge of the facts.

Those who have read Dr. Eugène Osty's book called *Supernormal Faculties in Man*,¹ now translated by Mr. Stanley de Brath, will be astonished at the remarkable instances, that have come mainly within his own experience, of trustworthy clairvoyant and diagnostic faculty; so that this eminent physician and neurologist is able to apply what he calls metagnomy, and Richet calls cryptaesthesia, to the understanding and relief of severe bodily ailments. He gives examples not only of diagnosis,—often by means of what is frequently called psychometry, from a piece of cloth or other object belonging to the patient,—he also gives examples of prognosis, sometimes verified; and a few instances of what might here be stigmatised as “fortune-telling.” The collection of cases in that book seem to me well worthy of the attention of Biologists; and inasmuch as he, like Professor Richet, attributes them to a paranormal extension of purely human faculty, without any of what might be called supernormal assistance, there may be less than usual in his book to repel them by unacceptable and quasi-childish hypotheses. At any rate Dr. Osty narrates the facts frankly, and quotes testimony from some of the clairvoyants themselves as to the way the impressions seem to come to them. The result seems to be a body of evidence which cannot reasonably be overlooked by men of science. Moreover this alone shows, if it were necessary, that Professor Richet is not alone in his cautious attitude to theory, and rejection of spiritistic views, but is supported by confrères of similarly great experience.

Prevision does not give me the profound difficulty that at present it gives Professor Richet. If we have to modify our notion of Time, and regard it as more subjective than hitherto—well, we can face even that; but at present I do not see the necessity. If any one survives there must be many, and some have survived for a long time. If there is progress, as they tell us there is—as undoubtedly there must be if survival is a reality in a

¹ *La Connaissance supra-normale Etude expérimentale* (Paris, 1923).

rational universe,—some will have acquired more knowledge and power than we at present possess. And, for evidential purposes, it is not impossible that these more learned individuals may deign to lend assistance.

Scientific inference, even to us, is possible, and physical prediction can be based upon that. There are many kinds of prediction known to us here and now. A transit or an eclipse is one very simple type. A railway time-table is another. I can predict that I shall go by the 11.15 to Paris this day fortnight. Competent people can predict that Aldebaran will be occulted by the moon at 4.7 a.m. on the 23rd of August, 1924; or that Mars will graze or rather dip under the left-hand top of the moon, and remain invisible from 8.3 to 8.23 p.m. on the evening of the 5th of November in this same year. One class of prediction is based on planning, which we may or may not carry out, and is contingent upon "strikes." The other is based upon calculation from present knowledge, and is contingent on their being no cometary or other disturbance to affect the equanimity of the moon. Predictions are always contingent, never infallible. Yet one may feel reasonably certain that frost will occur next winter, and I hope equally certain that France and England will continue good friends.

To take a small instance. Why am I sure that our differences of opinion about details of the Universe will not upset the amicable relations between Riehet and myself? The answer is, Because we both have characters of fair stability on which reliance can be placed.

Very well then, a higher being—I do not mean Deity, for that may go without saying, but people who have advanced in knowledge, grown in intelligence,—may be able to infer and plan and predict events, of to us surprising improbability, far ahead. They see further than we do. They have greater power of ratiocination, they are better judges of character, and can tell with fair assurance how even people will behave, as well as, more easily, what mechanical things will do.

But are we in touch with these exalted intelligences? Is it likely that they take the trouble to come and talk

domesticities through a medium here? No, by no means; at least we need not look for such condescension. We are not in touch with them, but our friends on the other side are. They, let us suppose, want to give evidence of the reality of things which are strange to us. They want to wake us up out of our materialistic torpor: so every now and then our friends are allowed to glean information from some higher being, and to convey it to us. If Newton or Shakespeare were alive on the earth to-day, even I might be allowed to speak to him occasionally: and if I was talking to ignorant people afterwards, though I could not convey one tithe of what he might have told me, I might be able to impress a yokel by predicting an eclipse or a comet, or by foretelling some chain of events that would excite interest and astonishment.

So we need not be unduly perturbed at finding that those on the other side possess powers which we do not understand. We ourselves possess powers which our ancestors would have thought miraculous; and our descendants will smile at the satisfaction with which we view our petty achievements in, say, locomotion and intercommunication. Prometheus was regarded almost as a god for discovering fire. Yet any urchin with a box of matches could set—if not the Thames—at least a Thames warehouse on fire. It took a Faraday to discover magneto-electricity; but every electrical shop sells telephones and dynamos. It needed Maxwell and Hertz to discover electrical waves; but now, one can hear Paris concerts by a thing rigged up in an English or Scottish barn. To modify the well-known tag into something more certainly true: "There is nothing either new or strange but thinking makes it so."

PROCEEDINGS

OF THE

Society for Psychical Research

PART XCI.

JULY, 1924

PRESIDENTIAL ADDRESS.

BY J. G. PIDDINGTON.

(Delivered at a General Meeting of the Society on May 8, 1924.)

FORTY-TWO years have now gone by since the foundation of our Society, and during that time nothing of a sensational, or even, I think, of an outstanding character has occurred to interrupt the even tenor of its way. Progress, indeed, has been made, but it has been a quiet and a gradual progress. There has been no unexpected development such as from time to time cheers investigators in other fields: no startling discovery to attract wide attention and win instant recognition.

In ordinary circumstances I should not complain of that; nor should I now, were it not that my office obliges me to choose some subject on which to address you. It must often happen that Presidents of other Societies devoted to studies that yield quicker and more positive results are spared the trouble of casting about for a subject for their Addresses, and have one almost thrust upon them by some new discovery, or tangible advance recently made in their own particular science. As I am not in that happy position, such observations as I have to make will, I fear, be of a rather dull and desultory kind.

I shall not, like my eloquent predecessor, move among the splendours and immensities of the heavens; nor shall I seek to scale the mountain-heights of thought, but—of necessity, if not by choice—I shall keep to the lowly and homelier valleys that lie about the base of Psychical Research.

In speaking of the progress made during the past 42 years as slow and hesitating I have no intention of belittling it, or of suggesting that it is not real. I know what educated people thought 30 or 40 years ago about the phenomena we investigate be compared with what the same class thinks now, no one, I venture to say, will fail to note a marked change. Almost universal indifference has given place to a widely-diffused, if mild interest; the sniffings and snortings of the robust sceptic who would dismiss the whole subject *a priori* as rubbish or superstition are at least less frequent and usually more restrained; and more than one orthodox psychologist not merely treats us with respect but has given us his blessing. It is not simply a case of hostility and ridicule giving place to toleration—to a toleration born partly of easy-going good-nature and partly of boredom; it is something more than that. The work done by the Society has unquestionably brought about a change in the beliefs of great numbers of educated people. By “educated people” I mean, not such as can merely read and write, but those people, drawn from every class of the community, in whom the critical faculty is sufficiently developed to allow them to weigh voluminous if not highly complicated, evidence. Among such people 40 years ago there can have been but very few who believed in telepathy; whereas to-day they must number tens of thousands. I do not mean that the majority of these persons would be well enough up in the evidence for telepathy to give detailed reasons for their belief in it; and I daresay a large proportion of them assume it to be a physical process, and are unaware that such evidence as there is points in the opposite direction. Nevertheless, the fact remains that a large number of educated people nowadays accept telepathy as a fact

and it is the evidence collected and published by our Society that has brought this about.

If belief in clairvoyance has not grown to any thing like the same extent, that is largely—perhaps entirely—because the evidence for it is most markedly inferior in quantity, whatever may be thought of its quality, to the evidence for telepathy: and there can be no question that quantity tells, and rightly so, I think.

What educated opinion about the so-called “physical phenomena” may be I have little or no idea; but I suspect it to be much the same as about clairvoyance, in spite of there being a considerable mass of evidence relating to them. At the same time I am being constantly struck, and rather bewildered, by the fact that the “physical phenomena” command more interest among members of the general public than do the psychical phenomena. So little conversant am I, however, with the physical phenomena that the less I say about them the better; and henceforward I shall confine myself almost entirely to the psychical phenomena.

The estimates I have been attempting of the different effects produced on the educated world by our different kinds of evidence are necessarily based on my personal impressions only, and may be mistaken; but if they are correct, then there is, I think, a close correspondence between the effects produced on outsiders and the effects left on the minds of those members of the Society who have taken an active part in the collection, consideration, and presentment of the evidence.

So far I have not mentioned one type of the phenomena studied by the Society: namely, the so-called Spiritualistic phenomena. That most of us who have studied these particular phenomena at first hand believe that in many cases they are in some degree, though by no means wholly, due to the agency of the dead, is clear enough from the papers we have contributed to the *Proceedings*; but whether this opinion is shared by any considerable section of the educated public I have no means of ascertaining. But of this much at least I feel confident, that the evidence on which we rely has had enough effect to

allow the question of communication from and with the dead to be debated in a serious spirit and as a serious possibility.

If this be true, and if it be true besides that telepathy is to-day accepted as a fact by large numbers of educated people, then I for one cannot regard this as a mean and unsatisfactory outcome of 42 years' work.

It may be objected that, though the Society may perhaps deserve the sole credit for convincing many critical minds of telepathy, it is not entitled to the whole credit for bringing about a more favourable attitude towards the question of communication with the dead and it may be claimed that part of the credit should be given to the Spiritualists. This claim I would not admit, though ready to allow that they can count many converts among the uncritical; and I would go further and urge that it is the Spiritualists' uncritical and over-enthusiastic way of dealing with their evidence their failure to distinguish—or if they do, to mark the distinction—between good evidence and weak or worthless evidence, and their reluctance to suspect fraud where to the plain man it is patent or highly probable, that have been in the past and are to-day responsible for much of the prejudice against the spiritualistic hypothesis prevalent among people capable of realising whether or not a case is being presented with caution, candour and care.

The effect produced on educated minds by the work of the Society has not been confined to a wide-spread belief in telepathy or to a greater inclination to consider in a serious spirit the problem presented by the spiritualistic phenomena, but has been felt, as indeed is only natural, in philosophy and religion. Few books on either subject appear nowadays which fail to take at least some account of psychical research; and this is perhaps all the more gratifying if we consider how natural it would have been had the victorious advance of physical science during recent years so absorbed the attention of the intellectual world that there was none left to spare for our unspectacular reconnoitings in a strange

and obscure region. Physical science, indeed, is marching from strength to strength; she betrays no symptom of decline, but rather every evidence of increasing power to grapple with the problems of the material world; and if her triumphant progress during the past 40 years be contrasted with our relatively exiguous record of success, some may feel a sense of discouragement. Yet do not think discouragement would be justified, and that for two reasons. In the first place, ours is a young science—if the name of “science” may be given to an inquiry conducted with an unflinching regard for accuracy—and if in its youth it progresses but slowly, it is only following the example of physical science. In the second place, we are faced at every point—and, I imagine, always will be—with difficulties which only rarely, or in a very mild form, beset workers in the realm of physical science. All, or nearly all, the phenomena we investigate—and here I have in mind chiefly the purely psychical phenomena, though much of what I am about to say would hold good of the alleged “physical phenomena” too—nearly all these phenomena are in themselves of a perfectly ordinary and commonplace nature. Somebody dreams something, or somebody says something, or somebody writes something. We all do those things, most of us every day, unless we happen to be dumb or illiterate. I may be told, perhaps, that many of the spoken or written things we investigate are spoken or written by a person in trance, and that trance is not ordinary or commonplace. That is true; but our primary object is to discover evidence of supernormal action—by which I mean something that goes beyond the limits of mere subconscious action, however strange—; and in our search for evidence of supernormal action, as thus defined, the condition of the speaker or writer is of no importance. If everything that Mrs. Piper, or Mrs. Thompson, or Mrs. Leonard have said or written when entranced, had been said or written while they were wide awake and in a perfectly normal condition, its value as evidence of supernormal activity would not be affected one way or the other. There is nothing, then, in the phenomena which in itself

compels conviction of its supernormal character; and it is just this ordinariness of the phenomena that gives fraud, whether conscious or subliminal, its chance. In physical science fraud of either kind is practically a negligible possibility, and even if fraud were practised, it could be readily detected. In our case, it would, I think, be true to say that we can never put our finger on a single phenomenon and unhesitatingly and confidently pronounce it to be supernormal; we can never say "this is a certain instance of telepathy," or "of clairvoyance"; we can never say "fraud, or chance, or misdescription will not suffice to explain this particular occurrence." Even if the laws governing telepathic or clairvoyant action were to be discovered, we should not, so far as I can see, be any better able to attain to certainty in any given instance, so long as supernormal phenomena remain so easily simulable as they are at present. At best we can attain only to a reasonable degree of certainty: not to that degree of certainty which is so often within the reach of physical science.

There appeared in the *Journal* for December last an account of a case of singular interest, especially from the point of view of theory. In bare outline the reported facts were these: A Dutch boy of 15 has been watching from his window some people entering a house opposite for the purpose of having a séance, and has been feeling vexed at not being able to take part in the séance himself. He then gets hold of an old school-book containing an English poem, and sits down and reads the poem in a dreamy state, without, however, apparently any other design than that of whiling the time away. Whilst the boy is dozing over the poem, two out of the five stanzas of which it consists—the only ones the boy knew by heart—are reproduced at the séance, the reproduction being preceded by the manifestation of a "control" who gives no name, announces in English that he is going to write a song, answers in English questions put in Dutch, and states that he is an Englishman.

If all the facts reported are true, they are obviously important from the theoretic point of view. But what kind of certainty can one feel as to the alleged supernormal elements in this case? What odds would you lay on their being genuine? Would you lay 1000 to 1 in £'s sterling that there wasn't trickery, or collusion, or misdescription, or some other normal cause at work? I can't answer for others, but my answer would be an emphatic "No": though I might be prepared to lay 3 to 1 against a normal explanation being the true one. But how flimsy a kind of certainty this represents as compared with the kind of certainty that physical science may afford. Imagine that the Astronomer Royal were invited, or dared, to wager £5000 to £1 that the next eclipse of the moon would occur at the time predicted by Greenwich, or whoever it is that works out these things. Well, he might suffer from a Nonconformist conscience, or he might hold that there's no fun in betting on a certainty; but at any rate it would not be fear of losing his money that would deter him from laying the odds. These two imaginary wagers will serve to illustrate the kind of certainty that physical science frequently—though by no means invariably—attains, and the uncertainty that dogs all our efforts; and so long as that uncertainty exists—and it may well be that it will always exist—we cannot hope to approach, let alone to rival, the rate of progress of physical science.

This perpetual want of cut-and-dried-ness, this unsubstantiality and instability that characterise all our phenomena, may well be one of the causes that render our investigations distasteful to so many men of science—though fortunately not to all. And not only that, but the comparative immunity from such uncertainty that men of science enjoy may disqualify them from being, as they might on first thoughts be supposed to be, the best judges of our work. Frederic Myers, it is true, often expressed himself as though the final court of appeal before which our case would be heard would necessarily be composed of men of science; and our

first President in his first Presidential Address spoke as follows :

“If anyone asks me what I mean by, or how I define, sufficient scientific proof of thought-reading, clairvoyance, or the phenomena called spiritualistic, I should ask to be allowed to evade the difficulties of determining in the abstract what constitutes adequate evidence. What I mean by *sufficient evidence* is evidence that will convince the scientific world.”

I might have hesitated to express dissent from the opinions of two such authorities, had I not chanced to re-read Professor Henri Bergson's Presidential Address to this Society, and gathered from it, though he does not say so in so many words, that he takes the view which I am here putting forward. Training in physical science and the pursuit of it, as it seems to me, do not necessarily make a man a better critic of the evidence collected by this Society than do some other forms of education and employment. A man of science might be as good a critic as others, or even a better one; but in that event he would be so, not *qua* man of science, but because he happened to possess qualifications which his own avocation is not specially calculated to develop. Men of science are not, so far as I know, specially expert in assessing the value of human testimony; nor are they specially expert—perhaps rather the contrary—in literary matters, and it so happens that quite a considerable portion of our evidence can hardly be appreciated at its true value without some scholarly and literary insight. And though men of science deal with men's bodies, alive or dead, they have little experience in dealing with the manifestations, and particularly with the abnormal manifestations, of men's minds. Unlike ourselves, moreover, it is but very rarely indeed that men of science have to beware of fraud, conscious or subliminal; and if they have to make allowance for the personal equation of experimenters or observers, that allowance, owing to various causes, presents little difficulty; whereas against that possible and frequent source of

error we with difficulty have to guard ourselves in every department of our enquiries; and in addition we have always to be making allowance for the personal equation of the dreamer, of the percipient, of the automatist, and of the corroborating witnesses.

I do not, then, believe that official science is our proper court of appeal; and I do not know of any formal body which could assume that function with authority. Neither medicine, nor law, nor history, nor literature, though each might contribute some of the necessary qualifications, could fill the bill; and not even a committee of intelligent schoolboys, though it might possess some useful qualifications in which physicians, lawyers, historians, men of letters, and even men of science might be deficient. It is, I believe, only among what for want of an exacter definition I have called "educated people" that a competent tribunal will be ultimately found. It is they who will pass final judgment; and it is therefore their interest that we should specially try to win; and we should not be downhearted if men of science as a body look askance at our work; and if so far only five Fellows and two Presidents of the Royal Society have presided over our Society.

I pass on now to make some observations on the organisation through which our researches have been carried on. A large part—I think I may say, a very large part—of the Society's research has been done by a small number of its members, of whom most are friends or acquaintances of each other. This small number of individuals might have co-operated as a private group without a Society behind them, but to have done so would have involved at least two drawbacks. They would have found it much harder to form a considerable circle of readers, and to maintain it if formed; and they would consequently have made less headway in attracting the attention of that very class of educated people which, if my view is sound, will some day pass judgement on the investigation. Secondly, without a Society behind them, it is unlikely that any small group of workers would have been able by their own unaided activities to come

often enough into contact with what I venture to call the raw material, or *corpora vilia*, necessary for the prosecution of their researches. The existence of a Society made it possible to carry out the Census of Hallucinations—a work of great importance—on a scale large enough to provide a dependable basis for calculation; and it is among the members of our Society that some of the best automatists and telepathic percipients have been found: Mrs. Verrall, Mrs. Salter, Mrs. Stuart Wilson, Mrs. Home, Mrs. “Forbes,” Mrs. Lyttelton, Miss Ramsden and others; and if I do not add the name of Professor Gilbert Murray, it is for fear of his protesting that he is but a mere hyper-aesthetic, innocent of all telepathic faculty.

In thus being largely self-supporting, and dependent for its raw material only to a limited extent on imports from abroad, our Society, perhaps, differs from all other scientific bodies; for even if some of the medical and psychological societies draw on their members for subjects of experiment and observation, I am sure they do not do so to anything like the same extent. To those of our members who have lent themselves so unselfishly and docilely to experimentation and observation—sometimes prolonged and very tedious—our sincerest thanks are due; and are due, if for no other reason at least for this, that it is their collaboration which has saved us from the awkward necessity of relying for a large and important part of our evidence on professional subjects.

Yet while the institution of a Society has brought these and other advantages with it, I would not deny that it has entailed, or may entail, some drawbacks and disappointments. Let me begin with the disappointments: two in number. The first is the relatively small number of members who have been willing, not now and again and for a short period, but systematically and regularly, to work at our subject. When we consider the number of highly-educated people with private means in this country, and how many of them undertake work of a public character without remuneration,

and how many of such people there must be in the ranks of our members, we may naturally feel disappointed that so few have devoted themselves to Psychical Research. The second disappointment is the falling-off of recent years in the number of cases contributed by our members. Members would no doubt excuse their inactivity on various grounds; but, short of there being no cases to report, no excuse is valid in face of the need, the ever-present need, of fresh evidence. On this head I have to enlarge at some length.

One reason why it is highly desirable to keep up a constantly fresh supply of evidence is the need for mere accumulation, quantity of evidence being of prime importance where crucial tests and cases are not to be had. A second reason is that our sort of evidence has a tendency to lose its value and effect as it grows old. A case, even if contemporaneously and carefully recorded, that dates back 20, 30, or 40 years, is apt to produce less effect on our minds than a well-recorded case of recent date. Why this should be so I am by no means clear; and no doubt the tendency to feel a lessened confidence in old evidence is not entirely rational. Yet it is not entirely irrational, for in the case of old evidence we must always have the feeling that the chances are against our being able to clear up doubtful points by cross-examining the witnesses, either because they are no longer alive, or, because if they do survive, their recollections after so long a lapse of time would not be worth much. I have purposely not spoken of cases that go back more than forty years because that would have included evidence collected in the Dark Ages before the foundation of this Society, and much of that evidence would be open to the suspicion of having been recorded and collected by people who were not fully alive to all the sources of error. I am speaking of our own evidence only, which in spite of its high quality tends to decrease in value as time goes on. I would ask you to consider what effect our evidence would be likely to have upon mankind 200 years hence, if for some reason or other all work on and interest in the subject

suddenly came to a full stop to-morrow, and all existing records of psychical phenomena were utterly lost sight of until by a happy accident in the year 2124 a complete set of *S.P.R. Proceedings* was discovered and attracted the attention of a group of thinkers like the group that founded our Society. These men would, I fancy, not fail to recognise that they had lighted on a body of first-class evidence collected with every proper care and analysed with critical acumen, which prejudice alone could ignore. But would they accept the evidence as it stood? I very much doubt it. I think they would say: "This evidence is too old; it's 200 years old; and before we accept it, we must see whether our own investigations and experiences will corroborate it." In the same way our past evidence will with every decade or so lose some of its cogency with the new generation unless it is being constantly reinforced by new evidence. Yet, notwithstanding that I take this view of our sort of evidence, I should presume that evidence given, say, in a trial for murder 200 years ago would be worth as much now as then, if fully and carefully recorded. How, then, should I explain the enduring worth of the evidence in the one case and its diminishing worth in the other? I should hesitate to assert, but I would venture to suggest that the difference would be due to the fact that in the one case we are absolutely certain that murder is committed, even if we have never seen a murder committed or committed one ourselves; while none of us is quite so absolutely certain, and most people are far less certain, that anything "supernormal" ever occurs. Will it, then, be always necessary to go on collecting fresh evidence? And if we don't, will the effect of all the evidence so far collected gradually disappear in course of time? Once more I would not like to attempt a dogmatic answer; but I should anticipate that it will be necessary to hammer away at the task of renewing the evidence until supernormal phenomena come to be believed in nearly as readily as, say, murder; until, in fact, a habit of belief in them has become general.

While I am on this subject of deterioration in the value of evidence through lapse of time, I should like to touch on the effect on it of distance, especially where distance involves difference of nationality, although to do so involves a digression. I find in my own case that as a general rule I do not attach the same weight to the evidence of foreigners, even of Americans, as to the evidence of my own countrymen; and having no reason to think that I am singular in this respect, I assume the impression to be a common one. At first sight this may appear like mere insular prejudice; but I think it is really nothing of the kind, and that the feeling has a rational basis. For it is not based on distrust of foreigners, but on distrust of my own ability to estimate the value of evidence given by foreigners. When trying to make up one's mind what amount of trust to repose in the testimony of a fellow-countryman, one's judgement is influenced, consciously and unconsciously, by innumerable little impalpable imponderable indications; and I feel sure that in the main such indications do really help towards the formation of a correct conclusion. But with witnesses of foreign nationality one is all at sea in this respect. If you question this, imagine to yourselves an Englishman being tried in this country on a criminal charge before a jury, not of his own countrymen, but—by some Gilbertian freak—of Italians perfectly familiar with colloquial English but with no experience of English life; and then imagine this jury trying to assess the value of evidence given by the following English witnesses: an archdeacon, a laundryman, an official of the Post Office, a lodging-house keeper, a veterinary surgeon, a lady's-maid, an Oxford don, a police-constable and a West-end tailor. How they would flounder! When we try to form an opinion of cases in which the evidence comes from foreigners, our task is akin to the one I have imposed on my hypothetical Italian jury. And, reciprocally, if foreigners do not feel towards our evidence what I feel towards theirs, I think they ought to.

The extreme difficulty of making the evidence in such

matters as we investigate equally valid for other nationalities makes me sceptical of the utility of international co-operation in psychical research; and inclines me to think that if a nation desires to learn the truth about psychical phenomena it must to a very large extent work out its own salvation.

After this long digression you may well have forgotten where I was when I started upon it. I had been mentioning two disappointing features in the history of the Society: namely, the small number of members who have systematically devoted themselves to psychical research, and the falling-off in recent years in the number of cases contributed by members.

I turn now to speak of certain drawbacks which our existence as a Society has entailed, or may entail.

The first and most obvious one is that the work of running a Society with a membership as large as ours means the expenditure of a good deal of time and energy that might otherwise be spent on investigation; for it so happens that those who have borne a large share of the research work have also borne a large share in the management of the business affairs of the Society. Why not divide the labour, it may be asked, and so relieve the investigators from mere routine work? Theoretically that sounds plausible; but I doubt whether it would work well in practice. It is right that those who have the most extensive first-hand experience of the phenomena that the Society was formed to investigate should also have a controlling voice in the direction of its policy, and questions of policy are too closely bound up with the business side of the organisation for the two to be under separate management.

A second, and more serious, drawback that our existence as a corporate body entails is the risk of the control of the Society passing into the hands of a section of its members, who would be likely to lower the severely critical standard that has so far been maintained—and maintained sometimes in the face of considerable dissatisfaction. It is not easy to find a name for this section, whose existence, in spite of its not being organised,

it would be idle to deny. I would not call it the credulous section, for, apart from the offence that that title would probably give, I do not think that, *exceptis excipiendis*, they are credulous as a body. They doubtless believe some things that most members of the Royal Society in common with the man in the street do not believe; but that is no criterion of credulity; or at least I hope it isn't, for if it is, I am "of all men most miserable." Sir Oliver Lodge on one occasion—or so I believe, though I have failed to trace the reference, and so if I am misrepresenting him, I ask his forgiveness—Sir Oliver once divided the members of this Society into a Right and a Left Wing. The Right comprised those of cautious and conservative views who uphold the strictest methods of investigation; the Left comprised those who believe more than the Right think is good for them, who desire to join hands with or to enter into closer touch with professed Spiritualists and to propagate their faith *in partibus infidelium* with a missionary zeal distasteful to the Right, and who would not view with alarm some relaxation in the rigorous methods of investigation hitherto pursued. But to christen the particular section I am seeking to define "the Left Wing" would be misleading; for though it doubtless belongs to the Left, it is quite possible, as I know from my own case, to belong to the Left in matters of belief, and yet to adhere to the Right—even to the Extreme Right—in respect of all that concerns methods of investigation. For my immediate purpose, then, Sir Oliver's dichotomy will not serve; and to bring out what it is that separates the particular section of members of whom I am speaking from those opposed to them, I shall call the latter the High-and-Dry School and the former—since the obvious antithesis might be actionable—the Not-High-and-Dry School. The dividing line here has nothing to do with how much or how little of the phenomena under investigation one accepts as supernormal, and concerns only opinions as to methods of investigation and standards of evidence. The Not-High-and-Dries, if I do not misrepresent them, take the line that so much

has been established beyond cavil that we can now safely relax to some extent the stringent precautions and the very high standard of evidence on which the Society has hitherto insisted, and generally adopt a less suspicious and more genial attitude towards mediums, automatists, dreamers of dreams, seers of apparitions, corroborating witnesses and so forth. The High-and-Dries take the line that we cannot now, or for a long time to come, and probably ever, afford to lower our "evidential" standard, or modify our methods—our admittedly irritating and meticulously wary methods—of investigation. Well, I for one am whole-heartedly on the side—I will not say, of the Angels, but—of the High-and-Dries; and that there exists a school of opposite views is due, I cannot but suspect, to a failure to realise—to realise not momentarily but always and vividly—one dominant characteristic of all, or very nearly all, the phenomena we investigate: I mean their easy simulability. For genuine supernormal phenomena can be aped in various ways: by deliberate fraud, by subliminal fraud, and by fraud that hovers between these two; and, furthermore, a semblance of them may be created by faulty memory, by careless recording, or by chance. Had the labours of the S.P.R. resulted in the accumulation of good evidence for witches riding through the air on broomsticks, or for repeated correct predictions in minute detail of events apparently beyond the powers of ordinary foresight and inference; if, in a word, there had been placed on record a mass of good evidence for the occurrence of things simulable only by extraordinary and costly mechanical devices, or not simulable by any known normal agencies, then there might have been something to say for the policy of less stringency. But there is no such evidence, none for witches riding on broomsticks or similar marvels; and unless and until there is good evidence—not an occasional scrap, but a mass of it—for phenomena outside the range of easy simulation, there is only one safe and sane policy, and that is to maintain our High-and-Dry methods and standards. In a trance-sitting, of which I have seen the record, Frederic

Myers is represented as commenting disapprovingly on an unpublished piece of investigation recently carried out. Whether Myers was really in any way concerned is, of course, open to question; but the phrase with which the *soi-disant* Myers brought his critical remarks to an end was at least true to life: "No sloppy work, please"; and if I quote it at this point it is not because I think the Not-High-and-Dries like sloppy work, but because I believe that if our standards were to be lowered, sloppy work would be the inevitable result.

I have to deal with only one other disadvantage that may arise from investigation being conducted through the agency of a Society, and then I have almost done. It is obvious that a membership such as ours must include a large number of persons whose interest in psychical research is not that of the expert, but rather that of the amateur; and, again, a considerable number whose interest in the subject is emotional rather than intellectual. I hope I may say this without giving offence, and that for two reasons: one being that I think it is a good thing that it should be so; the other, that I am myself a member of other Societies with whose objects I feel sympathy, but whose work I am either unable to follow, or can follow only in a very amateurish way. Now, if our Society is composed largely of members of these types, there must always be a risk of their severing their connexion with it should they find our papers difficult to follow, or should they fail to obtain satisfaction for their emotional requirements; or else a risk of their bringing such pressure to bear that genuinely scientific work will be sacrificed for the sake of making our *Proceedings* more popular and attractive. Experience shows that all sciences, simple enough in their infancy, increase in complexity as they grow older. Take, for example, the simple experiments undertaken in the early days of the Royal Society by men with little or no specialised training and easily followed by anyone of decent intelligence, and compare the reports of them with the *Transactions* and *Proceedings* of that Society to-day. These publications, I have heard it whispered,

contain many papers so abstruse as to be unintelligible to the majority of Fellows and digestible by only a very few experts in the particular branch of science of which they treat. Now imagine for a moment that as soon as physical science had begun to make progress, and as a consequence had begun to be split up into different specialised departments, and the *Transactions* as a further consequence had become increasingly difficult to understand,—imagine, I say, that the lay members of the Royal Society had objected on the ground that though, of course, they weren't asking for light reading, they really did think that these recent papers were too stiff. Suppose further that their protest had met with such success from a sympathetic but weak Council that thenceforward only records of experiments and observations which the average layman could follow without taxing his brains had received official publication—well, if that had happened, what would be the position of physical science in this country to-day? Luckily for science and for the Royal Society no such catastrophe as I have asked you to imagine overtook it; and I hope that such a catastrophe may never debilitate or destroy our Society. But if, like other sciences, psychical research increases in complexity, I can well imagine that the result might be either a very serious, even fatal loss of interest and consequently of members, and consequently of income; or, still worse, surrender to a demand for publications of a more popular kind:—a surrender that might, indeed, preserve the Society, but which would destroy its real utility. For what would it profit to save the Society and to forfeit the end to which the Society is but a means? It might, indeed, matter little, if there were in this country other bodies ready and competent to perform what I conceive to be our special duty; and that is to investigate certain obscure phenomena, and to carry on that investigation not for the sake of entertaining people, or with a view to converting people to any particular articles of faith, but simply and solely in the hope of discovering the true facts. Though various other organisations exist for the

study of psychological phenomena, they seem to me to approach the subject with a definite *parti pris*; and I know of no other body actuated solely by scientific curiosity and with a set determination to follow the evidence wheresoever it may lead, that could take our place, were we to prove false to our trust; and that is why I am a little apprehensive lest, as our subject becomes more complex, we should either suffer so large a loss of members as to cripple our activities, or—what would be much worse—cater for popularity by neglecting the investigation or cold-shouldering the presentment of the more involved phenomena. And, as I have already said, as the enquiry proceeds, unless Psychological Research is to prove an exception to the general rule, the subject is bound to become more complex. Indeed, it has become so already, partly from the mere accumulation of material; but also from another cause. I have pointed out before—and I do not apologise for doing so again, because the thing deserves attention—that up to the time of Frederic Myers's death in January, 1901, the phenomena recorded in our *Proceedings* were, to speak broadly and roughly, of a simple and straightforward type. Within a few weeks of his death a change takes place, though it is not realised—at least not fully realised—till much later. I am not speaking at this moment of what are called cross-correspondences, for that development came later, but of Mrs. Verrall's scripts. I cannot go into detail now, but speaking briefly I may say that these scripts mark a new departure in so far as they exhibit great complexity of structure, each several script forming a minute piece of a most elaborate and extensive mosaic, the pattern of which cannot be traced until all the little pieces are put together in accordance with subtle indications furnished in the scripts themselves. Then, in 1903, with the advent on the scene of Mrs. Holland, a further complication ensues. Her script, which is of the same tessellated character as Mrs. Verrall's, exhibits, as was soon recognised, coincidences with Mrs. Verrall's far beyond what chance will account for. Then in rapid succession other automatic writers mingle in the game:

Mrs. Salter, the Macs., Mrs. Willett, Mrs. Stuart Wilson, and Mrs. Lyttelton. The scripts of all these automatists, too, show just the same complexity of structure as Mrs. Verrall's and Mrs. Holland's; and embedded in them all is a very galaxy of cross-correspondences. Of these cross-correspondences so far only a comparatively few specimens have been published; and yet enough, I think, to convince a careful student of them, even if the utmost allowance be made for chance coincidence and ingenuity of interpretation, that there are purpose and intelligent direction at work.

So, then, we have not had long to wait for psychical research to follow the example of other sciences and become more and more complex. It has already become so, and become so not only from mere accumulation of material and from the growth of literature on the subject, but from the greater complexity of the phenomena themselves. And here incidentally I would call your attention to the fact that this greater complexity arises from *someone's* intelligent design. I am not troubling about the question of what intelligence or intelligences are responsible for the design. Assume, if you will, the design and the carrying out of it to be the work of an unknown living person; or assume them to be the work of more than one of the automatists themselves—I say “more than one,” because for various reasons they cannot possibly be entirely the work of one only of the automatists; or assume them to be the work of discarnate intelligences; the fact, or so I hold, remains that *some* intelligence is deliberately complicating some of the phenomena which this Society investigates. If that be true, we are faced with a difficulty peculiar, I believe, to our own field of research, and certainly unknown to physical science. For though physical science has to deal with immensely complex problems, it never has to assume that its problems are being intentionally complicated for it by some designing Demiurge. Our Demiurge may have the best of motives, and may introduce his complexities, not in order to bewilder us, but for the purpose of rendering the phenomena as

difficult as possible to explain by telepathy *inter vivos*, or for other reasons; but however excellent his intentions, there is no escaping from the fact that the increased complexity has increased the difficulty of presenting the evidence in a form palatable to the average member, who naturally cannot be expected to give the same minute attention to the problems involved as the investigators. And yet without minute attention these complicated phenomena cannot be properly understood. So far our members have shown a laudable long-sufferance, and if I have ventured to voice a doubt of its continuance, it is because I realise to the full how large is the draft we have made upon it. But such of us as have been guilty of contributing papers about these complex phenomena to the *Proceedings* may in one respect at least claim the gratitude of our readers; for we have not, as we easily might have, inflicted on them the labour of making themselves acquainted with a lot of new-fangled technical terms. When I come across some of the monstrosities of this kind that disfigure the writings of modern psychologists, and especially of those who treat of psycho-analysis, I admit that I am seized with the spirit of the Pharisee, and thank God that we are not as other men are.

On reading over what I had written thus far, with a view to seeing how to bring this address to a close, I was reminded of a remark made to me by a friend who happened to know that I was engaged upon writing it. "Don't be too depressing," she said. Holding, as I do, that results of a far-reaching and inspiring kind have been attained through the labours of the S.P.R., I certainly did not set out with the intention of producing a depressing effect; and I hope I have not produced one unwittingly. Yet, at the same time, I confess that I should not be sorry if anything I have said should help to check exaggerated notions of the degree of certainty attained and attainable in such researches as ours. There seems to me to be a growing risk of belief outrunning the evidence, and too little realisation—at any rate among the public—of the patience and care

required to discriminate phenomena in appearance supernormal but in reality of normal origin from genuine supernormal phenomena. How ready and eager many are to seek after signs, and how utterly uncritical in their search, no unprejudiced observer, alive to what has been going on around him during the past 10 years of crisis, can surely deny. Credulity and superstition, two of the greatest evils that afflict mankind, are plants of rapid growth; and when sooner or later the day comes—as come, I firmly believe, it will—when communication between the dead and the living has become part—rightly become part—of the accepted beliefs of mankind, there will ensue, I greatly fear, a period in which these two evils will flourish; and the general public, incapable of making fine distinctions, will swallow genuine, ambiguous, illusory and fraudulent phenomena with equal avidity. I do not, of course, flatter myself that any words of mine could directly serve to prevent or counteract so unfortunate a state of things—and one, moreover, calculated to bring unmerited contempt upon the whole subject. To do that, one would have to have the ear of the public. But the danger, I believe, is a real one, and I should feel I have not wasted breath if what I have said to-day should bring home to members how desirable it is that they as individuals, and this Society as a body, should set an example of level-headedness and discrimination to the public. “*Il n’y a de vérité que dans les nuances.*” If we could once impress on the public mind how profoundly true is that aphorism of Benjamin Constant’s in respect of the things we investigate, we should be rid of the risk of our work being discredited at some future time in consequence of popular outbreaks of indiscriminating credulity. Our cause, indeed, stands to lose more through the credulity of the crowd, than through its indifference or its scepticism.

ELUCIDATION OF TWO POINTS IN THE
"ONE-HORSE DAWN SCRIPTS."

I. THE HERB MOLY.

BY W. H. SALTER.

IF the "One-Horse Dawn Experiment" were of less interest to students of Psychological Research, I should feel that some apology was necessary for recurring to so ancient a topic. Happening, however, recently to have stumbled on a fact which seems to throw light on an important script of Mrs. Verrall, which has never been satisfactorily explained, I have ventured to contribute this note to a discussion which cannot be regarded as closed so long as the smallest dark corner remains unexplored.

For full details of the experiment I must refer the reader to Mrs. Verrall's paper (*Proc.*, Vol. XX.) and to Mr. Piddington's comments (*Proc.*, Vol. XXX., pp. 175-229 and 296-305), but the following short summary may be of assistance.

In April 1901 Dr. Verrall attempted to transmit telepathically to Mrs. Verrall three Greek words ($\mu\omicron\nu\acute{o}\pi\omega\lambda\omicron\nu$ $\acute{\epsilon}\varsigma$ 'A $\hat{\omega}$) from the *Orestes* of Euripides, with a view to their influencing her automatic scripts. Between this date and October 1902, when the nature of the experiment was disclosed to her by Dr. Verrall, Mrs. Verrall wrote a large number of scripts containing apparent attempts to reproduce either the sound or the sense of these three words. The scripts of this period also contained numerous allusions, (1) to Dr. Benson and Wellington College, where Dr. Verrall had been at school under Dr. Benson and where the lifelong friendship between them began; and (2) to a blind old man, journeying alone and dressed in

white robes, whose identity is the main subject of Mr. Piddington's papers in *Proc.*, Vol. XXX.

The particular script to which I wish to refer is that of the 9th September, 1901, which contained the following words :—

Find the herb moly that will help—it is a guide
 ζήτει καὶ τέλος λήψεις (=seek and in the end you will understand).

The words 'herb moly' were written larger than the rest of the script.

When, at the close of the experiment, Dr. and Mrs. Verrall went over the scripts together, they noticed several attempts to reproduce the sound of *μονόπωλον* (*monopōlon*), and considered that 'moly' was a not very successful specimen of this class. They were, however, puzzled by the fact that more emphasis seemed to be laid by the scripts on 'herb moly' than on other similar attempts at assonance. They considered, and, I think, there can be no doubt, rightly, that a reference was intended to the passage in Milton's *Comus*, where the Attendant Spirit gives to the two brothers the magic herb haemony. The passage (ll. 623-637) runs as follows :—

He [*i.e.* 'a certain shepherd lad'] loved me well and oft
 would hear me sing

Which, when I did, he on the tender grass

Would sit, and hearken even to ecstacy,

And in requital ope his leathern serip,

And show me simples of a thousand names,

Telling their strange and vigorous faculties.

Amongst the rest a small unsightly root

But of divine effect, he culled me out.

The leaf was darkish, and had prickles on it,

But in another country, as he said,

Bore a bright golden flower, but not in this soil.

Unknown and like esteemed, and the dull swain

Treads on it daily with his clouted shoon :

And yet more med'cinal is it than that moly

That Hermes once to wise Ulysses gave.

It will be remembered that in the *Odyssey* (X. 281-306) Hermes gives the herb moly to Odysseus (Ulysses) as a counter-charm against the spells of Circe, just as in Milton's poem the Attendant Spirit gives the herb haemony to the two brothers as a counter-charm against the spells of Circe's son, Comus. But what was the connection between the passage from *Comus* and the passage from the *Orestes*?

When Dr. Verrall sat for the Classical Tripos in 1873, one of the papers, as he remembered, had included the *Orestes* passage. After she had been told all about the experiment, Mrs. Verrall looked through the other papers set for the same examination, and discovered the curious fact, which Dr. Verrall had, consciously at any rate, quite forgotten, that the *Comus* passage had been set for translation into Latin verse. Mrs. Verrall in her paper in *Proc.*, Vol. XX. (p. 164), expressed the view that the script registered not only an existing mental impression of her husband's, but also a forgotten past impression, once closely associated with the first. This view is not accepted by Mr. Piddington (*Proc.*, Vol. XXX., pp. 225-228), partly on the ground that the opportunities for chance-coincidence in papers set in a Classical Tripos examination are exceedingly wide. It would not be relevant to the purpose of this note to express any opinion as to which of these two views is justified.

Recently, however, I chanced upon another association of the *Comus* passage, which links it very closely with Euripides, Dr. Verrall, Mrs. Verrall, Dr. Benson, Wellington College, and also, though the connection in this last case is not quite as clear, with the blind Old Man in White.

In 1881 Dr. Verrall published his first book, an edition of the *Medea* of Euripides. He was at the time engaged to Mrs. Verrall, to whom he presented a copy now in my wife's possession. This copy has on the fly-leaf in Dr. Verrall's handwriting, "*M. de G. M.*," the initials of Mrs. Verrall's maiden name, and on the page opposite, above his own initials, A. W. V., a line from the play which is evidently intended by him as a chaffing allusion to their engagement. The book is dedicated "To the Right

Reverend Edward White Benson, D.D., Lord Bishop of Truro and formerly Head Master of Wellington College."

In the Introduction (pp. viii to xi) Dr. Verrall discusses the various ways in which classical texts become corrupted, and the principles which he considers should be applied in restoring them. He illustrates his argument by supposing that Milton's *Comus* had been "preserved in manuscript copies only, made by ill-educated persons, and that we have to ascertain from five such copies . . . the description of the magic haemony." He then proceeds to take the two lines:—

Unknown and like esteemed: and the dull swain
Treads on it daily with his elouted shoon,

and supposes that one group of manuscripts, while preserving the sense, has departed from the exact form of the words, and that the other, while keeping closer to the sound of the original, has degenerated into sheer nonsense. Finally he shows how by comparing the different perversions of the manuscripts in detail, it would be possible to restore, with a fair degree of certainty, the original text.

Here then we have a play of Euripides, the author from whom the subject of the experiment was drawn, edited as his first published work by Dr. Verrall, the agent in the experiment, presented by him to Mrs. Verrall, the percipient, on a memorable occasion, and dedicated to Dr. Benson, formerly Head Master of Wellington, to whom and to whose former school the scripts have made frequent references; and in the Introduction we find that this particular passage of *Comus* is discussed at considerable length. These correspondences taken together seem to me to go far beyond the possibilities of chance-coincidence.

Mr. Piddington has reminded me of a later script of Mrs. Verrall's, written during the course of the experiment, which is also, I think, designed to draw attention to Dr. Verrall's edition of the *Medea*. I mean the script of the 21st June, 1902, printed on pp. 425, 426 of *Proc.*, Vol. XX. The relevant part of the script for the present purpose is as follows:—"Not Luria but Lyssa gives the keynote. he

must complete. It is better than the Editing—more full of life—more a thing for men."

The script was recognised by Mrs. Verrall as having Dr. Benson for the ostensible communicator, and as referring by the words "Luria" and "Lyssa" to an Essay on Euripides' *Hercules Furens* on which Dr. Verrall was then engaged. For the sake of brevity I would refer the reader to Mrs. Verrall's own comments on pp. 140, 141 and 302 of *Proc.*, Vol. XX. The "he" of the script is, of course, Dr. Verrall.

Now the script clearly draws a distinction between the nature of the work which Dr. Verrall was then doing, and "the Editing," and the point of the distinction is this. Dr. Verrall edited two plays of Euripides (*Medea* and *Ion*) and four of Aeschylus, and achieved a high reputation by the brilliance of his textual criticism. But his most distinctive work was as an interpreter of these authors. In particular he propounded a quite revolutionary view as to the aims and method of Euripides. The Essay on the *Hercules Furens* was a work of interpretation not of editing, and his editions of the *Ion* and the four plays of Aeschylus consist largely of interpretative matter. There is one, and only one, of Dr. Verrall's works which can be considered as an *edition* in the ordinary sense, and that is the *Medea*.

I may add that the Essay on the *Hercules Furens* was published in 1905 in a volume which also contained an Essay on the *Orestes*. I have not, however, been able to ascertain when this last Essay was begun, and accordingly do not suggest any direct connection between the script in question and that play, from which were drawn the words which were the subject of the experiment.

To revert to the 'herb moly' script, while I have no doubt that the object of this script, and of the Benson-Wellington scripts, was to establish, viâ the *Medea*, an Euripides-Dr. Verrall-Mrs. Verrall connection, I also suggest, more speculatively, that there is an attempt to add, by means of the Introduction to the play, an essential item to the description of the Old Man in White.

One of the causes of manuscript errors to which Dr.

Verrall refers is the substitution of common words for rare or archaic ones, e.g. 'peasant' for 'swain.' 'Peasant' might be written over 'swain' by way of gloss or explanation in one MS., and be substituted for 'swain' in a later MS. deriving from the first. He supposes that we have among our MSS. a glossary to Milton, containing the entries SWAIN, *a peasant*, and SCRIP, *a bag*; and that in consequence some of the MSS. gave in ll. 634 and 626 respectively the readings 'peasant' and 'leathern bag' for the 'swain' and 'leathern scrip' of the original.

Now the particular example he gives of the supposed perversion of 'scrip' into 'bag' seems to me significant. Readers of Mr. Piddington's paper will remember that he identifies the Old Man in White of Mrs. Verrall's scripts with Oedipus as described by Sophocles in the *Oedipus Coloneus*, and by Jebb in his notes to that play. All the details of the description, Oedipus' blindness, his age, his white hairs, his staff, his loneliness 'alone with God and none other,' the white robes put on by him before his passing, appear clearly in the scripts. One detail only is missing, or rather fails to come out distinctly. Oedipus, as beggar, should carry a wallet: the old man of the scripts carries 'a small square box' which 'might be a book.' Mr. Piddington conjectures, with great probability, that the box or book of the scripts was a visual misinterpretation by the automatist of the idea of a wallet, 'which was squarish and made of leather.'

If the idea of 'wallet' had come through correctly, it seems probable that Dr. and Mrs. Verrall would have recognised the allusions to Oedipus, have been led thereby to refreshing their memory of Jebb's edition, and so arrived at the connection with the *Orestes* passage which Mr. Piddington has elucidated. The mistake of 'box' or 'book,' small as it was, appears to have sufficed to put them off the track. I suggest that the emphatic advice to 'find the herb moly,' *i.e.* to consult the Introduction to the *Medea*, had, as one of its objects, by drawing their attention to perversions of sense, substitution of words and the idea of a 'leathern scrip' or wallet, to put them back on the right line of enquiry.

On my communicating the substance of this note to Mr. Piddington, he wrote in reply, "I think there is confirmation of your conjecture to be found in the following script of M. V.'s, dated Feb. 16, 1913:—

'Treads on it daily with his elouted shoon
Colin Clout's come home again
But perhaps the French word is more intelligible
Clou, to hit the nail on the head. That is what I
want to say.'

This script, of which I was not previously aware, was produced after Dr. Verrall's death. Whoever may have inspired it, there seems a clear intention to emphasise the importance of the only previous reference in Mrs. Verrall's scripts to this passage of *Comus*, namely that of the 9th September, 1901.

In any case, and whether my interpretation be right or wrong, it is curious that both Dr. and Mrs. Verrall, when casting about for possibly relevant associations with *Comus*, should have overlooked the Introduction to the *Medea*, in view of the circumstances attending the publication of the book and its presentation by one to the other. It would, however, seem not infrequently to be the case that persons engaged in the production of scripts fail to recognise allusions and associations which they would in other circumstances be the first to seize on. Perhaps this is a merciful dispensation, framed so as to enable those of us who have not the gift of automatism to take a part, however small, in the great game.

II. THE PRECOCIOUS OLIVE.

BY J. G. PIDDINGTON.

In her account (*Proc.*, Vol. XX., pp. 156-167) of the "One-Horse Dawn" experiment Mrs. Verrall (p. 157) wrote as follows:—

This experiment was devised by my husband in April 1901, and the three words [*μονόπωλον ἐς Ἄω*, *i.e.* "to the one-horsed Dawn"] were then written down, with the

intention of seeing whether my hand [*i.e.* script] would make any attempt to reproduce his thought. The paper on which the words were written was put into an envelope, placed by him, to the best of his belief, in the drawer of his writing-table, where he is in the habit of keeping papers. The drawer is not used by anyone but himself. He had not made, he tells me, any experiment before.

Mrs. Verrall added a footnote to the effect that the paper on which Dr. Verrall wrote the three words was "mis-laid or lost," and "could not be found when the experiment was ended."

The experiment, it should be observed, is here said to have been *devised*, not merely started, in April 1901: that is to say,—if Mrs. Verrall chose her words in this instance as carefully as she usually did—Dr. Verrall did not begin to think about the experiment until April 1901. It is not stated whether the note made of the three words bore a date, and as this note was lost, we cannot now ascertain; and we have to depend on Dr. Verrall's memory for the date on which the experiment was devised. Dr. Verrall, however, was a man of an accurate habit of mind, and there is a strong presumption that, if he stated that he devised the experiment in April 1901, he did devise it in that month, and not in March or May or any other month of 1901.

In a paper called "Fresh Light on the 'One-Horse Dawn' Experiment," and published in *Proc.*, Vol. XXX., pp. 175-229, I discussed a number of references in Mrs. Verrall's *μονόπωλον ἐς 'Αῶ* (or, "One-Horse Dawn") scripts of 1901 and 1902 to an Old Man in White, and argued that they were all references to Oedipus: chiefly to Oedipus as he appears in the *Oedipus Coloneus* of Sophocles, though one very significant reference was implied to a passage in the *Oedipus Tyrannus*. I argued further that the point of these references was to be found in various notes of Jebb's on the *Oedipus Coloneus*, and especially in a note of his on the *Oedipus Tyrannus* in which he gives his view of the meaning of the disputed word *μονόπωλον* in the phrase *μονόπωλον ἐς 'Αῶ*; and I pointed out that Jebb

gives a cross-reference to this particular note of his own in his comments on a Chorus in the *Oedipus Coloneus* to which Mrs. Verrall’s scripts allude. Part of this Chorus consists of a eulogy of the Olive of Attica, and is thus translated by Jebb:—

And a thing there is such as I know not by fame on Asian ground, or as ever born in the great Dorian isle of Pelops,—a growth unconquered [*φύτευμ’ ἀχείρωτον*], self-renewing, a terror to the spears of the foemen, a growth which mightily flourishes in this land,—the gray-leafed olive, nurturer of children [*γλαυκᾶς παιδοτρόφον φύλλον ἐλαίας*]. Youth shall not mar it by the ravage of his hand, nor any one who dwells with old age; for the sleepless eye of the Morian Zeus beholds it, and the gray-eyed Athena [*χὰ γλαυκῶπις Ἀθίνα*].

To this passage I maintained references were made in the following manner in Mrs. Verrall’s scripts:—

M. V. 3049 (*July 31, 1901*).

. . . viridenti coma ἐλαίου τῆς Γλαυκωπιδὸς αὐτῆς . . .

M. V. 3055 (*Aug. 20, 1901*).

. . . καὶ στέμματα ἐνῆν. οὐ δαφνεῖα ἀλλὰ φυλλὰ δειδῶρος [sic] τινὸς ἐκεῖ φευγοντος φντουμένου . . .

M. V. 3118 (*April 14, 1902*).

. . . γλαυκῶπις Ἀθίνη . . .

The word ἐλαίου (“of olive-oil”) in M. V. 3049 is an obvious slip for ἐλαίας (“of the olive-tree”), as is shown by the context on both sides of it, which means:—

“With the green foliage of the olive
of the Green-eyed (Athena) herself.”

With regard to the epithet Γλαυκῶπις (“green-eyed,” or “gray-eyed”), applied to Athena by Sophocles in the lines quoted above, Jebb observes that it was suggested by the epithet γλαυκᾶς (“green,” or “gray-green”) applied by Sophocles a few lines earlier to the olive:—

γλαυκᾶς παιδοτρόφον φύλλον ἐλαίας
 (“the gray-leafed olive nurturer of children”).

On the second epithet, παιδοτρόφον (“child-nurturing”)

that Sophocles here bestows on the olive, Jebb has a note, of which I transcribe a part :—

“ παιδοτρόφου, nourishing the young lives in the land.
 . . . Cp. Juv. *Sat.* 3, 84: *quod nostra infantia caelum*
*Hausit Aventini baca nutrita Sabina*¹ (the olive).”

The compressed style of this note might mislead. Jebb does not mean that *baca Sabina* is a regular name for olives, like our ‘Brazil nuts’ for a particular kind of nut. He means that *baca*, literally a berry, is here used for the fruit of the olive-tree—as, indeed, it often is by other Latin authors, with or without an epithet to distinguish it from other ‘berries.’ By *baca Sabina* Juvenal meant Sabine olives.

Meanwhile, the bewildered reader may be wondering what Sabine berries and Jebb’s note on *παιδοτρόφου* have got to do with the “One-Horse Dawn” experiment.

The experiment, it will be remembered, was devised in April 1901. On the afternoon of March 31, 1901,—that is to say, *before* Dr. Verrall devised the experiment—Mrs. Verrall wrote a script containing a good many disconnected and apparently meaningless phrases, and among them this one :—

praecox olea baccis Sabinis ponetur dis adiuventibus.

It may be translated :—

“the early olive with Sabine berries will be planted with the help of the gods.”

Even taken by themselves, the words, *olea baccis Sabinis*, would be an almost absolutely certain reference to the Juvenal passage; but when we consider that later scripts of Mrs. Verrall’s make repeated allusions to the *Oedipus*

¹The quotation from Juvenal means: “(Is it to go so entirely for nothing) that as a boy I drank in the air of the Aventine, and was nurtured on the Sabine berry?”

J. E. B. Mayor in the Addenda to his Notes on Juvenal’s Third Satire, gives under the heading “Baca Sabina” a reference to Sophocles, *Oed. Col.* 694-706: that is to say, to the precise part of the chorus in praise of the olive in the *Oedipus Coloneus* to which reference is made above.

Coloneus, that the point of these allusions is to be found in Jebb's notes on that play, and that the only other mention of the olive in Mrs. Verrall's scripts for nearly five years to come¹—namely, "viridenti coma ἐλαίου τῆς Γλαυκωπιδὸς ἀτῆς in M. V. 3049—is effected by means of an allusion to the very lines containing the word παιδοτρόφου, we are forced, it seems to me, to conclude that the words *olea baccis Sabinis* in the script of March 31, 1901, are, not only a reference to the Juvenal passage, but a certain reference to the quotation of the Juvenal passage in Jebb's note on παιδοτρόφου.

If that conclusion is, as I believe, inevitable, two things follow from it. First, it clinches the argument put forward in my paper "Fresh Light on the 'One-Horse Dawn' Experiment," which was that the clue to the repeated allusions in the "One-Horse Dawn" scripts to the Old Man in White and to a good deal of the contexts of these allusions is to be found in the *Oedipus Coloneus* and in Jebb's notes thereon.

Secondly, it leaves us faced with a very pretty problem. For, at least one day, and perhaps several days, before Dr. Verrall devised his experiment, allusion was made in Mrs. Verrall's script to a note of Jebb's on a passage in the *Oedipus Coloneus*; and this passage, as well as other notes of Jebb's on the same play and on the companion play *Oedipus Tyrannus*, was subsequently utilised in Mrs. Verrall's scripts to indicate the words *μονόπωλον ἐς Ἄω* which Dr. Verrall fixed upon in April 1901 as the subject of his experiment.

Various ways of accounting for this odd fact may be invented. If we assume that there is no mistake as to the time when the experiment was first devised, we might take the line that this new piece of evidence only goes to show the diabolical ingenuity of Mrs. Verrall's subliminal

¹ The first mention of 'olive' after July 31, 1901, is on March 21, 1906; but this, like all other mentions of the olive in Mrs. Verrall's scripts, is in English. The only 'olive' reference in Latin is on March 31, 1901; the only one in Greek on July 31, 1901: the use in these two instances of Greek and Latin corresponding to the Greek olive of the *Oedipus Coloneus* and to the Sabine olive of Juvenal's *Satires*,

mind, which, not content with contriving an intricate response to Dr. Verrall's experiment, went further and fitted this response on to a literary reference that had happened to emerge in her script before the experiment was thought of.

Or, we might assume that, though *consciously* Dr. Verrall neither devised nor thought about his experiment until April 1901, he had nevertheless been subconsciously turning the matter over, and considering *μονόπωλον ἐς Ἄω* as a possible subject for experiment. If this were really the case, the promptitude and appositeness of Mrs. Verrall's first reaction to her husband's *subconscious* thought stand out in marked contrast to the slowness and difficulty with which the response was afterwards completed when Dr. Verrall was *consciously* trying to convey his thought.

Or again, we might assume that Dr. Verrall's memory played him false, and that he *consciously* devised the experiment before the afternoon of March 31, 1901. But those who knew Dr. Verrall will not readily, I think, call in question the accuracy of his memory.

There is a fourth hypothesis that I am not disposed to press, but which should not be entirely ignored. It is that Dr. Verrall was not the real originator of the experiment, but that he carried out an experiment which, though he did not know it, another intelligence had devised and imposed upon him. This hypothesis, like the other hypotheses, is, of course, incapable of proof; but it at least has the merit of simplicity, and only assumes the possibility of Dr. Verrall's being open to telepathic influence.

Those who prefer to regard all the phenomena of the "One-Horse Dawn" case as due to telepathy *inter vivos* can pitch upon Mrs. Verrall as the intelligence that subliminally devised the experiment and telepathically imposed it on Dr. Verrall.

I may, perhaps, be allowed to add that, knowing the ways of scripts, I had often puzzled over the 'olive' reference in the script of March 31, 1901, and felt that I ought to hitch on to the 'olive' reference in the script of July 31, 1901, in spite of the fact that Dr. Verrall dic

not begin his experiment until April 1901; but I never could see any sense in

praecox olea baccis Sabinis

until a few months ago when I happened to read Jebb's note on παιδοτρόφον.

The epithet *praecox*, perhaps, deserves attention, for there is nothing in the Juvenal passage or in the Chorus in the *Oedipus Coloneus* in any way answering to it. The adjective *praecox* is applied in Latin literature not only to plants that flower or fruit early, but to plants that fruit *before their time*. And that is exactly what the *praecox olea* of Mrs. Verrall's script did when it put in a precocious appearance before the "One-Horse Dawn" experiment officially began.

Jan. 6, 1924.

THE MECHANISM OF THE SO-CALLED MEDIUMISTIC TRANCE.

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The relation of this article to my paper "The Psychology and Physiology of the so-called Mediumistic Trance," read at the 2nd Congress for Psychical Research at Warsaw, 1923, and published in its Transactions, is as follows. In this article I only give a very brief summary of what I had to say on Mrs. Piper in my Warsaw paper, and I must therefore be allowed to refer readers of these Proceedings to the fuller discussion there. A few new points of view are now added here, however. What follows upon that is wholly written for these Proceedings, and does not appear in the Warsaw paper.

In this article my intention is to view the so-called mediumistic trance and its more important features in the light of hypnotic phenomena. I believe that by this method it is possible to attain to a better understanding not only of the conditions of the trance-state itself, but also of what the so-called "personalities," manifesting in the state, really are or—are not.

MRS. PIPER.

In her elaborate exposition of the psychology of Mrs. Piper's trance (Vol. XXVIII. of these *Proceedings*) Mrs. Sidgwick came to the conclusion that Mrs. Piper's trance very probably was a state of self-induced hypnosis, in which she or her hypnotic self, by the help of suggestion, personated different characters either consciously or unconsciously.

To begin with, I wish to emphasize the importance of a certain symptom which Mrs. Piper more or less often showed in the intermediate stage between her deep sleep

or trance and her awake-condition, *i.e.* in her coming-to-state or awakening-condition.

This symptom was echolalia (repetition of words or sentences uttered by persons present). This proves that when Mrs. Piper came to she passed through a state of consciousness which constitutes or corresponds to a hystero-hypnotic state, called by Charcot, Janet, Ochorowicz and others the cataleptic state, but which I prefer to call the automatic state, this being a more general term. In this state the subject—according not only to my own, but also to observations made by others, *e.g.* O. Vogt—hears spoken words, but does not understand them. He repeats them parrot-like. The only form of suggestibility of which he might be said to be capable is one caused by images. These provoke hallucinations and, on the motor side, corresponding automatic actions.

It is interesting that echolalia may also show itself not only in certain cases of mental disease, often accompanied by echopraxia and echomimia, but also in encephalitis lethargica or on account of a bullet-wound in the frontal lobe of the brain (F3), etc. Here there exists no reason to suppose that it is caused by suggestion or at will. It can therefore very well be conceived to show itself, when functional brain disturbances or blockades of a certain kind exist, as for instance in certain trance-phases, without the help of any suggestion or volition on the part of the subject. The opinion, held by probably most modern hypnotizers, that echolalia in hypnosis is due to mental suggestion, as Mrs. Sidgwick rightly puts it, cannot be maintained any longer. And for these reasons: (1) it can occur, as I have found it to do, quite unexpectedly and unprovoked;¹ (2) it occurs in a definite state, lying between what I call "light" and "deep" hypnosis, which can be produced experimentally, and in which verbal suggestions are not obeyed, because not understood; (3) intelligent introspection, as in Vogt's case, confirms the truth of this; and (4) similar reactions, for instance mimicry, occur in the *same* hypnotic, *i.e.* the automatic state, as echolalia does.

¹This is also the opinion of Ochorowicz and Wingfield, as stated in a personal communication to me.

As the eeholalia occurred in the awakening-stage, it is evident that Mrs. Piper's deep sleep and trance proper—see the synoptic table below—represented a nervous condition in which the inhibition was still more profound than in the automatic stage. She was, consequently, in a state—let us call it a state of lethargy—where her capability of giving herself auto-suggestions, or *à fortiori* of receiving and realising suggestions from without, had ceased to exist. It is also evident from other symptoms that the trance-state involved a diminution of excitability stretching more or less far down in the central nervous system: the lessened respiratory frequency (7-10 per minute) the general insensibility and inertness, the lessened or inhibited reflexivity, the total colour-blindness (Mrs. Piper saw objects, faces, black), the micropsia (objects were seen very much diminished), etc.

In this deep hypnosis Mrs. Piper doubtless also was incapable of receiving telepathic suggestions. The experiments of Ochorowicz seem to prove this. One of his subjects was very clearly susceptible to telepathic impulses of a motor kind in the automatic state. This form of sensibility ceased however in the lethargic state.

The probability that the personalities of Mrs. Piper's trance and their sayings and doings depended on auto-suggestion from the medium or on telepathic suggestions from the sitters, as Mrs. Sidgwick supposes, must therefore be considered very small indeed.

I do not want to give the impression that I accept all the characteristics of *Charcot's* well-known and much criticized three states of hystero-hypnosis: the somnambulistic, the cataleptic and the lethargic states. The important point is whether, when hypnotising persons of a certain nervous type deeper and deeper, an inhibition of the mental and nervous functions, the brain and nerve centres respectively, as well as a corresponding secondary enhancement of other functions and centres, takes place in a certain general order, independent of suggestions and auto-suggestions, and whether these progressive alterations in the excitability of the different parts and levels of the nervous system are *in the main* best accounted for by assuming

the existence of three distinct states. I am inclined to believe that this really is the case. It is, on the other hand, of minor importance whether the specific and constant characteristics of each stage were correctly apprehended and described by Chareot, or not; whether these states represent hard and fast divisions or not; whether they can be transformed into each other in all the ways described by Chareot and his school, or not; whether in certain persons irregularities are to be found, dependent, perhaps, on nervous changes or ideas already existent in the awake condition, or, perhaps, on different methods of hypnotization, etc. I have given a more extensive *exposé* of my opinion of the nature of different hypnotic states than I have been able to do here in my paper "The Psychological Importance of Hypnotism" (read before the 7th Congress of Psychology, Oxford, 1923, and published in *Psyche*, 1923, p. 129-140).

SYNOPTIC TABLE.

Mrs. Piper's trance-states, according to Mrs. Sidgwick's description.	Corresponding hypnotic states, according to my conception.	Corresponding states in Pierre Janet's patient Rose.
1. The awake condition.		
2. The going-into trance state.	{ Light Hypnosis. ¹ Intermediate state or Automatic state.	[Somnambulism.]
		[Catalepsy.]
3. Deep sleep.	{ Deep Hypnosis, with partial restitutions during the existence of the "trance proper."	[Lethargy.]
4. Trance proper.		Syncope.
		Lethargy.
5. Deep sleep.		
6. The waking (or awakening) stage.	{ Intermediate state or Automatic state. Light Hypnosis. ¹	Catalepsy.
		Somnambulism.
7. The awake condition.		

¹My "light hypnosis" includes also such hypnotic states for which amnesia exists afterwards.

There is another curious feature, which occurred in the awakening state of Mrs. Piper: the so-called "head-snaps." Shortly before normal consciousness returned an experience constantly occurred which Mrs. Piper described as her head snapping, and which she half seemed to expect the sitter to hear. Generally this snap occurred twice, with a short interval between, before she completely recovered her normal consciousness. (*Proc.*, Vol. XXVIII. p. 23.)

Mrs. Sidgwick imagines that the sensation is due to some change in the flow of blood to the brain, and adds that "Mrs. Piper takes this view herself, perhaps as the result of a suggestion from some sitter." She said once: "My head goes s-s-click. I think the blood settles back in my brain and then I am conscious."

Only quite lately I have been able to find an experience analogous to Mrs. Piper's clicks. In a few articles Mr. Oliver Fox (really Mr. Hugh G. Callaway) has described experiments in "Dream-travelling." These are too complicated to be given here in full.¹ I can only give certain points in this paper. Mr. Callaway had been trying to prolong a certain kind of dream: "Dreams of knowledge," i.e. dreams in which he had the knowledge that he was dreaming. He found that by exercising his will he could resist the "attraction" of the body and considerably prolong the dream. The effort, however, produced a slowly increasing pain in what he imagined to be the region of the pineal gland. He made the experiment of fighting this pain. It then ceased quite suddenly and something seemed to "click" in his head. Upon this he appeared "to be in the position of a permanently disembodied spirit," i.e. "out of the body." By will power he managed "to return to his body," but the after effects were bad. After this he found that when he was in the *trance*-condition he could "leave the body" by a sudden effort of will, and still later he found that the "right" method to do this was to will that his incorporated self should pass through the doorway of the pineal gland. When this was done *the little click sounded in his brain.*

¹ See *The Occult Review*, 1920, pp. 190 and 251, and 1923, p. 332.

When this method was used there was no restricting "pineal" pain as before, no break in consciousness, no difficulty in "re-entering the body" when he wished.

Mr. Callaway puts forward the theory that when "dreams of knowledge" take place, a third state of consciousness is the result, and he adds: "To prove that the soul actually leaves the body is practically impossible, for the experience may be purely subjective." Still he considers that, to his *own* satisfaction, he has proved the "existence of his soul."

In a letter to me Mr. Callaway writes that he has never read any detailed account of Mrs. Piper's trances, though her name was, of course, known to him.

It would, of course, be wrong to attach much importance to a single person's experiences of this kind. But it certainly is rather curious, that in the only case besides Mrs. Piper's—known to me, at least,—where such clicks in the brain can be produced quasi-experimentally, they should occur just at that point or moment when the experimenter feels and considers himself to have "left the body"—whatever this may mean¹—during a trance condition.

There is another experience of Mr. Callaway's which reminds me of one of Mrs. Piper's.

Once, when coming to and after the head-snap, Mrs. Piper said: "I want to tell you the strangest thing. I had two distinct pairs of eyes. I used the one pair behind the other and looked through these eyes (touching her own) as if they were spectacles. They looked like marbles . . . And Mr. Hodgson, when I saw you first it was through the other pair of eyes and you didn't look as you do now." (Just before she had said that she had two distinct brains . . . "one looks like sulphur burning, the other like flesh") (*Proc.*, Vol. XXVIII, p. 222).

Mr. Callaway relates that when in a certain experiment he "concentrated" on its preliminary stages, he felt a general numbness, his whole body stiffened and his eyes

¹As to the nature of Mr. Callaway's experiences and his own reasons for considering himself to have been out of his body, see Mr. Callaway's articles.

closed tightly (*The Occult Review*, 1923, p. 336). Then came the sensation of possessing another pair of eyes, and these "astral eyes" he opened. As he did this he seemed to turn right round within his physical body, so that he faced the other direction, etc.

What this felt duplication of eyes (and brain) really means is difficult to decide. Still, the coincidence between Mrs. Piper's and Mr. Callaway's experiences deserves to be noted, and investigators ought to be on the look-out for similar observations in the future.

MRS. LEONARD.

I now intend to give as a further example of the mediumistic trance the case of the well-known medium Mrs. Osborne Leonard, because she is still in full activity, and it is therefore probably quite possible to get a thorough examination of her different trance or hypnotic stages from a purely psychological and neurological point of view, which hitherto has not been done.

This medium presents, according to Una, Lady Troubridge (*Proc., S.P.R.* Vol. XXXII., p. 349), first of all a condition, characterised by a slight drowsiness, productive of automatic script, which has proved on several occasions to convey accurate knowledge of events unknown to the medium. Lady Troubridge asks if we may see in this condition a relatively light hypnosis not followed by any amnesia.

Mrs. Leonard further presents a partially analgesic trance, in which she appears to be somewhat hyperaesthetic of hearing. In the trance she shows the characteristics of a personality quite foreign to her waking self. This is the personality known as Fedra. Also in this state Mrs. Leonard gives evidence of supernormal knowledge. Lady Troubridge believes this state to be a lower hypnotic level than the former one, a deep somnambulism. I wish to say that the hyperaesthesia of hearing seems to me in this case certain only for the time which *precedes* a sitting, *i.e.* when hypnosis is coming on, and is then quite what we should expect. This hyperaesthesia consequently does

not in any way preclude the trance itself being a deep condition. As to the analgesia I should like to know what is really meant by partially or "to some great extent" anaesthetic and analgesic.

Finally comes another trance condition, in which according to Lady Troubridge Mrs. Leonard reproduces the vocal characteristics and mannerisms of deceased persons of both sexes, who were never known to her during their lives. In this state the motor faculties are largely in abeyance. Whereas Fedra can easily move about and talk loudly, these so-called personal controls have, as Lady Troubridge expresses it, very limited command of the organism as regards motion and vocal energy (p. 362). Mrs. Leonard lies like a log against the chair, and therefore seems to have lost her muscular tonus to a great extent. The arrival so to say of a personal control is announced by a long, sometimes very long, and steady exhalation of breath, whereas Fedra's arrival is only heralded by a few moments of mere quiescence (p. 365). At least one personal control shows a pronounced hyperaesthesia of touch affecting the fingers. The personal controls can only be maintained for a short time. On account of this and other features (the power of mental concentration is for instance weakened), Lady Troubridge believes that this condition is possibly yet another and still lower hypnotic level.

Later, on account of Mr. Irving's letter (*Journal*, 1922, p. 266), Lady Troubridge emphasises the circumstance that the personal controls have access to the Fedra material, whereas Fedra has only a very fragmentary and occasional knowledge of the personal control material. This, however, we might regard, writes Lady Troubridge, as some unusual and momentary shifting of the levels, which gives Fedra, for an instant only, access to material which is generally outside her purview and which might be acquired telepathically by her during the periods when she herself governs the organism (p. 291). This superiority in the field of knowledge on the part of the personal controls would then be another point in favour of regarding them as representing a still deeper hypnotic level than Fedra.

I should like to accentuate the desirability of distinguishing here more exactly between two things. On the one hand the condition of Mrs. Leonard's organism *during* the emergence of Feda or the personal controls, *i.e.* the trance state *per se*; on the other hand the psycho-physiological nature of these personalities themselves.¹ But can such a division be made? How can we know what belongs to the one and what to the other? Three points seem able to help us here: (1) our general knowledge of pure (hystero-) hypnotic states; (2) our knowledge of the nature of Mrs. Leonard's condition immediately before and after the emergence of the personalities; (3) the circumstances that these different outbursts apparently form coherent organic unities, of which certain utterances, movements, etc., are integral parts.

To begin with the personal controls. It seems from the description given by Lady Troubridge as if there existed a special nervous condition, which precedes the trance *per se*, runs through this and also succeeds it for about a minute. I admit, however, that the data for this assertion are rather poor. In the case of Mrs. Piper they are much stronger. Still it seems as if there exists such a condition also here, and that this is a state corresponding to a very deep stage in (hystero-) hypnosis (the lethargic stage). During this condition a partial restitution or revivification of certain functions for an unknown reason takes place in the form of speech (usually very weak), movements (very limited), increase of muscular tone (hardly sufficient to keep the vertebral column erect), and in one case hyperaesthesia (of fingers). Of these, speech seems to be the only restitution which necessarily belongs to or expresses the mental activity behind. Regarding the other symptoms this connection is not quite clear, at least as far as Lady Troubridge's information goes. They probably, however, also belong to these personalities, as they occur simul-

¹ Lady Troubridge herself in her first paper (*S.P.R. Proc.* Vol. XXXII.) writes of the possibility of the different trance *conditions* being different hypnotic levels (p. 361). Then Mr. Irving writes about the *personal controls* being this, and finally Lady Troubridge in her reply writes that her suggestion was that these controls *represent* a deeper hypnotic level.

taneously with their utterances.¹ But even if this is so, they may be only secondary and irradiative effects of the restitution of speech and its corresponding nervous apparatuses.

As to the personal controls themselves, I think there is very little evidence that these "entities" as such represent or constitute a still deeper hypnotic level than Fedá. Even assuming Lady Troubridge to be in the right as to their wider memory-range, I do not think that this is any evidence in this respect. And for this reason, that they are not really the inner side of *complete* hypnotic states, but only—at the best—partial restitutions of such states. Only of the former has it been assumed, with more or less reason, that the deeper the hypnosis the more comprehensive the memory-range.² Further: if we accept telepathy as an explanation of Fedá's incidental knowledge of a personal control, why shouldn't telepathy also be able to work the other way?

The weakness, short duration and incompleteness of the personal controls in comparison to that of Fedá might very easily be explained by the circumstance that Fedá obviously "emerges" from a lighter hypnotic state, where the resistance to be overcome is less than in the lethargic state, while the restitution, apparently brought about in some way by the personal controls, demands a greater output of energy.

In conclusion: all we can say is that the manifestation of the personal controls takes place in a state of trance or auto-hypnosis probably much deeper than the state from which Fedá emerges. As to the personalities themselves, it is of very little use comparing them to hypnotic levels or egos *at all*, much less considering them to *be* such

¹ Note here Lady Troubridge's observation, that the sitter must be on the alert to catch Mrs. Leonard's body as the personal control comes to an end (p. 366). May I ask a question: *Who* complains of the hyperaesthesia of the fingers as being "actually distressful"? And does this sensitiveness serve any purpose?

² There exists, however, no proof that Prof. Morton Prince in the case of Miss Beauchamp had hypnotised B2 deeper than usual on the first occasion B3 appeared. B3 had, however, a wider memory-range than B2. And can we also in other cases be certain at what "level" a "personality" is formed?

levels. The mental life of the personal controls is not inferior, seemingly, to that of Fedra, whereas the deepest (hystero-) hypnotic stage (the lethargic one) generally shows much less mental activity, if any at all, than the lighter ones—unless complications exist. As to the memory-range, I should like to ask Lady Troubridge a question or two. Is there not, to begin with, *some* evidence of Fedra's knowing the contents of the minds of the personal controls from the circumstance that Fedra, at least on the face of it, *transmits* the thoughts of the personal controls, for instance of A. V. B.? Now, seeing that, according to Lady Troubridge, Fedra generally has no knowledge of personal control material, whereby no doubt is meant *the utterances* of a personal control when really controlling, *i.e.* when influencing Mrs. Leonard without intervention from another source, the question arises: is there any evidence that the thoughts of a certain personal control, say of A. V. B., which Fedra *transmits*, and the utterances of A. V. B. as a personal control, really belong to each other or to a common personal source? If there is such evidence, would not this then show that Fedra at times really does get at the minds of what we call the personal controls?

When using the expression "restitution" of Mrs. Leonard's organism, I do not of course mean that the whole thing is explained by such a process. I can locally or partially reconstitute a subject in deep hypnosis by simply holding my hand above his: the sensibility returns then at this place (on the hand). I can also by upward passes over one arm, again, as in the former case, without contact, *e.g.* through a sheet of glass, and taking as before every precaution so that the subject cannot know or suspect what I am doing, restore the sensibility, etc., on that half of the body. That is not, however, a complete analogy to what occurs in Mrs. Leonard's case, when a personal control comes on. But if we suppose that in some such way, by nervous effluence or otherwise, I could *first* restore Mrs. Leonard's vocal organs, peripheral *and* central, and *then* by the help of telepathy make these restored parts of Mrs. Leonard's organism talk and give utterance to my thoughts—then we should have, I believe, a process

which at least could be compared to what seems to take place when a personal control manifests.

OTHER MEDIUMS.

I lately examined (at the British College for Psychic Science) a young man who put himself into an apparent trance without any help from anybody present, and who in this state manifested at least two different trance-personalities. There was a very great difference in the easiness with which the knee-jerk reflexes could be evoked in the awake condition, and the difficulty, not to say impossibility, with which they could be shown to exist at all in the trance state. And when the subject was awakening from the trance state the returning of the knee-jerk reflex by degrees could be very nicely observed. This was also confirmed by a medical man present. There were also interesting alterations in the sensibility. These changes gave me the conviction that no shamming of the trance-state as such occurred in this case, and also that the trance-state in question involved a deep-reaching inhibition of the excitability of the nervous system (as far as the spinal cord). I was prevented from making further examinations, but what I have put forward may be enough to show once more the importance of always making a neurological examination in such cases, if possible.

Sir Arthur Conan Doyle¹ has made some observations which show the importance of studying the pulse-rate in trance. He found that a medium, Mr. Tickner, showed remarkable variations in this respect. Before and after a certain sitting the pulse rate was 78 per minute, but during trance and when a certain "personality" manifested it showed 124 (for about twenty minutes running), and when another "personality" came on the scene it showed 100. Sir Arthur writes with much reason that it may be that we have an excellent check against fraud in these pulse-variations. I should like to add that they may also aid us in understanding the mechanism of the trance-condition and the restitutions taking place there.

¹ "Pulse-rate in Trance." *Jour. of the Am. S.P.R.*, July 1923, p. 374.

I once registered the respiration and pulse of a gentleman who claimed that he could "leave his body," and who, in order to do this, sent himself into a trance. No reactions followed in this state on stimulation of the skin senses, the knee-jerk reflex was absent, etc. During the trance I held a sharp-smelling liquid under his nostrils; no reactions ensued, excepting a flattening out of the respiration-curves for about 20 seconds. When, however, the subject commenced the deep respiration which he usually employed in order to "bring himself back," and had made two inspirations and expirations, he very suddenly began to sneeze and complained of a sharp and nasty smell. This seems to me good evidence of the absence of the sense of smell during the trance-state. The phenomenon itself can be interpreted in two ways: either there remained enough smelling-particles in the nostrils to produce the reaction when the olfactory organ had regained its sensitiveness, or an excitation of the olfactory nerve and tract occurred already during trance, but could not lead to a result because of the lessened excitability of the corresponding centres in that state.

THE METHOD OF THE PSYCHO-GALVANIC REFLEX.

Mr. Whately Smith has put forward the idea (*Proc. S.P.R.*, Vol. XXXI., p. 401) that these problems might be elucidated with the help of the phenomenon known as the psycho-galvanic reflex, already inaugurated by Prince and Peterson for this purpose.

There seems to exist a difficulty here, which Mr. Whately Smith in my opinion undervalues. I mean the loss of sensibility which encounters us in most trances or deep hypnotic states. Also hyperaesthesia may obtain here, at least locally, as we have seen, and probably as a sign of restitution. In light hypnosis we also often meet hyperaesthesia, mostly I should think as a secondary symptom. Mr. Whately Smith observes, however (p. 409, note), that in cases of functional anaesthesia in connection with dissociation the subject will re-act just as well on the anaesthetic areas as on the normally sensitive ones. But

the possibility, not to say the probability, exists here that functional disturbances of sensibility may occur which do *not* depend—or do not depend solely—on dissociation, and that in such cases the disturbances may involve changes in the excitability even of the peripheral sensitive nerves or nerve-organs. This is far from improbable, because such changes can be shown to exist in regard to motor peripheral nerves in the deep hypnosis of certain subjects. The electric irritability of such nerves has in point of fact been found to be considerably lessened in such a state (see my article "Problems of Hypnotism," *Proc. S.P.R.*, Vol. XXXII., 1921, p. 169). On the other hand this irritability has been found to be increased in certain other hypnotic states, and Krafft-Ebing found that such an enhancement could be observed as a result of paralysis by suggestion (*Eine experimentelle Studie auf dem Gebiete des Hypnotismus*, 3rd ed., 1893, p. 62). We must therefore reckon with the possibility that functional anaesthesia may also mean a decrease of nervous excitability stretching down as far as to the periphery. And this form of anaesthesia ought certainly to affect the psychogalvanic reflexes.

In such circumstances it would seem to be far the best thing to begin the study of the psycho-galvanic reflex-phenomena on different forms of hypnosis, for instance, on hypnosis with hemilateral changes, and, perhaps most important of all, on forms where the anaesthesia has been produced by suggestion, *or* by passes, *or* by the deep hypnosis itself. When all this has been cleared up the time may be ripe to attack the "big problem" proposed by Mr. Whately Smith.

I have entered rather deeply into this question, because I am of the opinion that the psycho-galvanic reflex really is an important method for our purpose, and because Professor Veraguth himself, the inventor of the method, proposed to me some time ago to use it in order to examine if the changes in the sensibility brought about by passes are of a peripheral nature or not. I have not yet, however, had the opportunity to do this. I hope now that Mr. Whately Smith, with his large experience of how

this method works, will devote some of his time and interest to the application of it to the important neurological problems which I have put forward and discussed here.

CONCLUSION.

I hope that what I have advanced in this paper justifies the following assertion. If we have complete and clearly formulated examinations of how a medium behaves and reacts in different states to questions and suggestions, how his or her senses, pulse, respiration and reflexes function, etc., we can with much greater confidence decide to what hypnotic level a certain trance condition *per se* corresponds, and consequently also what sort of mental activity the medium himself in such a condition is capable of, *e.g.* if he is suggestible or not, and also what kind of suggestibility exists. And we might also be able to decide if the trance condition is of a kind which permits the receiving of real telepathic impressions or not.

Furthermore, when we encounter trance states where certain curious upheavals or restitutions occur which sometimes seem to form a "personality" of some kind or other, if we then examine also these personalities not only from a psychological but also from a neurological point of view, we shall be able to distinguish better between the medium's "own" states and the foreign ones, and consequently be in a more favourable position to judge of the origin and nature of the latter.

A METHOD OF SCORING COINCIDENCES IN TESTS WITH PLAYING CARDS.

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THE problem of *scoring* a series of possible events so as to measure appropriately the degree of success attained in each trial seems to lie on the borderline between the purely deductive region of mathematical probability and the region of arbitrary choice. The particular problem in respect of which this note is written serves to illustrate what abstract principles are available in arriving at a rational system of scoring, and may be of use in dealing with more complex cases.

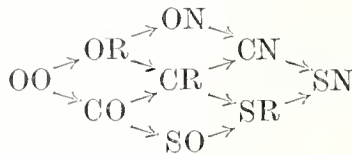
If two playing cards are obtained from different packs, the maximum degree of success is clearly obtained if they are corresponding cards of the same suit; but, short of this we shall have obtained some degree of resemblance if the cards are either corresponding cards of different suits or if they are of the same suit. A lower degree of success, but still one which is worth counting, will have been attained if the two cards are of the same rank (both plain or both picture cards), or even if they are of the same colour. There are in fact nine possibilities, to each of which we need assign an appropriate score, and these will be represented as follows:

- OO No resemblance, a plain card and a picture card of different colours.
- CO A plain card and a picture card of the same *colour*, but of different suits.
- SO A plain card and a picture card of the same *suit*.
- OR Both plain or both picture cards of different colours.

- CR Both plain or both picture cards of the same colour, but of different suits.
- SR Both plain or both picture cards of the same suit.
- ON Corresponding cards of different colours.
- CN Corresponding cards of the same colour, but of different suits.
- SN Corresponding cards of the same suit.

If the cards are both plain or both picture cards we may speak of them as having the same rank; if they are corresponding cards we may speak of them as having the same value, using this term to include the distinction between Knave, Queen and King.

There are certain conditions respecting the *order* of the classes, which any satisfactory system of scoring must satisfy. It is evident that each S class must score more than the corresponding C class, and still more than the corresponding O class; equally each N class must score more than the corresponding R class, and still more than the corresponding O class. These fundamental conditions may be represented in the following diagram, in which the arrows point, in each case from a class with the lower to a class with the higher score:



These conditions as to the order of the scores still leave much latitude as to the actual scores to be assigned to each class. In order to proceed further it is necessary to take account of the relative rarity, upon purely random conditions, of the several possible classes.

A circumstance which gives a clue to a rational system of scoring is that in every one of the three groups O, R and N, the class S differs from the class C in being right instead of wrong on an even chance; for, given that the cards are of the same colour, it is an even chance that they will also be of the same suit, consequently the

difference in score between SO and CO, should be the same as the difference in score between SR and CR, and the same as the difference between SN and CN. Also each C class differs from the corresponding O class in being right instead of wrong on an even chance, and we may, if not as a logical necessity, at least as a rational convention, postulate that each C class shall exceed the corresponding O class in score by as much as it is exceeded by the corresponding S class. If the difference in score between each of these 6 pairs of classes be x units, evidently each S class will exceed the corresponding O class by $2x$ units.

There is, I think, only one rational generalisation of this rule, namely, that if the best class of a group of classes occurs in random samples of that group once in n trials, then its score differs from the lowest score in the group by a quantity proportional to the logarithm of n .

If we accept this rule the determination of the relative scores in the R and N classes becomes purely a problem in probability; the cards will be of the same rank 109 times in 169 random samples, and of these 13 give the same value; the differences between the nine classes will therefore be proportional to the following:

$$\begin{aligned} C &= \log 2 = \cdot 3010300 \\ S &= 2C = \cdot 6020600 \\ R &= \log \frac{169}{109} = \cdot 1904602 \\ N &= \log 13 = 1\cdot 1139434; \end{aligned}$$

giving the following 9 scores:

	-O	-R	-N
O -	0	·1904602	1·1139434
C -	·3010300	·4914902	1·4149734
S -	·6020600	·7925202	1·7160034.

It is a matter of indifference to the principle upon which these values were obtained, and to our actual conclusions from any experiment, if these scores are altered either by adding any constant value to all the scores, or by multiplying them by any factor, or by both

processes. Their application to practical tests will, however, require comparison to be made with the *mean value*, and with the *standard deviation*. To simplify these applications it will probably be most convenient to bring the mean value to zero, so that in any experiment the observed mean score shall measure the actual deviation from the mean to be expected upon purely random conditions. It will also be convenient to make the standard deviation to take some simple value, such as 10, in order to facilitate tests of whether the observed deviation from expectation is really significant of something more than chance. If we do this the following scores are obtained:

	-O	-R	-N
O -	-11.18	-6.11	+18.50
C -	- 3.16	+1.91	+26.53
S -	+ 4.86	+9.94	+34.55.

Using these scores the statistical significance of a series of observations may be tested by calculating the average score, and comparing it to its standard error $10/\sqrt{n}$, where n is the number of observations averaged.

To illustrate this test I am indebted to Dr. V. J. Woolley for the following results of 49 cards drawings under approximately random conditions; the numbers of occurrences in each class were

	-O	-R	-N
O -	10	18	1
C -	1	6	2
S -	3	7	1

The total score on the above system is -31.21, from which the mean score is -0.64; the square root of 49 is 7, so that the standard error is $10/7=1.43$. The mean score is thus, in this case, negative, and distinctly less than the standard error. In all cases where the mean score is less than twice its standard error it is unsafe to argue that any cause other than pure chance is required to produce the observed deviation from expectation.

Some error is necessarily introduced by using a limited number of decimal places. If we use two places, as above,

REVIEWS.

THE "OSCAR WILDE" SCRIPT.

- I. *Psychic Messages from Oscar Wilde*. Edited by HESTER TRAVERS SMITH, with a preface by SIR WILLIAM BARRETT, F.R.S. (Published by T. Werner Laurie Ltd., London, 1924. 8vo. Pp. 179.)
- II. "A New Message from Oscar Wilde," with introduction and discussion by MR. V.'s brother. (*Occult Review* for November, 1923.)
- III. "*The Oscar Wilde Script: A Critique by the brother of Mr. V.*" (*Psychic Science* for January, 1924.)

I SHALL refer to the above-mentioned book and articles in what follows as I., II., and III. The "messages" with which they are concerned came through Mr. V. by automatic writing, or Mrs. Travers Smith by an ouija-board, and all between June 8 and October 8, 1923, except that Mrs. Travers Smith has included in her book two fragments of later date (Dec. 14, 1923, and January 4, 1924). The majority of them have been published from time to time in newspapers and periodicals, and have excited considerable interest. But this scattered publication does not afford a convenient means of studying them, and all serious students of automatism will welcome both Mrs. Travers Smith's book, bringing together a number of the scripts, and the very valuable discussion of Mr. V.'s script by his brother. For there is no doubt that these communications, some twenty-five in number and generally of considerable length, professing to come from Oscar Wilde, suggesting his style throughout and (in the automatic script) his handwriting, and also mentioning a few true incidents in his life of which the automatists had no conscious knowledge—there is no doubt that these communications form an addition to our knowledge of automatism which no one studying the subject can afford to neglect. But when we examine them in detail, and especially when we look for the source of the inspiration—the mind directing the script—and ask *e.g.*

if Oscar Wilde was really concerned, many difficulties present themselves. No hypothesis so far formulated is without them, and the scripts raise problems rather than solve them.

Before describing the development of the communications it may be well to point out that "messages," though a convenient name for them, is perhaps a little misleading. For there is no suggestion that Oscar Wilde had anything he wanted specially to say except when attempting to give some reminiscences which might afford evidence of identity (see especially I. pp. 65-67 and III. 320-323). For the rest the communications seem for the most part attempts to amuse and interest in Oscar Wilde's manner by conversation or by short essays, both full of witty or eynical epigrams, intentional exaggeration, quaint metaphors, and arresting turns of phrase.

As I have said, two automatists were concerned in the production of these scripts, and on the first appearance of "Oscar Wilde" they were working together. Neither, however, had any special interest in Wilde, nor are they aware of anything having occurred to recall his memory, and neither was well read in Wilde's writings, though Mrs. Travers Smith had read more than Mr. V. Mr. V., wishing if possible to develop a power of automatic writing, had joined a class held by Mrs. Travers Smith for the purpose. After two blank sittings his hand wrote a few words purporting to come from a deceased friend, and, so far as they went, appropriate I understand. But they came when Mrs. Travers Smith's hand rested lightly on his, and without partnership of this sort he has practically not succeeded in obtaining automatic writing at all—his pencil merely taps the paper. Nor can any one taken at random serve as a partner. Mr. V. has tried with a good many in vain, but in the scripts before us three ladies besides Mrs. Travers Smith have at different times successfully given the necessary help by placing hand or fingers on his wrist. One question that arises is, in what way does this partner influence the writing? Does she merely facilitate it by increasing Mr. V.'s confidence and thus perhaps breaking down some inhibition, or is it a case of joint automatism? Does the partner's mind subconsciously operate jointly with Mr. V.'s, or at least serve jointly with his as a channel of communication? It must be remembered that Mr. V. writes with his eyes shut, and is not

aware at the moment of what is being written except perhaps a word now and then.¹ In fact he finds it advantageous to concentrate his mind on something unconnected with the work in hand—such as a calculation or mathematical question. The partner on the other hand follows the writing—or at least Mrs. Travers Smith does.²

At the next sitting they had the same deceased friend began, "I want my daughter Lily, my little Lily," when at the word lily another communicator intervened with the words, "No the lily is mine not his" and a *soi disant* Oscar Wilde made his first appearance and took possession of the script. It is not unnatural that "lily" should suggest Oscar Wilde to any one who remembers the aesthetic movement with which he was so much identified in the last quarter of the nineteenth century, and the caricatures of it by *Punch* and Gilbert and Sullivan, etc. But did it merely suggest him to the subliminal consciousness of the automatist, or did the suggestion give Oscar Wilde himself the opportunity of coming in?

The script on that day (June 8th) proceeded in a style and handwriting both of which more or less resembled Oscar Wilde's, and contained sentences if not exactly quoted from, at any rate strongly reminiscent of, sentences in his writings. One of these apparently came from a work *Intentions* which Mr. V. had not read but which Mrs. Travers Smith had. On the other hand there is a sentence almost exactly reproducing one in a letter of Mr. V.'s own—a letter descriptive of scenery—which he had written some eight years previously, and which was recalled to the memory of his correspondent and unearthed in consequence of the publication of this script (see III. p. 314). This must, one supposes, have come from Mr. V.'s mind, though he had no conscious recollection of it.

¹On at least one occasion, however, Oct. 8th, 1923, when Miss MacGregor was his partner, he seems to have read the script during pauses and asked questions (see II. pp. 274-6).

²There is I think a difference, not easy to define, in the style of communications obtained with the aid of three of the partners. The fourth was Mrs. Travers Smith's daughter, who took her mother's place in the middle of a sitting, with the result that the writing became very large without other obvious change. For what is said in the scripts about the relations of the two automatists, see below p. 194.

Ten days later Mr. V., again with Mrs. Travers Smith's assistance, produced a second script which contained, among other things, sarcastic remarks about the S.P.R. in Oscar Wilde's epigrammatic manner. The subject was probably suggested by the presence of our Research Officer, Mr. Dingwall. After this, beginning from that evening,¹ Mrs. Travers Smith obtained frequent "Oscar Wilde" communications by herself—using an ouija-board—an instrument with which she is a very expert and rapid operator.

The general resemblance to Oscar Wilde's style is continued in the communications received by Mrs. Travers Smith alone, but they tend to be less spontaneous and more conversational, the subject being often suggested to begin with by the automatist and changed by questions interposed.

Mrs. Travers Smith's book, which I have numbered I. above, contains most though not all the scripts produced by Mr. V. with her as partner and a large number of the ouija-board communications received by her during the period in question. These are followed by several chapters of analysis and discussion, pleasantly written, and giving a popular account of arguments for and against various theories concerning the intelligence behind the scripts.

In II. we have two long scripts produced by Mr. V. with the hand of Miss Helen MacGregor (of the College of Psychic Science) on his. These are perhaps the most interesting scripts of the series. They are the most fully developed in literary form, and they contain the most vivid and lurid imagery in their account of the communicator's "sort of amphibian" life "in the twilight of existences" with "a foot in either world" but belonging "properly to neither." The existence of the communicator in twilight is, it may be remarked, spoken of in several scripts, including the first, and is possibly reminiscent of Oscar Wilde's account of his prison life. The two scripts in II. are accompanied by very interesting and careful comment and discussion by Mr. V.'s brother.

This comment and discussion, but now covering the whole of Mr. V.'s script, is continued by his brother in III. This article,

¹This date is an inference based on internal evidence. It does not quite agree with the dates given in the book, but this is probably due to a misprint. There are several in the book.

after giving a list (with brief descriptions) of the scripts, is divided into three sections. The first is a careful study of the handwriting, comparing it in detail with that of the living Osear Wilde. (Faesimiles of both are given.) There were definite resemblances in the first script of the series, but their number decidedly increased as time went on, becoming remarkably complete in the latest scripts. This need not have surprised us very much if Mr. V. had been familiar with the handwriting, for to imitate (without copying) a marked handwriting is apparently a not very difficult accomplishment even when the imitation is carried on through many pages.¹ But the puzzle here is that Mr. V. is not aware of having ever seen Osear Wilde's handwriting before the first script was written, and he did not afterwards see any till all the scripts were written except a "Believe me your sincere friend Oscar Wilde" which appeared in the *Occult Review* in August 1923—that is about the middle of Mr. V.'s scriptic activities (III. p. 305). Mrs. Travers Smith was also ignorant of the handwriting when the first script came, but she made investigations, and at the Chelsea Book Club (I think between the first script and the second) saw "a faesimile of Wilde's writing" and "an autograph letter of his" which "happened to be there for sale" (I. p. 81). Whether the knowledge she had thus acquired influenced the scripts at all we cannot tell. Nor of course is it possible to assert positively that—though they do not lie about in every book shop—Mr. V. had never at some unknown date himself accidentally come across an autograph letter of Wilde's (or a reproduction of one) which, while making no permanent impression on his conscious mind, remained imprinted on his subliminal memory. However this may be the handwriting remains a very curious and interesting problem.

The second section of III. (pp. 305-315) deals with Osear Wilde's style, and compares that of the scripts with it. Spaece forbids my going fully into this. I will only say that this section will be found both interesting and instructive. The author is evidently very familiar with Wilde's writings and a

¹ Mr. V.'s brother has shown this as regards Oscar Wilde's handwriting by experiments of his own described in a letter to the *Occult Review* of March 1924. And I have known of similar success in an experiment with another handwriting many years ago.

great admirer of them, and his articles will I think convince the reader that there are many real Wildean traits in the script though little plagiarism after the first day. But, as we should expect whether Oscar Wilde was himself concerned or not, the imitation, though it improves, is not in Mr. V.'s brother's opinion equally sustained throughout each script. Remarkably characteristic of Wilde in parts it is not apparently unmixed Wilde. And as the extent to which style can be successfully imitated is not only a matter about which opinions differ, but one which is essentially indefinite, we cannot I think through style alone obtain conclusive evidence as to origin any more than we can through handwriting. This section ends with a portion of the letter written by Mr. V. himself in 1915 to which I referred above, from which a phrase is plagiarised or at least repeated in the first script, and which shows a way of looking at scenery somewhat Wildean though no doubt quite unconsciously so.

The third section of III. concerns the subject matter of the scripts. It is pointed out that ideas and opinions are expressed in the scripts—in some criticisms of modern authors for instance—which are not Mr. V.'s; and Mrs. Travers Smith says the same for herself (see I. p. 110). Also that both by excess and defect the general knowledge exhibited by the scripts does not appear to coincide with that of Oscar Wilde in his lifetime. We find in the scripts for instance a knowledge of wild flowers, and again of the history of astronomy, both of which might well have come from Mr. V.'s mind but of which there is no appearance in Wilde's writings. On the other hand Oscar Wilde was "a very competent Greek scholar" and "often adorned his prose with quotations from the Classics" while the automatists knew but little of Greek. It accords with this that no Greek quotations appear in the scripts, and that classical allusions, even though "thoroughly characteristic of Wilde," seem to be all contained in *The Iliad* and *The Odyssey*, translations of which Mr. V. had read. On July 13th the script gives a "remarkably accurate reproduction of a passage" from Butcher and Lang's translation of *The Iliad*, read by Mr. V. some years before. The script reads: "On that wondrous shield forged by Hephaestus for Achilles, on which was depicted the whole of the life of man in its joy and sorrow, we are told

was wrought 'the earth and the sea and the unwearying sun, the Pleiads and the Hyads and (her ?) that men call the Bear who watches Orion, and alone hath no part in the baths of Ocean.'” The passage in Butcher and Lang, evidently the source of this, runs: “Then wrought he the earth and the heavens and the sea and the unwearying sun and the moon waxing to the full and the Signs every one wherewith the heavens are crowned, pleiads and hyads and Orion’s might, and the Bear that men call the Wain her that turneth in her place and watcheth Orion, and alone hath no part in the baths of Ocean.” (See III. p. 316 and I. p. 59.)

Various allusions in the scripts are traced by his brother to knowledge stored in Mr. V.’s mind as their probable or possible source, but space will not allow me to dwell on these. We must proceed to incidents in Oscar Wilde’s life to which the scripts refer.

The Oscar Wilde of the scripts, though he complained that “it is so difficult to drag the past from memory’s black cave,” did on July 20th (see I. pp. 65-67) “descend for once into the dull abyss of facts,” and recounted some seven or eight alleged incidents in his life. Mr. V.’s brother has been at considerable pains to verify these, and has succeeded in doing so in the majority of cases. But it is in five or six different books, biographies of Wilde and others, that the evidence is found, and with none of these was Mr. V. consciously acquainted. More curious still, the way the incident is told in some cases sufficiently resembles the account in the book which furnishes the verification to suggest that the book was the actual source of the supposed memory. I will quote the strongest instance of this. The script says:—“Other memories . . . lunching with Margot Tennant, Mrs. Fox, Blunt, and others in London—poor Asquith was like a fish out of water, I did most of the talking—and afterwards I told Margot stories—stayed behind.” In *My Diaries*, by Wilfrid Seawen Blunt, pp. 178-9, Mr. V.’s brother finds the following entry (III. p. 322):—“17th July. A brilliant luncheon with Margot and her husband at 30 Upper Grosvenor Street . . . The other guests were Mrs. Grenfell, Mrs. Daisy White, Ribblesdale, his brother Reggie Lister and Oscar Wilde. All immensely talkative, so that it was almost like a breakfast in France. Asquith alone rather out of it. I sat next him

and was rather sorry for him, though he was probably happy enough. After the rest had gone away Oscar remained telling stories to me and Margot." There are two mistakes in the script—the lunch occurred after Miss Tennant's marriage to Mr. Asquith and no Mrs. Fox appears to have been present. The occurrence of the name Fox may possibly, as Mr. V.'s brother points out, be due to confusion with another reminiscence which had just been spoken of in which that name should have occurred but did not.

Of course if documentary evidence of the reality of an incident cannot be found, the chances of being able to verify it at this distance of time (Wilde died in 1900) would be rather poor. It would be wise therefore in furnishing evidence of identity to choose incidents of which there are printed accounts. But are we to suppose that Wilde himself knew where to look in books published after his death for incidents he could use? Or is it possible that the subliminal consciousness of one of the automatists put them together from their own subliminal store of memories picked up from reviews, or conversation, or books casually glanced at, etc.? Perhaps more light may yet be obtained on this question.

Before concluding I will call attention to two curious contradictions or inconsistencies in the Wilde communications which come to light by comparing those published in I. and in II. and which seem different from the kind of confusion we might expect owing to real communications passing through the minds of different automatists and being contaminated by them. The first inconsistency concerns the sensations experienced by "Oscar Wilde" in entering the brain of living human beings.

In script of July 2nd (see I. pp. 17, 18), written by Mr. V. with Mrs. Travers Smith assisting, "Oscar Wilde" describes how he has gazed through the eyes of others on the sights of the world: "Once on a pleasure steamer on its way to St. Cloud I saw the green waters of the Seine and the lights of Paris, through the vision of a little girl who clung weeping to her mother and wondered why . . . It may surprise you to learn that in this way I have dipped into the works of your modern novelists. That is, I have not drawn the whole brew, but tasted the vintage."

In the evening of the same day through the ouija-board—

Mr. V., of course, not present—"Oscar Wilde" says (I. pp. 20, 21): "I will go on and tell you how I have wandered into the minds of the moderns, as you are pleased to call them. It is a rather entertaining process. I watch for my opportunity, and when the propitious moment comes I leap into their minds and gather rapidly these impressions, which are largely collective."

But in the scripts of September and October given in II., in which Mrs. Travers Smith did not take part, the same process is spoken of in a much less light-hearted way. In these scripts "Oscar Wilde" seems to describe his existence as consisting largely of successive brief occupation of different human organisms, and says: "It is a strange thing, this birth into a new brain. You may analyse it or dissect it as a scientific curiosity, but for us who hang in fearful poise twixt the daylight and the dark it is an experience no less terrible than strange, and one which repetition cannot rob of its terrors. By some central mystery of existence Life's oldest pangs must accompany Life's newest creations" (II. p. 271).

The second inconsistency concerns the share in the work of the two automatists. At the ouija-board on June 18 (see I. p. 13) "Oscar Wilde" was asked: "Who did you communicate through at the sitting for automatic writing this afternoon? Through Mr. V., or through Mrs. Travers Smith?" He replied: "Through you dear lady. He is a tool. You are the light that lets me peep again into the world that seems so dazzling, now that the Divine Justice finds it His pleasure to keep me in dim twilight."

And again through the ouija-board on July 2 (see I. pp. 21, 22) when asked: "How do you manage when Mr. V. and I are together." He replies: "I can control his hand, I can only control your mind. Your hand is guided by your mind."

And again on July 5th, when asked by Mrs. Travers Smith why he selected her as his medium, he gave an answer too long to quote here, but in the course of it said (I. pp. 35, 36): "I tried many times to secure a vial for my ideas . . . But until the day when I seized the pencil from some unnoticeable being, who seemed to make an effort to press through the brain of 'the tool' never before had I found the exact quality I needed . . . I can use the hand of the tool. . . . But his brain

does not serve me. I cannot use it, for ideas would stick there as flies do in a cloyed mass."

What has been said in the course of this review about the use in the scripts of material in Mr. V.'s mind is in itself a sufficient disproof of this account of the matter. But, further, these ouija-board statements are flatly contradicted in a script written by Mr. V. with Mrs. Travers Smith as his partner on July 20th, 1923. In a part of this script not included in Mrs. Travers Smith's book, but published in the *Sunday Express* of August 5th, 1923, the following sentences occur and have been copied for me: "Oscar Wilde . . . It is through your temperament that I am able to give my thoughts to the world. You have that curious combination of the literary and scientific temperament which creates a sort of psychic affinity with myself. It is true that one of the ladies here supplies a certain motive force—just as an electric machine must have its 'starters' or whatever one may call them. But these are merely the accessories and the accessories are not the machine. The machine I use is your human temperament. So please remember that there is only one Oscar Wilde and that you are his prophet."

Nor is this all, for it does not seem possible to reconcile either the ouija-board statements or the script just quoted with the following curious statements made in the script of October 8th when Mr. V. wrote with Miss MacGregor as a partner (II. p. 275). "Oscar Wilde" had been speaking of his experiences when attached to different brains, and Mr. V. asked: "To whose brain are you attached at present? *Answer*: To your own. *Question*: How is it you are able to communicate through Mrs. Travers Smith if, as you say, you are imprisoned in my brain? *Answer*: That is most probably another part of myself, a poor fellow-unfortunate who suffers even as I suffer. *Question*: What do you mean? Surely there are not two Oscar Wildes? *Answer*: Does that cause you to wonder? Yes, it really is so. Quite possibly our name is legion. The soul is no indivisible unity, no solitary shadow seated in its house of sin. It is a thing, highly complex, built up, layer upon layer . . ., etc."

It will be remembered that two of our ex-presidents in their presidential addresses—Mr. Gerald Balfour in 1906 (*Proceedings*,

Vol. XIX.), and Dr. McDougall in 1920 (*Proceedings*, Vol. XXXI.)—suggested that we are in this world polypsychic beings, and Mr. McDougall discussed this hypothesis in some detail. Mr. V., however, has no recollection of having read, or thought about this hypothesis, and the subordinate personalities are not I think conceived by either Mr. Balfour or Mr. McDougall as continuing after death a separate and independent existence in which they can masquerade as the dominant personality while they live in the hope of some day being reunited to it as the Oscar Wilde of the script of October 8th professes to do. "I yearn," he says, "to be united to my soul. Somewhen and somewhere I must surely meet my soul again. That is my little taper of hope in infinite darkness."

But my paper is already too long, and I think I have said enough to justify what I remarked at the beginning, namely that these scripts raise problems rather than solve them. For myself I find it impossible to decide on the evidence before us whether it is most probable, or should we say least improbable, that we have here to do with an extraordinarily full development of subliminal power both as regards imagination, dramatisation and memory, or on the other hand with some distorted element of Oscar Wilde inspiring the scripts. Or, again, is it conceivable that there is some kind of combination of the two. I believe that Mr. V. and his brother are in the same attitude of complete suspense of judgment as myself, while Mrs. Travers Smith, if I understand her rightly, inclines to the spiritualistic hypothesis. But both those who feel able to come to a conclusion and those who do not will agree that we have here an important addition to our knowledge of facts concerning automatism.

ELEANOR MILDRED SIDGWICK.

Problems of Belief. By F. C. S. SCHILLER, D.Sc. "Library of Philosophy and Religion." (Hodder & Stoughton. 1924. Price 3s. 6d. net.)

No one can have followed, even sporadically and unprofessionally, the controversies of the last forty years without perceiving the crisis through which philosophy and religion are passing. The questions raised are "Can any philosophy be true? Is any

religion true?" and the answers seem to be in the negative to both questions. Mr. Schiller, no doubt, would quarrel with this statement and retort—"What do you mean by true?" involving one at once in the whole controversy about "pragmatism." On that ground, so far as it is a question of logic, he has nothing new to advance. But if a reader prefers to consider the way in which men do, in fact, arrive at their conclusions, he will find this book full of interest. Sometimes the human mind will seem merely grotesque or mad, as in the account of Jeremiah, the Indian chief, who conducted three times a day, for a naked congregation, a service which consisted in repeating ten times over the English alphabet and the numbers from one to ten. Sometimes it will appear dishonest, sometimes confused, sometimes pitifully inadequate; with, always, that little lamp of what we call reason floating so desolately on so vast a sea of instincts, desires, hopes, fears, passions, cupidities, necessities. And he will be a bold or an unimaginative man, who is not constrained to say in the end: "There, but for the Grace of God, go I."

The analysis and classification of all this chaos of beliefs is a principal object and achievement of this little book. But it has other purposes. One, perhaps too prominent, is a further attack on those forms of idealism against which Mr. Schiller has so long been tilting. Possibly residence in Oxford has made him exaggerate the importance of these would-be rational philosophies. Perhaps too, in his controversial zeal, he neglects the real qualities of some of the men he attacks. The present reviewer, at any rate, when he thinks of Plato and Spinoza and even Hegel does not feel them to be the merely ridiculous or dishonest figures that they are apt to appear in Mr. Schiller's polemics. That, no doubt, is because philosophers of that kind are also poets; and one does not laugh at or quarrel with Dante because one does not accept his theology. But that by the way, for it is not, in this book, the important point.

The important point is Mr. Schiller's insistence on the real character of the beliefs that may claim to be scientific; how relative, how tentative, how modest they are, in the minds of their best exponents. And since it is here, if anywhere, that the possibility of human progress lies, the service done is a

real one. Science has to steer its way between credulity and scepticism; and how arduous that task is those best know who have tried to perform it.

Perhaps the most important of Mr. Schiller's points is the one he makes about the connection of belief with action. Can you be said, really, to believe anything, unless you are prepared to act upon it? Broadly, and admitting qualifications, Mr. Schiller says "No." And certainly for the truths of morals, action is a real and searching test, the candid application of which must make most of us feel uncomfortable. Moral genius implies the power of living the beliefs that are professed. But it implies also that the beliefs shall be "true." In what sense? Mr. Schiller would like to reply, and does in great part reply, in the sense that they tend to survival. Clearly, however, they do not tend to the survival of the genius who propounds them; or Socrates would not have been hemlocked, nor Jesus crucified. It may be said, however, that they tend to survive in others; and, if not, they are false. But something in us certainly rebels against this doctrine. We remember "*si fractus illabatur orbis, Impavidum ferient ruinae*"; which brings one quickly to the question of optimism and pessimism; for it is optimism that assumes that the true valuations survive, and pessimism that holds the contrary. This question of optimism and pessimism Mr. Schiller discusses; concluding apparently that it is an open question, and that there is a fair choice between the alternatives. If indeed the pessimists showed signs of being extinguished, he seems to think that their doctrine would be false. But in fact they survive. So, by that test, pessimism might be "true." Anyhow Mr. Schiller is himself enough of a pessimist to hold that optimism requires the admixture of a good deal of pessimism before it becomes anything but frivolous. "Survival" does not help to conclusions about truth in this case, nor yet in other dilemmas, such as that of determinism or free will. Mr. Schiller says that, in such cases, we can and should choose, and our choice may affect the course of the world, however faintly. Perhaps. But all this seems to be a hazardous skating over the precarious surface of our dangerous world. There comes a point, in these discussions, at which speech seems inadequate, unless it be the speech of poets or saints.

But it is not always, or commonly, that we are effectively brought up against such issues. And for the issues of common life Mr. Schiller has indicated very fruitfully, both how men do form beliefs, and how they should form them.

One of the questions he touches on is of peculiar interest to the S.P.R., for it is the question of survival after death. Many years ago, as is well known to the older members of the society, Mr. Schiller and Mr. Hodgson sent out a questionnaire enquiring what the recipients believed, hoped, feared, and so on, about that problem. The replies, some of which are quoted here, showed great diversity of opinion and much reluctance to attempt to pursue the question in a scientific way. This reluctance most people must have come across, and it seems to be due partly to disbelief in there being any method of enquiry, partly to a desire to believe, or disbelieve, what one wants. Mr. Schiller discusses the reasons for this attitude and concludes that they are serious obstacles in the path of enquiry. "I have not yet despaired," he concludes, "of the S.P.R., but I realise that its path lies through a terrible complex of conflicting emotions." When to this is added the difficulty that people are almost inevitably either unduly credulous or unduly sceptical, and that it is very hard to know what degree of either quality is really "scientific," the obstacles to the work of the Society seem formidable. But we have no right to pronounce them insuperable, and it would be very "unpragmatic" to do so.

G. LOWES DICKINSON.

Making of Man; a Study in Evolution. By SIR OLIVER LODGE, F.R.S (Pp. ix + 185. Hodder and Stoughton. 6s.)

IN this book Sir Oliver Lodge discusses the Evolution and Destiny of man from a somewhat novel standpoint. Realising to the full the achievements of physical science, and in no way underestimating the rigidity of its demonstrations, he none the less considers that there is ample place for a super-physical order of reality—a reality distinguished from that with which physicists normally deal by permanence and immunity from decay. This order of existence he associates with the Ether as opposed to Matter, though he considers that

interaction between the two may and, indeed, habitually does take place.

An original and interesting view is developed in the second chapter, "The Effort of Evolution," where Sir Oliver compares Evil with "inertia"—a fundamental property of matter—pointing out that although effort implies a resistance, that resistance need not necessarily be active—it is not necessary to postulate an Evil Force deliberately opposing our strivings towards perfection—for the opposition encountered may be merely analogous to that experienced in accelerating a mass to the required state of motion.

In a later chapter the same conception dominates the discussion of "The Best of All Possible Worlds," in which the view is advanced that given the conditions under which the Universe was in fact evolved the World is as perfect as is possible. Another corollary is an approximation to that idea of the nature of the Deity of which the Rev. Studdert Kennedy is perhaps the most notable exponent in ecclesiastical circles. According to this view God is represented not as Omnipotent and Omniscient Being who, for inscrutable reasons, elects to permit the existence of Evil, but rather as a beneficent Power demanding and needing our cooperation in combating it—or as Sir Oliver would say—in overcoming the inherent inertia of the Universe.

The book is, in fact, full of suggestive passages of which the above are but samples taken almost at random and is certain to appeal to many who, while unwilling to violate the established conclusions of physical science, still feel the need for belief in possibilities transcendent thereto.

W. WHATELY SMITH.

PROCEEDINGS

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PART XCII.

DECEMBER, 1924

IN MEMORIAM—GUSTAVE GELEY.

1868-1924.

BY SIR OLIVER LODGE.

THE sudden and untoward calamity which has removed from us an indefatigable and devoted worker in metaphysical science calls for an appreciation of his personality as well as of his work. Dr. Geley is not well known in this country: I doubt if he is well known personally in any country except in France and Poland; for, whether through overwork or through a habit of concentrated thinking, there was an outer husk to break through before one came upon the man himself. The first time I saw him was at Mariemont, Edgbaston, in 1919, when, in company with Mr. Stanley de Brath, he called upon me unexpectedly one afternoon during what was at that time an infrequent, perhaps exceptional, visit to England. I too was very busy at the time; and though he brought a letter of introduction from my friend Charles Richet, calculated to predispose me in his favour, I found him rather reserved and *difficile*. Very likely he got the same impression of me; and I was by no means as hospitable as I would now like to have been. Doubtless the diffi-

culty of language and of nationality is partly responsible ; but something of the same kind was felt at first by others whose control of language was much superior to my own. Later, during several visits to France, I got to know him and his family, and, with the friendly assistance of Madame Geley, felt that I knew him better, and established the beginning of a friendship. Moreover, I met at his house some delightful people, and realised the importance of his life and mission.

He was a philosophic thinker of no small magnitude. His physiological and medical training gave him many advantages, he was well read in the writings of philosophers who had dealt with the relations between the conscious and the unconscious, and he had made a special study of the views of M. Bergson.

His best known book, *De L'Inconscient au Conscient*,¹ aroused the attention of many in France. In it he tried to deal with the philosophy and rationale of psychophysical phenomena in general, and it may be regarded as the most important treatise on that aspect of the subject since F. W. H. Myers's great and more comprehensive work. Moreover, Geley had the advantage of being better acquainted with physiological phenomena (which are evidently of vital importance in supernormal psychology) than even Myers was. And whether his views hold their ground, whether they really form the initial chapter of a new science, or whether they are destined to be replaced as well as supplemented,—questions which cannot be lightly or quickly decided,—they are certainly based on an apprehension of ectoplasmic phenomena, some personally apprehended, some collated from the experience of others, which, as far as I know, is without a parallel. Had he lived there seemed every prospect of our learning a great deal more through his indefatigable work amid the opportunities which friends of the subject had provided, and of which, with rare self-sacrifice (comparable with that of Richard Hodgson), he availed himself to the uttermost.

¹ Published by Alcan in 1919, and now translated into English, *From the Unconscious to the Conscious* (Collins.)

In addition to his own contemplation and study of the subject he patiently devoted a great part of his time to the convincing of others, especially of his medical confrères, or the few who would allow themselves to be subjected to a demonstration, through first-hand experience, of the reality of the supernormal physiological phenomena, which had long attracted the attention and overborne the scepticism of Richet, Schrenck Notzing, Osty, and others.

Gustave Geley—killed by the crash of an aeroplane as he was leaving Warsaw for Paris on the 15th of July 1924—was born in 1868 at Montceau-les-Mines. He studied in the hospitals of Lyons (where incidentally he obtained the first prize from the Faculty of Medicine for his thesis), and then established himself as a medical practitioner at Annecy, being at an early age specially attracted by the study of metapsychic phenomena. His first book was virtually on the origin of species, or what was called in France (and occasionally by Huxley) "*Transformisme*," to express capacity for racial change, *Les Preuves du Transformisme*, with a sub-title *Enseignements de la Doctrine Evolutionniste*, in which he criticised the doctrines both of Darwin and of Lamarck, and argued for an element of guidance or plan as necessary to account for the origin of variations. In his second book, *L'Être Subconscient* (published in 1899), he attempted a synthetic explanation of obscure phenomena in normal biology as well as in abnormal psychology, and broached his doctrine of what he called "dynamo psychism,"—a sort of soul-energy akin to the *élan vitale*, and not very different perhaps from the conceptions, otherwise arrived at by ancient writers, of *entelechy*, and the Logos. This conception of dynamo psychism was fundamental in Geley's scheme, and in his mind took the form of a vitalistic theory which sought to escape from the trammels of materialistic philosophy through what may be treated in a wide sense as the interaction of soul and body, or, more generally, a dynamic power of the mental and spiritual regions competent to control, guide, and rearrange atoms of matter. The fact of such control is familiar in

the bodily processes of digestion and the like, carried on with a definite object or on a definite plan, but quite unconsciously; and of these normal analogies he makes full use.

This book attracted some attention, but not till 1920 did it develop into a more comprehensive treatise, the outcome probably of a philosophy which was no longer satisfied with the duality inseparable from the usual idea of interaction, but was seeking for a unification of the two main aspects of the universe by postulating a passage or development or evolution of one into the other,—the gradual growth of the conscious at the expense of the unconscious,—somewhat perhaps as is suggested by De Morgan's title *From Matter to Spirit*. Geley's thesis, however, is purely biological, it does not deal with the non-living, it treats of the gradual unfolding or emergence of consciousness out of subconscious or unconscious life.

In this work (*De L'Inconscient au Conscient*) Geley traces many analogies in the animal kingdom, where from a formless mass of protoplasm a full-fledged self-determining, and in some sense conscious or ultimately conscious, organism is gradually elaborated. From the formless pulp of the chrysalis, in which all the organs except the nervous system of the larva have completely disappeared, biologists admit that limbs and organs are reconstituted, under the guiding influence of "Life"—a term which here at any rate must be left vague,—operating apparently through the residual trace of nervous mechanism, until a fully developed insect appears, with characteristics quite different from those of the larva, though doubtless to some extent foreshadowed by them in rudimentary and barely recognisable form. From an egg again, which is mainly a mass of unorganised food material, isolated from all external influence save the random molecular agitation which we call heat,—yet which must contain a microscopic germinal vesicle, the nucleus and container or vehicle of the vital principle,—a bird emerges, completely constructed and able to function in every detail, with an intelligence enabling it to stand erect, to move, to see, and intentionally seek its food.

In analogies such as these, and by appeal to the pheno-

mena of reproduction generally, whether in association with a placenta or otherwise, Geley and others are seeking to rationalise the strange phenomena exhibited by ectoplasm—the reality of which is testified to also by Prof. Richet, who gave it its name,—from which there appears to be quickly formed a temporary living organism, having inevitably some of the main characteristics of the pre-existing normal organism whence the ectoplasm must have been derived. In beginning the study of such temporary formations, controlled by intelligence and yet arising out of apparently formless pulp, we seem at first to be in the region of the frankly incredible, certainly of the plainly mysterious. But biological analogies, which are undeniable though equally mysterious, may serve to mitigate our initial incredulity, and enable us more placidly to contemplate, and perhaps accept gradually and circumspectly, the strong and repeated evidence for the existence of such things, which from time to time is forthcoming.

For these apparitions or simulacra, or whatever they may be called, are able to make an appeal to our senses; not only to the sense of sight, but the sense of touch, and the muscular sense also. They are visible, they are sometimes tangible, and they can exert force on matter; they simulate human bodies or limbs. Indeed the analogy of our own bodies may be pressed into the service; for these too are constructed by the vital principle out of materials which, whatever their previous history, are first reduced by the processes of mastication and digestion to a formless pulp or even to their molecular constituents. Yet under the mysterious guidance of Life, each portion of food or assemblage of molecules, when it arrives at its destination, is there converted into the organ or structure appropriate to that particular locality, forming here a skin, there a hair, here again a blood-vessel, or a part of some internal organ; filling up artificially made cavities, such as wounds, to the proper level, and, under healthy conditions, stopping there without going beyond the normal limits; in some of the lower organisms actually replacing lost limbs, or even reconstructing a whole amputated body; so that by section it is possible to get two animals

where only one existed before. In vegetable life the process is still more familiar, as when the mere cutting from a tree reproduces not only the tree, but flowers and fruit and innumerable descendants.

To those who would study the operations of Life, whether as displayed by mediums in the laboratory or by organisms in the field, all these things have to be taken into account. And we shall presently find that one class of phenomena is no more incredible than any other, but that every class must be examined and verified, and the laws of its being gradually ascertained. There is much work to be done, and Geley was on the track. Fortunately a few biologists are waking up to the importance and interest, not only of normal, but what appear now to be supernormal phenomena: and in the course of a few generations we may hope, not for a full understanding—for that must be far distant—but for a clearer comprehension and more active receptivity of all responsibly vouched for occurrences, not only in the chemical and physical and biological, but in the psycho-physical direction as well. For the boundary between the normal and the supernormal shows signs of breaking down. We are beginning to get a glimpse of a continuity running through the whole of animate nature. The interaction of mind and body is attracting more attention than ever before, and in due time Philosophy may succeed in its great and difficult and perennial task of unifying the vital and the material, and realising that the ultimate clue is to be found not in the material and transient but in those permanent realities which appeal to us as Life and Mind.

But to return to Geley the man. In 1918 the Institut Métapsychique Internationale was founded by the munificence of M. Jean Meyer, and was established by him at 89 Avenue Niel, Paris; and Geley was invited to become its first Director.¹ This involved his abandoning his

¹ Prof. Charles Richet accepted its Honorary Presidency, and some responsibility for experiment. The President is Dr. Santoliquido, lately the head of the Italian Sanitary Service. The Committee included Dr. Leclainche, Inspector-General at the Ministry of Agriculture; Dr. Cal-

medical practice and prospects of success in his profession, and entering upon an arduous and unpopular task, which he must have known would subject him to a painful amount of ridicule and hostility. Even in this country such a step would be a sacrifice; although here, through the exemplary and cautious labours of Sidgwick, Myers, Gurney, not to mention such of the founders of the S.P.R. as are still living, the ground has been to some extent prepared; the hostility of the press, of the scientific world, and of theologians, has been, not indeed removed, but to some degree restrained or mitigated. In France, however, it must be conceded that both among clerics and among professional men hostility is rampant, though the eminence of some of the workers is such as to render them more or less immune from personal attacks. Geley was not immune. His standing in normal and medical science was not such as to curb the fiercest kind of criticism. Scientific men in this country, as elsewhere, have been accused of a kind of insanity, over credulity, mal-observation, and the like; but Geley was accused, not so much of those things, or not only of those, but of downright fraud and deceitful co-operation; in other words, he was accused of being an accomplice and a liar.

Older members of the Society for Psychological Research will remember that it was Henry Sidgwick's ambition to make the evidence so strong that this accusation of complicity would be the only one left to opponents. He could well afford to take that line; for his transparent honesty was such that accusations of that kind, in his case, would have been preposterous. But a comparatively unknown and junior man could hardly suffer such accusations without pain; and to rebut such scandal Geley consented to have his premises examined for secret doors and the like, and to being chained up along with other investigators,—himself as well as the medium being subject

mette, Medical Inspector-General (France); Professor Bozzano (Italy); Professor Cunéo; the veteran astronomer Camille Flammarion; Count de Gramont of the French Academy; M. Jules Roche; M. Gabriel De-
 lanne; and Professor J. Teissier. A bi-monthly journal, *Revue Méta-
 psychique*, is published by the Institut.

to control. In the interests of truth, all these things were submitted to; and a whole year of work was devoted for the most part to convincing doctors and publicists and men of science that under the most rigid scrutiny and complete control of everybody present, normally inexplicable phenomena actually occurred. That at least was the aim. Whether it was accomplished or not, is not a matter for assertion. Some were convinced, others were not: each must speak for himself.

It may be argued that the effort to convince people against their will is neither necessary nor wise. It may be argued on the other hand that the asserter of strange and apparently unwelcome truth is bound to make the attempt. Crookes made the attempt, and failed. But many things have happened since the seventies of last century. Geley made the attempt, and partially succeeded; the most stringent evidence that he has been able to produce—evidence from which it is difficult to see any loophole for escape—being the casts of hands and other limbs, but mainly of hands, which he obtained at Warsaw through the unpaid mediumship of Franek Kluski. I use the term “unpaid” because it was so, not because that is a matter of any importance. Precautions are just as necessary in one case as in another; and remuneration is perfectly reasonable if a medium is willing to accept it. Kluski, though a manual worker, was not.

The paraffin gloves from which these casts were made, considered in conjunction with the conditions under which they were produced and the crucial tests made to ensure their genuineness, are a standing demonstration of something inexplicable by normal science; they constitute the kind of demonstrative evidence which Zöllner, long ago, and many others have sought, without success; a permanent material record, which can be examined at leisure, and which,—given ascertainable and recorded conditions,—are, as it were, a standing miracle. These casts repose on the shelves of a cabinet in the Institut Métapsychique, and this is not the place to describe them. They represent or typify the material side of Geley's achievements: his books represent the other side.

The last book he wrote was an account of these and other experiments conducted at the Institut, or in other countries with the Institut as base. Under the title *L'Ectoplasmie et la Clairvoyance*, it narrates experiments establishing his assurance of the genuineness of meta-psychic phenomena. The book has only just appeared; and I hope that a translation will be forthcoming through the industry of Mr. Stanley de Brath, whose friendship with the author, and whose close acquaintance with his work, will certainly make it a labour of love.

On the note of friendship and personal appreciation I propose to conclude this notice. In answer to my enquiries, one of my daughters, who a year ago was kindly invited by the Geley family to pay them a long visit, has sent me the following personal information:—

“Dr. Geley was quiet and difficult to understand, but always felt friendly and kind. He worked much too hard: it seemed as if he was always writing in his study or holding a séance. These sittings seemed to take it out of him, giving him a tired look, and making him rather abrupt in his manner; he was so conscientious about them, and worried if sceptics went away still sceptical. At meals he was never too tired to be thoughtful enough to talk slowly and carefully whenever he spoke to me, so that I should understand. There seemed but little peace for him. His heart was in his work, and he showed great delight when any important person obtained favourable and impressive results. Very often he would sit silent, apparently immersed in thought. Madame Geley of course managed everything in the house: and the family life was peaceful and affectionate.”

As showing the estimation in which Geley was held by his friends and co-workers, I shall here translate or paraphrase from a panegyric in *La Revue Spirite* a few passages which speak for themselves:—

“What we would speak of, we who have known and loved him, is his magnificent intelligence coupled with high scientific conscientiousness; also his exemplary simplicity, his rare faculty of reconciling the

enthusiasm of the investigator with the reflective wisdom of the savant and philosopher; finally, and above all, his charity which extended itself unmeasured to his most sceptical adversaries. . . . Serenely he persevered in his honest task, remaining indifferent to attacks, seeking only one end, to which he was valiantly devoted: namely, the advancement of the status of a subject, of which the principles are already indisputable, and which he sought to raise above the cloud of suspicion in which it had too long been enveloped and hampered by the negation of orthodox materialistic science. He knew that time was on his side and that by slow but sure increments his hypothesis in some form would gradually become certainty. His faith equalled his courage. He saw opening before him a long stretch of life. He preserved that quiet faith which sustains and guides all the great leaders, he pressed forward in spite of obstacles, towards the goal; striving only to bring about, one day, this victory, towards which the advances are better and securer when gradually and cautiously made. He felt assured that the barriers would yield, one by one, to persuasive pressure before the evidence of facts, without any necessity for using violence; although nevertheless violence was employed against him by adversaries who doubtless felt that their ground was beginning to shake under them.

“This achievement was for him the mission of the future—of his future. He is no longer among us. The torch has slipped from his fingers. Those who hereafter carry on the interrupted work will not find in the history of Truths courageously conquered a finer example than that of Gustave Geley.

“For us spiritists, Gustave Geley is not dead. . . . He falls, but his spirit rises. An active worker for truth while on the earth, he will remain the same, in the luminous regions which he has entered, without surprise, and where he has reopened his eyes on a vaster vision. His mission has entered on a more active phase.

“If this conviction can be any alleviation to the grief of his wife and children and many friends, we may bless once more the knowledge which enables us to mingle with our tears the vivifying promise of future reunion.”

To this tribute M. Jean Meyer adds a touching note of remembrance and sympathy, speaking of the admiration and regret which he feels for “this great savant and benefactor of humanity, who lived only for the advancement of his nascent science.” “His work remains: it is founded on a rock, and will be continued in the same spirit. . . . He left the earth in that fragile aeroplane, his eyes fixed on the heavens whence he came, . . . his great soul will continue to inspire the strictly scientific work of the Institut.”

REPORT ON FURTHER EXPERIMENTS IN THOUGHT-
TRANSFERENCE CARRIED OUT BY PROFESSOR
GILBERT MURRAY, LL.D., LITT.D.¹

BY MRS. HENRY SIDGWICK.

PROFESSOR GILBERT MURRAY'S experiments in Thought-transference are perhaps the most important ever brought to the notice of the Society, both on account of their frequently brilliant success and on account of the eminence of the experimenter. It is surprising, I think, that they have not attracted more general attention than, so far as I know, they have. All persons, however, who remember his interesting Presidential address in 1915 (see *Proceedings*, vol. xxix., p. 46), in which he gave an account of the experiments, or have read the report by Mrs. Verrall on the 504 experiments then before her (see the same volume, p. 64), will rejoice to hear that Professor Murray has not ceased experimenting, and will welcome the opportunity of studying the further series, comprising 259 experiments, which he has now submitted to us. I should like to say first that though I will try to make the present report intelligible by itself, all who really wish to study the subject should also read the above-mentioned papers.

As, however, we have probably not all of us got either the Presidential address, or Mrs. Verrall's report fully in our minds at the moment, I will quote Professor Murray's brief account of the method of procedure. He says: (*Proc.* vol. xxix., p. 58.)

The method followed is this: I go out of the room and of course out of earshot. Someone in the room, generally my eldest daughter, thinks of a scene or an incident or anything she likes, and says it aloud. It is written down, and I am called. I come in, usually take my daughter's hand, and then,

¹ This paper was read at a General Meeting of the Society on December 12, 1924.

if I have luck, describe in detail what she has thought of. The least disturbance of our customary method, change of time or place, presence of strangers, controversy, and especially noise, is apt to make things go wrong. I become myself somewhat over-sensitive and irritable, though not, I believe, to a noticeable degree.¹

Mrs. Verrall, who was herself present on one occasion, gives a somewhat fuller account of the method (pp. 64, 65). As to the way he gets his impression, Professor Murray says (same page, above):

When I am getting at the thing which I wish to discover the only effort I make is a sort of effort of attention of a quite general kind. The thing may come through practically any sense-channel, or it may discover a road of its own, a chain of reasoning or of association, which, as far as I remember, never coincides with any similar chain in the mind of anyone present, but is invented, much as a hallucination is invented, for the purpose of the moment.

I have not myself had the advantage of witnessing any of the experiments, but Mr. Gerald Balfour was present one evening, August 26, 1916, and though the success on this occasion was somewhat below the average, it will give a good idea of the experiments if I quote the notes of this sitting in full, and a brief note by Mr. Balfour as to the impression produced on him. The persons present were Lady Mary Murray (Professor Murray's wife), his daughters Mrs. Arnold Toynbee and Miss Agnes Murray, his son Mr. Basil Murray, Mr. Arnold Toynbee, and Mr. Balfour, and Miss Blomfield taking notes. On this, as on all other occasions, all in the room were aware of the subject selected for

¹The "subject" is written down, from the words of the agent, by the note-taker, who keeps it in her hand and writes on the same sheet of paper the remarks made by Professor Murray, etc. As the note-taker faces Professor Murray after he enters the room it is difficult to conceive any unconscious reading of the notes by him as has been suggested by one critic. I may add that it is written so quickly, and often in such faint pencil, that in studying the records for the purposes of this paper I have sometimes found them quite difficult to decipher, and have at times used a magnifying glass with advantage.

transmission; and all were, or may have been, agents in the transmission; but I shall use the word "agent" for the principal agent—the person responsible for the subject and to whom Professor Murray attends. In what follows remarks by the agent and contemporary notes are in round brackets; additions by myself, to make things clear, in square brackets.

1. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of the beginning of a [story by] Dostoievsky where the dog of a poor old man [is] dying in a restaurant."

PROFESSOR MURRAY. "I think it's a thing in a book. I should think a Russian book. A very miserable old man, and I think he's doing something with a dead dog. [A] very unhappy one. I rather think it is in a restaurant and people are moeking, and then they are sorry and want to be kind. I am not sure." ("Nationality?") "No—I don't get their nationality. I have a feeling it is a sort of Gorki thing. I have a feeling that it is something Russian."

([Mrs. Toynee] had not said it but it was all true. Mr. Murray had not read the book. It was a German restaurant, but Mr. Murray had not felt that.)¹

2. *Subject (suggested by Mr. Balfour).* MRS. ARNOLD TOYNBEE (agent): "As he [Mr. Balfour] was coming up the road he was thinking:—The shade of Nelson watching the funeral procession of the Duke of Wellington at St. Paul's Cathedral."

PROFESSOR MURRAY. "This is not your own. No, I'm not getting it. I think it is Mr. Balfour[']s. I [am] only getting you [Mr. Balfour,] walking up the road. No, I'm not getting it."

3. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of a thing in *Burnt Njal* where Njal and his sons are burnt in his house, and [the enemy and] his sons come up and set fire to the house."

¹This "subject," but perhaps a slightly later stage of it, had been successfully tried by the same agent four months earlier, on April 23, 1916. See Appendix, No. 53.

PROFESSOR MURRAY: "I don't think I shall get this. No, can't get it."

4. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of Helena Cornford and Tony grown up, walking beside the river at Cambridge."

PROFESSOR MURRAY. "This is not a book. It's got a sort of Cambridge feel in it. It's the Cornfords somehow.—No—it's a girl walking beside the river, but it isn't Frances [Mrs. Cornford]. Oh! is it baby Cornford grown up? Ought I to know what she is doing?" ("Who she is with"). "No, I don't get who she is with—No—I should only be guessing." (EVERY ONE "go on"). No. I should only think of another baby grown up—Tony [a small grandchild]."

5. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of the Australians leaving Gallipoli and one man going back that wouldn't leave."

(*Tohu-bohu*, [noise of] running about, having baths.)

PROFESSOR MURRAY. "No."

6. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of a scene in [Hardy's] *Tess* [of the *Durbervilles*] where she is opening a letter, rather near the end, sitting by the fire."

([A] maid [moving] about all the time).

PROFESSOR MURRAY. "This is a book—It's a sort of country milkmaid atmosphere very sad. I don't think it is *Marie Claire*. Oh, I think it is *Tess*—No I can't get it—can't quite—I think it is late on when the horrid religious man has come back. It is not one of the early idyllic scenes."

(MRS. TOYNBEE. "[I] was thinking of a scene in *Marie Claire* with the nuns going through, but I rejected it. Both [in] the last one and this one, but I rejected it.")

7. *Subject.* MISS AGNES MURRAY (agent): "Terence [a nephew of Professor Murray's] and Napoleon standing on a hill above the Marne and watching the artillery down below."

PROFESSOR MURRAY. "This is a war scene—I don't get the persons clearly, but I think on the hill looking down on

the artillery. It is not Saumarez. They may be Oxford people. I get the bursting of shells. I should think it was Terence and somebody else—I don't think I know the other person. I don't think I know him. No I can't get him."

8. *Subject (suggested by Mr. Balfour).* MRS. ARNOLD TOYNBEE (agent): "Sir Galahad taking his seat on the Siege Perilous, saying 'If I lose myself I find myself.'"

PROFESSOR MURRAY. "I am getting this very weakly. This is Mr. Balfour again. I feel as if it was somebody uttering an apothegm. Somebody saying I will do something or other. No I can't get it."

9. *Subject.* MISS AGNES MURRAY (agent): "I think [of] *Diana of the Crossways*. Diana walking up the road in the rain, and crouching down in front of the empty grate in the house."

PROFESSOR MURRAY. "This is a book. Oh it's Meredith. It's Diana walking. I don't remember the scene properly. Diana walking in the rain. I feel as if she was revisiting her house, but I can't remember when it happens" ("A little more?") "No—can't oblige."

10. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I'll think of Rupert [Brooke] meeting Natacha in *War and Peace*. Running in a yellow dress; running through a wood."

PROFESSOR MURRAY. "Well I thought when I came into the room it was about Rupert. Yes it's fantastic. He's meeting somebody out of a book. He's meeting Natacha in *War and Peace*. I don't know what he is saying—perhaps 'Will you run away with me'" ("Can you get the scene?") "I should say it was in a wood." ("Colour of the dress?") No. I can't get it."

11. *Subject.* MISS AGNES MURRAY (agent): "I think of Rosalind and Arnold with Wiggs [Mr. and Mrs. Arnold Toynbee with the dog] driving in a dogcart at the front along the road that Dad [Professor Murray] went with shells dropping."

PROFESSOR MURRAY. "This is the road where they fired shrapnel at me. There's a half-burned village, and I

think it is Rosalind driving a gig along. I can't remember the name [of the place]" ("Who is with her?") "I don't know who is in the dogcart with her—somebody else I don't know!!"

12. *Subject.* MR. BALFOUR (agent): "The last line of the *Æneid*."

PROFESSOR MURRAY. "No. I am afraid I can't."

13. *Subject.* LADY MARY MURRAY (agent): "Philip B—— [going] into his dug-out for the first time, and being told to look out for the flowers in the morning by the gardener."

(Too much noise.)

14. *Subject.* LADY MARY MURRAY (agent): "He and I at the lunch party at the C's up the hill [at Christiania], and all the little green sprouts and the tricolors."

PROFESSOR MURRAY. "I think I shall get this. I feel as if it was you and I going out to a party somewhere—going out to lunch, and there are flags and things—I ought to get it. Oh it must be at the C's."

(Mr. Murray had got the flags wrong.)

As regards this sitting, Mr. Balfour authorizes me to state that "he came away from it with a conviction that *hyperæsthesia*, to whatever length it might be stretched, could not be made to cover every case. In one instance (No. 1) Professor Murray, in describing a scene out of a book which he had not read, added certain striking details that were present to the mind of the principal agent, but of which no mention whatever had been made when the choice of a subject was being decided." See, however, No. 53, p. 250.

The experiments Mrs. Verrall reported on went down to the end of 1915. Among those now before us I find that 23 are dated in 1913 and 1915 respectively, and were, I presume, accidentally omitted when the notes of sittings, which are all written on loose sheets of paper, were sent to Mrs. Verrall. Subtracting these from the whole 259 there remain 236 between April 1916 and April 1924, and these were made on twenty-four separate occa-

sions, the number on each varying from 3 to 26,¹ with an average of about 10. It will be seen therefore that the attempts were infrequent. They were also very irregularly distributed. Sometimes sets would be carried out at short intervals, and even on two consecutive evenings, while at other times there were intervals of months, and twice over of more than a year. The company present, exclusive of Professor Murray himself, varied in number on different evenings from 3 to 10, but the most common number was 6. It was always in the family circle that the work was done, and though others were generally present there were never, I think, fewer than two of Professor Murray's immediate family—his wife or children—in the party.² In the 236 experiments before us, however, persons outside the immediate family have been present and taking active part more frequently, I think, than was the case in the earlier series examined by Mrs. Verrall. Besides 6 members of the immediate family, who among them acted as principal agents 167 times, 30 different people have acted as principal agents, 19 of them only once. And the success obtained by these principal agents outside the immediate family was quite considerable enough by itself, I think, to convince most people, though it was proportionately less than that of the immediate family. Besides the 36 persons who have taken the part of principal agents about 20 others were present at different times. Indeed only on two occasions, November 22, 1923, and January 27, 1924, were no outsiders present. I imagine that none of these outsiders, whether they acted as

¹ It is perhaps worth noting that on the two occasions on which 26 experiments were tried at a sitting (September 10, 1916, and July 14, 1918), there was an unusual proportion in which Professor Murray had no impression at all, especially early in the sitting, and this was probably the reason why so many were tried. For an experiment in which there is no impression is apt, I imagine, to take less time than one in which an impression is gradually developed, or is even immediately felt and discussed by the company afterwards.

² Except, I think, during 4 experiments on September 14, 1916, when Mrs. Toyne went out of the room while Mr. Mellor acted as principal agent.

principal agents or not, were, strictly speaking, strangers, and some of them were intimate friends or relations. Nevertheless, that so many should have shared in the experiments shows, I think, a widening of the conditions described by Professor Murray in 1915 (see above, p. 213). And the same is true of another restriction named by Professor Murray, namely, change of place, for the 24 sets of experiments before us were carried out in at least four different houses. Noise appears to interfere with success as much as ever; but this is to be expected, since most people with psychic gifts seem to find noise a serious and often a complete obstacle to the exercise of them.¹ It should be added, to make the above statement complete, that in one only of the 24 sets of experiments (January 2, 1918) was no success whatever obtained. There were 6 experiments—all failures—Mrs. Arnold Toynbee being agent in 5 and Lady Mary Murray in 1. In 4 of these cases no impression at all was received—an interruption in one and noise in another perhaps accounting for two. In the other 2 of the 6 cases wrong impressions unconvincing to the percipient were experienced, but both perhaps show signs of some influence from the thought of the agent. On the other hand there were two occasions when no failures occurred, the number of experiments being 4 and 3 respectively. On the first of these occasions (December 3, 1919) I have reckoned 2 experiments as successes and 2 as partial successes. An outsider present took the part of principal agent in one of the partial successes. The other occasion was on November 22, 1923, when only members of the family were present and only 3 experiments were tried, of which I reckon two as successes and one as a partial success.

It is time I explain this classification and state how many of the 236 experiments since the end of 1915 I reckon as successes, etc., but first I must remark that 236 is of course too small a number to base reliable statistical conclusions upon, and secondly that the classi-

¹ Séances for physical phenomena at which noise—singing, talking, etc.—is insisted on, form an exception to this, if psychic gifts are really exercised at them.

fication is essentially indefinite; there is no clear line between one class and another. Endeavouring, however, to follow the divisions and standards adopted by Mrs. Verrall in her report I get roughly 85 (*i.e.* 36 per cent.) successes, 55 (or 23.3 per cent.) partial successes, and 96 (or 40.7 per cent.) failures. Mrs. Verrall gives her percentages as 33.1, 27.9, 39.0 respectively, so that, if I have succeeded in dividing the classes as she would have done, both the successes and the failures in the present set are proportionally greater than in the previous set, at the expense of course of the partial successes. But I have doubts about the standard, and particularly in the failures. Mrs. Verrall says there is little or no doubt about failures, and this is true of 47 cases in which no impression was received,¹ and also of some 33 in which the only impressions were wrong. But there remain about 16 in which the impression was on right lines so far as it went, but in which it hardly seems to me to have gone far enough to be reckoned as even a partial success. How would Mrs. Verrall have reckoned these? Nos. 2 and 8 on August 26, 1916, quoted above are instances, and the following is an even clearer one:—

September 10, 1916.

15. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of the girl in [Barrie's] *Quality Street* bringing down the wedding dress."

PROFESSOR MURRAY. "No. I think it's a girl in a book, but can't get it."

Or again on *August 17, 1918.*

16. *Subject.* MR. GEOFFREY CURTIS (agent): "I think of Charles Lamb sitting by the fire with his maniac sister Mary and dreaming of the wife he would have married."

PROFESSOR MURRAY: "I don't think I get it. I have a faint impression of a man writing a book or an essay—No—I've got a little bit an old fashioned literary atmosphere."

¹ I have included in these 10 cases where the note-taker has merely left a blank for the percipient's statement, as I feel sure these were cases of "no impression."

Or again, to give more complicated examples—complicated because a wrong idea intrudes itself and is rejected:—

February 24, 1918.

17. *Subject.* MR. PATON (agent): “David O’Rane in *Sonia* beginning to teach in his [old] school, and he is blind, and the boys don’t know it.”

PROFESSOR MURRAY. “I get a faint impression of a school. It’s not a Baltic baron who can’t read.”

[It seems likely, as regards the rejected idea, that the name of Mr. Stephen M’Kenna’s novel, *Sonia*, though of course it is not a Russian novel nor about Russian people, was responsible for the idea of Baltic barons, and the blindness for that of inability to read.]

July 14, 1918.

18. *Subject.* LADY AUREA HOWARD (agent): [Her only attempt.] “I think of the American who was taken to the church where the light had never been blown out for hundreds of years, and he blew it out.”

PROFESSOR MURRAY. “Is this a sort of Gothic medieval thing?” (“Yes.”) “I don’t think I know the book or the story—It’s not the people killing Beckett in a church—it’s something like that.”

[Here the percipient gets the church, and the occurrence of something tragic in it.]

If these 16 cases are to be counted not as failures, but as partial successes, the percentages become 36·0, 30·1, and 33·9 for successes, partial successes and failures respectively.

A similar difficulty occurs in drawing the line between successes and partial successes. When the subject chosen consists of several elements it may easily happen that the agent fails to grasp one or more of these and yet gets the essential ones. Mrs. Verrall decided to count as successes for statistical purposes, “not only all cases where the complete incident is described, but also cases where what may be called the essential elements are given by the percipient,” though, as she admits, “opinions will

differ as to what is essential." She gives examples to illustrate her mode of deciding, and I have endeavoured to judge what are to be taken as successes in the same way, though of course without complete confidence that she would have agreed with me. Examples of successes and partial successes can be seen in the sitting of August 26, 1916, quoted above. Thus No. 1 (p. 214) is clearly a success. The scene from a Russian book is fully described by Professor Murray so far as the agent, Mrs. Toynbee, had spoken of it, and (what is specially interesting), though he had not read the book he gives further details that were in her mind but had not been mentioned by her. He fails, however, to perceive a final point she was thinking of and would have liked him to name. No. 4 again—a fantastic subject—is completely, though only gradually, developed by Professor Murray. It is interesting to note that the last item, drawn out by a question by the agent, appeared to the percipient to be merely a guess. No. 14 in which Professor Murray recalls the real incident thought of by the agent was also apparently a complete success.

On the other hand, Nos. 9 and 10 though, I think, undeniably successes by Mrs. Verrall's standard, each fail in one particular. In 9 Professor Murray did not get Diana crouching by the empty grate, and in 10 he did not get the colour of Natacha's dress. For partial successes we have a clear case, I think, in No. 6. The percipient recognises that the subject concerns Tess in Hardy's *Tess of the Durbervilles*, but fails to get the scene. Nos. 7 and 11 are perhaps more difficult to decide about, as they are so nearly complete successes. But I have called them only partial successes because in each case the percipient fails to recognise a person important in the supposed incident. Failure, by the percipient, to get some name or other item—important or unimportant—forming part of the subject as described by the agent happens rather often. An attempt is sometimes made, either spontaneously by the percipient or in reply to a question by the agent, to supply these missing items. The attempt sometimes succeeds, as in

No. 4 above (p. 215), and No. 23 below (p. 224), and see, *e.g.* Appendix Nos. 49, 68, 82, 88, 110, 134, but sometimes leads to a wrong guess, see, *e.g.* Appendix Nos. 109, 111, 115, 120, 122.

It will have been realised both from Mrs. Verrall's report and from the cases already reported in the present paper that the subjects selected by the agents are very various. We may divide them roughly into five classes:— (A) Scenes or incidents, either real or imaginary but possible, in which the experimenters themselves or their friends and acquaintances are concerned. Nos. 11, 13 and 14 above are instances, and see also Appendix, *e.g.* Nos. 46, 96, 108, 127, etc.; (B) Scenes or incidents from books, plays, or history (real or imaginary, but not fantastic) or newspapers. Nos. 1, 3, 5, 6, 8, 9, 15, 16, 17, 18 above are instances, and see also Appendix, *e.g.* Nos. 58, 73, 92, 137, etc.; (C) Fantastic scenes or incidents, including dreams. Nos. 2, 4, 7, 10 above are instances, and see also Appendix, *e.g.* Nos. 109, 110, 120, 128, etc.; (D) Particular quotations asked for, No. 12 above is an unsuccessful instance. The following are successful ones:—

December 27 (1919 ?),

19. *Subject.* MISS AGNES MURRAY (agent): "I think of the beginning of Shelley's *Ode to the West Wind*."

PROFESSOR MURRAY. "I think this is a poem—O Wild West Wind."

[These are the first words of the poem.]

December 3, 1919.

20. *Subject.* MISS AGNES MURRAY (agent): "I'll think of *The Shropshire Lad* :—

When smoke stood up from Ludlow,
And mist blew off from Teme,
And blythe afield to ploughing
Against the morning beam,
I strode beside my team."

PROFESSOR MURRAY. "This is a poem—oh it's the thing in

The Shropshire Lad, where De dum de dum from Ludlow and dum de dum from Teme—smoke—mist.”

See for other instances No. 30 below (p. 234) and Appendix Nos. 65, 81, and perhaps 80. In the fifth class (E) are inanimate scenes, or rather scenes in which human beings do not appear, *e.g.* No. 21, “The sun sparkling on the water yesterday on the lake,” on *July* 14, 1918, and No. 22, “The four destroyers we saw this evening,” on September 10, 1916. There are only five in this class altogether, and only one was successful, and it is perhaps doubtful whether that one should be placed in the class as it certainly strongly suggests human activity. It is as follows :—

December 30, 1919.

23. *Subject.* MR. BASIL MURRAY (agent): “I think of Shamrock IV. coming into Southampton water in a storm, after winning Atlantic Cup.”

PROFESSOR MURRAY. “I should say it was a yaeht running before a strong wind—running into harbour—a thing I have never had before—yaeht running into harbour in a storm. I should say a West country place like Southampton or Plymouth” (“Any particular yaeht?”) “One of the Shamrocks.”

The 236 experiments are divided among the classes roughly as follows :

(A)	81 instances	with 28	(or 34·5 per cent.)	successes
(B)	102	„	with 36	(or 35·3 per cent.)
(C)	30	„	with 14	(or 46·7 per cent.)
(D)	18	„	with 6	(or 33·3 per cent.)
(E)	5	„	with 1	(or 20 per cent.)
Total,	236 instances	with 85	(or 36 per cent.)	successes

It appears, therefore, that while classes (A), (B), (D), are successful a little below the average, (C), the fantastic class, is, so far as the small numbers enable us to judge, markedly above the average. Mrs. Verrall observed the same thing. She says (*Proc.*, vol. xxix., p. 84), “There is no doubt that the fantastic and the unusual specially lends itself to the successful guessing of Professor Murray.”

Probably such subjects tend to be more amusing to the agent, and thus perhaps to be more vividly in his mind, or to be there with what one may call a more explosive quality. Or perhaps their oddness more easily arrests the attention of the percipient.

Inversely, it may be owing to their not being vividly interesting to the principal agent that subjects suggested by some other person present seem apt to fail. There are only three in the present series, two of which are quoted above (Nos. 2 and 8), and all of which failed;¹ but there were 40 instances, of which the undue proportion of 20 failed, among the experiments reported on by Mrs. Verrall (see *Proc.*, vol. xxix., p. 72).

This brings us to the question of the function of the principal agent. As already said, all the persons present know the subject selected, and all try, or are supposed to try, to transfer it telepathically to the percipient as soon as he enters the room. We may therefore ask (*a*) whether the principal agent takes any larger share than the others in the transference, and (*b*) if so, why? As regards (*a*), it is clear, I think, that the principal agent has a predominant share in transferring the impression, because with the same group of agents in the room the success with certain principal agents is on the whole greater than with others. Mrs. Arnold Toynbec, *e.g.*, is more effective as principal agent than when she is merely one of the company. As regards (*b*), the principal agent differs as a rule from the rest of the company in two respects. He or she selects the subject, and therefore is likely to grasp it more clearly and vividly than the others present do. And, what is perhaps more important, the percipient attends especially to the principal agent, which probably tends to bring their minds into special rapport.

In the earlier experiments it was the practice to try to intensify this rapport by the percipient holding the hand

¹ In two other experiments (September 14, 1916, and July 14, 1918 respectively) Professor Murray imagined wrongly that the subject had been suggested to the principal agent by someone else. One of these was a failure and the other a success. (See Appendix No. 93.)

of the principal agent. I am not sure whether this is still the usual plan. The drawback to it is, of course, that in certain cases of gradual development of an impression, indications might be given by variation in hand pressure. Approval or disapproval might also be indicated by facial expression and movements of the agents generally, but more delicate shades might be given by the hand of the principal agent. There are some cases where, as an impression develops gradually item by item, the withdrawal by the percipient of some item already mentioned which sometimes occurs (see, *e.g.* Appendix Nos. 90, 102A, 105, 112, 129) may be influenced by subconscious perception of the agent's disapproval; but I think there are very few, if any, of the experiments in which guidance of the kind required to draw out correct items could have been obtained in this way. However this may be, there have been enough successful experiments in which the hand was not held to show that holding it was not a necessary condition.¹

It seems possible that agents sometimes interfere with each other. This may have happened in the sittings on September 10 and 14, 1916, the only occasions on which Mr. W. Mellor was present. Numerous experiments—twenty-

¹We have in the present series 7 experiments in which it is explicitly stated that there was no contact, and 2 in which Professor Murray described his impression as he entered the room, and therefore cannot have been holding the agent's hand. Among these 9 there were 1 failure, 2 partial successes, Appendix No. 55 being one of them, and 6 successes, for which see Appendix Nos. 52, 54, 71, 72, 80 and No. 40 below (p. 243). After starting an experiment with no contact the hand was taken in the middle four times. In one of these (see Appendix No. 53), with good results, and in two cases, of which one, No. 66, is given in the Appendix, with apparently no result. In one (Appendix No. 56), contact is followed by a correct but entirely irrelevant and promptly rejected impression about a book the agent had been reading. I am disposed to think that on some other occasions, even when nothing is said about it, there was no contact, because contact is mentioned in one experiment of a set, as *e.g.* on September 14, 1916, Appendix No. 66. It is perhaps worth mentioning that on December 27 (1919?), when Professor M'Dougall was acting unsuccessfully as principal agent, Miss Agnes Murray took the hand in the middle of the experiment to see if this would improve matters, but it did not.

six and nineteen respectively—were tried on these two occasions, and Mr. Mellor was principal agent in eighteen of them, with a degree of success ranking with that of the immediate family. But they were peculiar sittings, and included a quite unusual proportion of failures. Mrs. Arnold Toynbee started as principal agent on September 10, and began with four failures. Lady Mary Murray followed with a failure, and then Mr. Mellor tried, two partial successes and a failure resulting. Then Miss Heath tried once and failed, and so did Mrs. Arnold Toynbee. She had nothing but failures on this day, though usually a very successful agent. Mr. Mellor followed with two partial successes, Mrs. Toynbee with a failure, Mr. Mellor again with a very partial success and three failures, and then Mr. Basil Murray, Miss Heath, and Lady Mary Murray with one failure each. There had thus been twenty experiments with nothing that I have counted as a success. But at this point success began. Mr. Arnold Toynbee taking the part of principal agent obtained a complete success (No. 33, p. 236 below), and an interesting partial success (Appendix No. 61), and Mr. Mellor followed with two successes (Appendix Nos. 62 and 63), and Mr. Basil Murray with one, Appendix No. 64. The sitting ended with a failure. A contemporary note at the end of the sitting says:—

“A curious evening. Mr. Murray had a feeling the whole time that everyone was doing it very badly. Mr. Murray jumped at everything with Mr. Mellor, but nothing would last long. Everything was very short. After a little time with Mr. Mellor it went off, and after trying with others—Rosalind [Mrs. Toynbee], Lady Mary, Miss Heath and Basil, Mr. Mellor was better again. Again Mr. Mellor fell off, and Arnold [Mr. Toynbee] was a success, and then returning to Mr. Mellor, he was better than before. Mr. Murray, the whole time, had to do it in Mr. Mellor’s way, which rather aggravated [Note breaks off here].”

At the next sitting on September 14, Mr. Mellor being again present, there was more success, though still much failure. The experimenters must, I think, have had the idea that there was perhaps in some unknown way inter-

ference between agents, for the plan was adopted of Mr. Mellor leaving the room during four of the experiments while Mrs. Toynbee was acting as principal agent, and Mrs. Toynbee leaving it during four experiments while Mr. Mellor was principal agent; and it certainly happened that of the six successes obtained that evening, five—two with Mrs. Toynbee and three with Mr. Mellor—occurred while the other was out of the room. The matter is not commented on in the contemporary notes.¹

With so large a demand for suitable subjects to transfer as these experiments involved, one would expect occasionally to meet with repetition. And there is a little. In the present series there are two instances in which the same subject from a book is selected by the same agent after an interval of a few months, and is successful both times. (See Appendix Nos. 52 and 53.) And there are further two subjects from books—the Bird-droves chorus from *Hippolytus* and Shelley rescued from drowning—which appear once in this series and also once in that reported on by Mrs. Verrall (see Appendix Nos. 45 and 99); but while the first of these produced a wrong impression on the earlier occasion and was successful on the

¹ Apropos of above paragraph Professor Murray writes to me:—"In the two cases of X and Y, who are both rather psychic, the experiments went badly wrong until we made them themselves the agents. *I.e.* I could not get messages from Rosalind while X or Y was there, but when she went away and one of them was agent, or if they went away and left her as agent, all went well. This happened only with these two persons, and once or twice with my daughter Agnes. She rather disturbed the communications until she became agent. But later on, when she had her full fling as agent, she did not disturb Rosalind's communications any more. (I never saw enough of X or Y to be able, so to speak, to satiate their desire to act as agent.) I am inclined therefore to think that the disturbing element is a sort of restless desire on the part of some one present to act as agent. If so, it is not significant, since any irritation or anger in the room acts like a loud noise and incapacitates me at once. I do not think I ever found scepticism any particular obstacle. Putting this more briefly:—I mean, it is generally supposed in our circle that the presence of another 'medium' is disturbing; I suggest that perhaps it is not the 'mediumistic' quality, but a certain irritated feeling, 'I could do that: I want to do that myself,' which causes the disturbance."

second, the other, very successful earlier, produced no impression at all when given again. On none of the occasions do either agent or percipient appear to have been conscious of the repetition.

So far the experiments have been discussed either from the point of view of success and failure, or from that of the agent's share in them. I now turn to the interesting and important question of what light is thrown by the records on the way the ideas the agent desires to transfer reach the mind of the percipient. In connection with this, Professor Murray's own discussion of the subject in 1915 (*Proceedings*, vol. xxix., pp. 57-63) should be read. He tells us in his Presidential address, among other things, that he thinks that when experimenting he probably gets into a state of slight hyperæsthesia and is particularly sensitive to every kind of impression—noises, for instance, becoming intolerable. He also says he inclines to the conclusion that

“the basis of this so-called telepathy is unconscious sense-perception, the sensory disturbance itself being too slight for consciousness, but the state of mind resulting from it being fully perceptible. . . . But,” he adds, “we must be prepared for the possibility that this sense-perception is not confined to the canonical five channels of Sight, Sound, Smell, Taste, Touch. . . . Again, some of the information which seems to come most clearly and rapidly, as when I feel a certain emotional atmosphere, or the country to which an incident belongs, or the fact that it is in a book and not in real life, does not seem to be the sort that could well be conveyed by mere sense-impressions of the canonical sort. Thus I should be inclined provisionally to admit the likelihood that we may become directly sensitive to another person's state of mind.”

In this last sentence Professor Murray of course admits the probability that telepathy has operated, but without committing himself to telepathy being a purely psychical process. He leaves the way open, as I understand him, to the theory which used to be described as “brain waves,” but of which little has been heard of late. His

suggestion of hyperæsthesia, however, makes it necessary to scrutinise the records carefully to see what sign of it there is. I will begin with the less important senses. Touch, which can, I think, only have operated through holding of hands, and then only in expressing approval or disapproval by the agent of what has already been said by the percipient, has been discussed above (p. 226). Taste and smell do not so far as I can see come into the question of hyperæsthesia at all, because there were no real tastes and smells to be intensified by it. It is true that the percipient's impression began with a sensation of smell on two occasions, but this had nothing to do with any physically caused sensation. I shall revert to the matter later.

The possibility of hyperæsthesia of sight—unless on the extreme assumption that we can potentially see anything anywhere at any distance and through any obstacle, and that therefore the percipient can read the note-taker's record of the "subject"—is in much the same position as that of touch. The only scope for it seems to be in the seeing of slight signs of approval or disapproval as the percipient proceeds with his description. He cannot, however much his sensibility is heightened, be supposed to see concrete ideas or names in the faces of the agents. Sight in the sense of mental seeing—the share of mental pictures in the percipient's impressions—like imaginary smells and sounds we must return to later.

The only sense through which we can seriously imagine hyperæsthesia helping Professor Murray in his "guesses" is, I think, it will be agreed, the sense of hearing. In the experiments before us the subject selected for transmission is always spoken before it is written down, and I learn from Professor Murray that at the beginning of the experiments tests were made to see if any fragments of ordinary conversation could be heard at the place where he usually stood, and that the experimenters were satisfied that they could not. His own ordinary hearing, he tells me, is normal, but certainly not unusually acute. It may, however, be that though out of earshot so far as consciousness or normal hearing is concerned, he yet subconsciously hears the agent's description. There are some

arguments, both for and against this possibility, to be found in the experiments under consideration, as there were in those reported on by Mrs. Verrall.

Taking first things which suggest hearing. There were first and foremost two experiments stopped because Professor Murray heard, or thought he had heard, a name. In the first (No. 24) (August 17, 1918) the subject was "Pendennis at Charterhouse," and Professor Murray heard the word 'Pendennis.' In the second (No. 25) (December 20, 1919) the subject was "Denis motoring from here to London by, etc.," and Professor Murray heard 'Denis.' In both cases the agent was Mr. Basil Murray. Professor Murray writes to me as regards these occasions, "I am not clear whether accidentally from excitement somebody had spoken unusually loud, or whether my hearing was super-normal. It seemed to me like the first, but this is not evidence."

In a very curious case, in which a name was neither consciously heard or apprehended, it yet seems as if it must have 'got through,' and if so, was the only part of the "subject" that did. It was as follows:

July 14, 1918.

26. *Subject.* MR. PENMORLAN MAIN (agent): "Sir Francis Drake drinking the health of Doughty before he was led out to be hanged."

PROFESSOR MURRAY. "Is this a—?—No, I've a faint feeling of Arabia or desert."

Now Mr. C. M. Doughty, the traveller, wrote a well-known book called *Travels in Arabia Deserta*, and it seems almost certain that the "faint feeling of Arabia or desert" arose from association of ideas with the name Doughty—the association with Thomas Doughty, the mutineer tried and executed by Drake, being at the moment absent. If this is correct, how did the item Doughty reach the percipient with the exclusion of other items in the "subject" proposed? ¹ It is obviously just what might have

¹ A case of only a single word of the "subject" being apprehended is given in Mrs. Verrall's record, p. 74. Also one where the sound of a word was grasped and at first misinterpreted.

happened in case of imperfect hearing. But this kind of imperfect apprehension, followed by wrong associations of ideas, might also happen telepathically.¹ In the following case, though the chain of association is more doubtful than in the Doughty case, I think the one I shall suggest is probably the real one; and if so, sound is not a link in it.

September 10, 1916.

27. *Subject.* MR. MELLOR (agent): "I'm thinking of the operating room in the nursing home in which I was operated."

PROFESSOR MURRAY. "I got an impression of a theatre.

No. I can't get it. I'm now guessing—Covent Garden and *Œdipus*."

I think that here the idea of an operating room reached the percipient's consciousness in the form of theatre—operating theatre of a hospital—but was not understood, being in fact taken to be a place where plays are acted. But the mistake, in whatever way it arose, was not auditory.

It should perhaps be considered on the side of auditory hyperæsthesia that on the two occasions when the "subject" had been suggested to the principal agent by Mr. Gerald Balfour (see Nos. 2 and 8 above), the fact that it was Mr. Balfour's suggestion was realised by the percipient, as might have been the case if he had heard his voice. But again this might equally be due to telepathy.

The apprehension of the rhythm of a verse or a sentence before that of its meaning may be suggestive of an auditory channel of transmission, and there are one or two instances of this. No. 20 above (p. 223), where a stanza from *The Shropshire Lad* is recognised but not completely quoted by the percipient, is perhaps a case. And the following is one where the impression of rhythm and of the sound of counting combine to suggest possible hearing.

¹ We must not altogether ignore the possibility that some one of the agents may have had in mind, perhaps subconsciously, the association of the name Doughty with *Arabia Deserta* and conveyed this telepathically to the percipient, and a similar possibility must be kept in mind in some other cases.

April 6, 1924.

28. *Subject.* MR. BASIL MURRAY (agent):

“He stood and heard the steeple
Sprinkle the quarters on the morning town—
One, two, three, four, on market place and people—
It tossed them down.”

PROFESSOR MURRAY. “Oh this is a bit of a poem.” [He] marks the metre [with his hand]. Metre wrong; but [he] got “One, two, three, four.”

The search for instances of possible sensory transmission leads to dwelling on experiments that failed, and it will be refreshing to turn to one that succeeded, but in which the rhythm of part of the central sentence was apprehended before the words and sense were gradually grasped.

July 14, 1918.

29. *Subject.* MRS. ARNOLD TOYNBEE (agent): “This is the girl in the *Cherry Orchard*, by Tchekoff, saying—When I was in Paris I went up in a balloon.”

PROFESSOR MURRAY. “I think this is a Russian story—a particular sentence, words ‘De dum dum de dum dum—I went up in a balloon.’ ‘When I was the something, I went up in a balloon’—‘when I was in Paris, I went up in a balloon.’”

[I do not think the sentence occurs in that exact form in the book.]

I have not noticed any instances such as occurred in the series reported on by Mrs. Verrall, where a name or a word was mistaken for one similar in sound, and I think [I have given above all the instances which in any way support the idea of auditory hyperæsthesia, unless the almost verbatim repetition by the percipient of the “subject” set, whether prose or poetry, which sometimes occurs be regarded as such. In the case of poetry, however, a full and correct transmission of the idea would of course produce the quotation asked for verbatim, if the poem is known to the percipient. The following is an instance:—

April 6, 1924.

30. *Subject.* MR. STEPHEN MURRAY (agent):

“There is some corner of a foreign field
That is for ever England’s. R. Brooke.”

PROFESSOR MURRAY.

“There’s some corner of a foreign field
That is for ever England.”

[The original runs:

If I should die, think only this of me:
That there’s some corner of a foreign field
That is for ever England.]

The only instance I recall of the almost word for word reproduction of the whole of a prose “subject,” is the following:

May 26, 1923.

31. *Subject.* MR. DENIS MURRAY (agent): “Wiggs throwing the kitten in the air at Overstrand.”

PROFESSOR MURRAY. “This time I’ve got a clear idea.
Wiggs tossing the kitten in the air at Overstrand.”

Here the words used are so much the natural ones in which to describe the short and simple incident, that whether the idea reached the percipient telepathically or otherwise he would be likely to clothe it in that form. Still, of course, auditory hyperæsthesia is not excluded.

I now proceed to cases which do seem to exclude auditory hyperæsthesia, and cases where, if it operated at all, its effect on the percipient’s reproduction of the “subject” must have been indirect. The most crucial kind of case is that in which the percipient has correct impressions of things neither mentioned by the agent in giving the “subject” nor such as would necessarily be inferred from what is mentioned. There are a few instances of this. No. 1 (p. 214 above) is a case in point: for the impression that in a scene from a book the people present were mocking and then were sorry and wanted to be kind, was true, but had not been mentioned and Professor Murray had not read the book. Another

example from a book which he appears not to have read will be found in the Appendix No. 88. That the person to whom shelter was given was a spy and an Englishman is not either stated or implied in the words of the agent, but was nevertheless arrived at by the percipient. Another case where a "subject" is taken from a book is somewhat different from these. It is given in full in the Appendix No. 48. The subject consisted of "the girl skating," from a Swedish book named by the agent. The percipient got Scandinavia and, after first being misled by another association with Scandinavia and skating, which he rejected, correctly got a girl skating in "a very wild atmosphere" "and wild burly people," and named the book in which the scene occurred and which he had read. But the book he named was different from that named by the agent; and it turned out that he was right—the scene intended was in the book named by him. It is clear that his impression went far beyond anything said by the agent or necessarily implied in what was said. He must first, it would appear, have got the scene and the general atmosphere, and then remembered where it came from. In a fourth case the incident described was not from a book. The agent imagined a high two-wheeled buggy being driven down Holywell at Oxford, and the percipient got this, but added that it was on "a muddy wet day." The agent had not mentioned mud, but afterwards said that she had thought of it (see Appendix No. 115). It is curious that though the percipient appears thus to have apprehended a sort of accidental accessory to the picture in the agent's mind, he failed to realise who the person was who was supposed to be driving the buggy—a person well known to him.

The kind of case which may be put next in order as evidence against auditory hyperæsthesia is that in which the percipient fails to recognise a person or book named by the agent but realises something which is true about that person or book though not mentioned by the agent—something which would, however, have been a natural inference from the name had the name been grasped. A case in point is the following :

March 10, 1913.

32. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I'll think of Margaret K—— at a particular restaurant in Munich where I used to have lunch."

PROFESSOR MURRAY. "It's some girl I don't know—a Cambridge girl, I think—I can't get it clear—is she standing in a restaurant or something like that?"

Here, if the agent had grasped the name, Margaret K——, he would have known, no doubt, that she was a Cambridge girl he did not know; but it is difficult to see how he can have arrived at these unmentioned facts about her (except telepathically) without the name.

Two cases in the Appendix (Nos. 92 and 94) may be referred to in this connection. In No. 92 the percipient does not realise that it is the death of Hereward the Wake that the agent had spoken of, though he does realise that the somebody killed was early Saxon or Norse and fought with a battle-axe—which facts had not been named. In No. 94 the "subject" is taken from a book the percipient had not read, but he realises that it is a sort of legend or fairy story, though this is not implied in the agent's words, at least apart from the unapprehended name.

The order in which the elements of a "subject" present themselves in the impression of the percipient is often very unlike what one would expect if the impression depended on hearing the words spoken by the agent. One form of this is when the agent names a person, and a mental picture presents itself to the percipient, interpreted by him as representing that person whom he then, but only then, names. For example, on September 10, 1916:

33. *Subject.* MR. ARNOLD TOYNBEE (agent): "I'll do Rip Van Winkle coming down the mountain."

PROFESSOR MURRAY. "Oh I've got this. It's an old sort of gnome-like person with a matted beard coming down—very funny feeling expecting to be known and find things—Oh it's Rip Van Winkle."

Professor Murray gets a good picture of Rip Van Winkle

with appropriate description of his mental state—neither derived directly from the agent's words—before he realises that his picture represents Rip Van Winkle after awaking from his 200 years' sleep.

Other somewhat similar instances in the Appendix are No. 70, where the salient personality in the agent's statement, is named only after being described by the percipient; No. 82, where Mr. Gladstone is spoken of by the percipient as a dignified person before he is recognised; Nos. 86 and 98, where the name Lusitania—prominent in the "subject"—is got at by the percipient after "Torpedoed ship—people getting away in boats . . . great big ship" has been said in the first case, and "awful impression of naval disaster" in the second. A name uttered by the agent, but only appearing after feeling about the subject by the percipient occurs also in some cases of confused impressions gradually developing into the right one. A conspicuous example is Appendix No. 90, when Rousseau and the right incident concerning him are at length grasped. Compare also Appendix No. 102A.

There are two instances where the idea required is introduced by a feeling of an appropriate smell. The following is one of them:

April 22, 1923.

34. *Subject.* MR. PATRICK MURRAY (agent) [The only time he acted as such]: "The lion in the Zoo trying to reach a large piece of meat just outside the cage."

PROFESSOR MURRAY. "A sort of smell of wild animals—carnivorous animals. Something grabbing through bars at a piece of meat at a Zoo. Don't know the animal."

In the other instance which is quoted in full in the Appendix No. 49, Professor Murray begins by saying "This is curious. I've got a smell of some kind of insensy stuff—I should think it was opium or hashish—" the "subject" being in fact a night club and opium den.

The smell experienced by the percipient in both these cases must have been an imaginary or hallucinatory smell; there can hardly have been any real smell to suggest it. And

why the required impression should enter the consciousness of the percipient in this particular way is mysterious. It is possible, no doubt, that the agents, or one of them, may have been thinking of the smell appropriate to the idea they wished to transfer; but had they been conscious of doing so, the fact would almost certainly have been mentioned after the experiment. I think it must be assumed that the idea of the smell originated in the percipient's mind, and if so, that hyperæsthesia cannot have had anything directly to do with it.

It will be observed that there is a difference in the relation of the smell to the whole impression in these cases and in the experience of smell in the case mentioned by Professor Murray in his Presidential address. (*Proc.*, vol. xxix., p. 59). In this earlier case a small bit of tarry coal falling out of the fire was the apparent means of bringing into consciousness the smell of oil or paint burning, and so the scene of Savonarola and the burning of pictures, etc., in the square at Florence; there was an external cause—perhaps a real smell from the tarry coal—to suggest the smell of burning pictures. In the cases before us there seems to have been nothing to suggest the smell except the “subject” of the experiment itself.

On one occasion, what was presumably in part at least a sensation of *sound*, “the feeling of something whizzing along at a tremendous speed—airplane or car”—introduced the percipient's correct impression (a certain motor car race, see Appendix No. 130), just as an appropriate sensation of smell introduced it in the two cases just mentioned. There was no real sound to suggest it, apparently.

We may note in passing that, like smells, inarticulate sounds seem to have entered very little into any part of Professor Murray's impressions. I find but three cases besides the one just referred to which suggest it. One is the successful impression in No. 7 (p. 215 above), where getting “the bursting of shells” may have meant that they were heard, though not necessarily so. In the other two the impressions were entirely wrong, but may have included sound. In No. 35, *September 10, 1916*, the percipient got a “sort of feeling of a heavy hammer

in an engineering place ” when the subject was “ the waves breaking on the breakwater.” And in No. 36 on April 29, 1917, he had a “ faint impression of an explosion or a fire ” when the subject was “ Mr. Asquith being taken up to the front in a staff car down at Verdun.” Only once, so far as I know, did an agent try to impress an inarticulate sound on the percipient—it was the croaking of frogs—but no impression was received (see Appendix No. 60). It occurred, however, in the middle of a series of failures.

Returning to the question of hyperæsthesia. Cases where the percipient’s impressions begin with something associated in idea with the “ subject ” of the experiment, but something not alluded to by the agent at all, must I think be regarded as weighing against any explanation by auditory hyperæsthesia, for the associated idea precedes any knowledge of the subject. The following is a case in point :

August 17, 1918.

37. *Subject.* MR. BASIL MURRAY (agent) : “ I’m thinking of the Etruscan seer who during the siege of Veii was captured by a young Roman warrior. He told them to drain the Alban lake in order to take Veii.”

PROFESSOR MURRAY. “ I don’t think it’s Balaam, but it’s something like—It’s a prophet who’s serving the wrong side—not Hebrew. I think it’s early Roman—I’ve got the impression that he’s telling them to drain a marsh.—Does he come in Livy ? I get an impression that he’s caught and made to reveal a secret.”

For other examples see Appendix Nos. 77 and 81 and No. 42 (p. 244 below). And perhaps we may class with these the following case (only partially successful) where an emotion—that of being frightened, unmentioned by the agent—appears to precede any realisation by the percipient of facts which would have justified it.

May 29, 1919.

38. *Subject.* MISS AGNES MURRAY (agent) : “ Don Juan eating cucumber sandwiches with [X. Y. a modern woman] on Mount Vesuvius.”

PROFESSOR MURRAY. "Curious feeling of being frightened. It's quite clearly Mount Vesuvius. It isn't an eruption. It is some one quite idly on the top, *not* frightened—picknicking—simply my own feeling how dangerous it is" ("Can you get who they are?") "No—Rosalind. They are eating their picnic."

(Mr. Murray had a feeling of cucumber at one time.)

A case which may be compared with this is No. 78 in the Appendix, where the emotion of being afraid in a first battle presents itself not inappropriately, though the impression as a whole is a failure.

With these cases of emotion may be considered what Professor Murray calls in his Presidential address, "a sort of indeterminate sense of quality or atmosphere"¹—geographical, literary or other—which often precedes any more definite idea in his impression, and which appears to him unlikely to be conveyed by the senses. There is, however, apt to be some word or phrase in the "subject" given which, if apprehended, might suggest the atmosphere in question, as there is, *e.g.* in the case No. 78 just referred to.

Another argument against the source of Professor Murray's impressions being actual hearing is afforded by cases where the general idea is manifestly caught by the percipient and the right atmosphere, as it were, given, yet no single important word of the subject is reproduced by the percipient. No. 97 in the Appendix is a case in point. We get there King George "giving V.C.'s and things"—or at any rate "an investiture of some sort," for Queen Victoria giving medals to the Crimean soldiers. There is a similar kind of transformation in No. 84. where crowded Eastern streets are substituted for the bazaar in Cairo; but in this case the guess that follows is badly off the track.

I think there is not much more to be said for or against aid being received by Professor Murray through the senses, or in particular the sense of hearing. In

¹ See *Proceedings*, vol. xxix., p. 60, and also the extract from the address quoted above, pp. 212, 213.

some cases the evidence against it seems, as we have seen, conclusive, and I feel sure that if hearing, however hyper-æsthetic, has operated at all, it has done so rarely.

I do not propose to comment on all the experiments before us, one by one. But before concluding, there are a few things about the way the impression comes to the percipient which it may be interesting to note. Though Professor Murray's attempts to reproduce the agent's subject are sometimes spoken of as guesses, no one, after realising the degree of success obtained, will imagine that mere guessing could have produced it. It is evident that telepathy, or some other agency, has been at work. At the same time Professor Murray distinguishes three things—namely, the impressions that come to him from without, inferences from these impressions, and guesses to supplement them. No doubt both inferences and guesses may sometimes really be impressions from without, but they do not appear so at the time to the percipient. In the following case impression, guess, and inference are all exemplified.

December 26, 1921.

39. *Subject.* MISS AGNES MURRAY (agent): "I think of John Bright going to speak in Birmingham on free trade—so frightened he fell off his chair."

PROFESSOR MURRAY. "This is somebody all of a tremble—It's somebody with [a] sort of stage fright who is going to make a big speech—I think he falls down—Does he fall off his chair? Oh I'm merely guessing—but I should think it's John Bright—oh well—the rest I can guess. I suppose he was making [the] speech on free trade—at Birmingham."

The percipient here gets an impression of the scene, guesses that John Bright was the person concerned, and given these facts, infers that he was making a speech on free trade; for I assume that when Professor Murray said "the rest I can guess," he meant it appeared to him a pretty obvious inference.

It is of course the "impressions," as probable examples

of telepathy, that interest us; and their nature and quality vary in different ways. First they differ in intensity and clearness—varying from strong to faint or even very faint, and from clear to blurred. From the remarks occasionally made by the percipient about the vividness, etc., of particular impressions, I should judge that one which is strong and clear, or which comes quickly, is usually right, but not always.¹ But, on the other hand, the impressions may be faint and dim or blurred, or slow in developing, in quite successful experiments.

Slow development is, sometimes at least, a kind of groping after the “subject” with or without ultimate success. The feeling, I suppose, is like what we have when we are trying to recall something—*e.g.* a name or an address—which we know we ought to remember and feel on the verge of remembering, but which will not emerge into consciousness. Perhaps indeed the attempt in both cases is to raise into consciousness what is already in our minds subconsciously. A very good instance of groping for the right impression which does not come is No. 47 in the Appendix. See also No. 16, (p. 220 above), and Appendix No. 139. Successful groping is seen in No. 4, (p. 215 above), and in other cases of gradual development (*e.g.* Appendix Nos. 61, 90, 95). An instance where groping probably led to guessing is

¹In 17 of the 33 cases of failure (spoken of on p. 220 above) in which Professor Murray got some impression, but a wholly wrong one, it is stated that the impression was faint or vague, and in all these but one this statement about faintness was made before anything was said of what the impression was. In the other 16 cases nothing at all was said about the intensity of the impression. There is, however, a case of mixed success and failure on February 24, 1918, when the subject to be transferred was an incident concerning a Mrs. B. ‘being silly’ at a cricket match. Professor Murray described another incident concerning her and then said, “No—it is Mrs. B.—I don’t expect I shall get it—because I got that [the wrong incident] quite clearly.” On reading this report Professor Murray added:—“But the incident, though wrong, was a very characteristic example of the kind of ‘silliness’ implied. The mistake was perhaps due to my subconscious self over-dramatising the vague expression.” The principal agent in this case was acting as such for the only time in the present series.

Appendix No. 118, where the subject is "the four riders of the Apocalypse," and the percipient having got galloping horses, and presumably some subconscious idea that there is something unreal about them, thinks for a moment that it is going to be a Walkyrie ride.

In contrast to cases of gradual development are those where the impression comes instantly, and the percipient probably could not have told us how it came to him. For instances of this see Appendix Nos. 46 and 80, and the following case (which chronologically followed 80).

November 18, 1917.

40. *Subject.* MISS AGNES MURRAY (agent): "Alice in Wonderland, falling down the rabbit hole and landing where Bill the Lizard is watching, and White Rabbit is going by at the same time."

PROFESSOR MURRAY (as he enters the room). "I want to say 'Oh my ears and whiskers.'"

[In the book, when Alice after falling down the rabbit hole pursues and comes up with the White Rabbit, he is saying 'O my ears and whiskers, how late it's growing.' Bill the Lizard does not appear in this scene in the book.]

In this case the impression takes the form of a quotation so appropriate as to make it certain that the subject to be transferred has been apprehended. There are several examples of this. The following is one:

August 17, 1918.

41. *Subject.* MISS AGNES MURRAY (agent): "I think of the scene in *Macbeth* when the feast is beginning and Lady Macbeth is sitting at the head of the table, and Macbeth comes in and won't sit down because he sees the murdered ghost."

PROFESSOR MURRAY. "I've got this:—'Which of you has done this?' It's Macbeth when he sees the ghost in the chair."

[The quotation is Macbeth's first remark when he sees Banquo's ghost in his chair.]

Compare with this Appendix Nos. 76, 85, 89, 106, 107. In No. 109 an appropriate quotation comes to

Professor Murray at once, but does not imply the whole subject, most of which, however, is successfully developed afterwards.

In all these cases where the answer is given in the form of a quotation, it would seem probable that the agent's ideas reached the percipient first as ideas.

In other cases, as we have seen, the impression comes first through a sensory mental channel, *e.g.* smell in No. 34, (p. 237), sound in Appendix No. 130, a visual image in No. 33, (p. 236). A very clear case of a visual image and nothing else will be found in the Appendix No. 101. The percipient recognised almost all the details of the scene intended as though he had had the scene itself or an actual picture of it before his eyes, but—as would equally have been the case with a real picture unexplained—he failed to realise the agent's chief idea, which was that the little girl sewing under the apple trees was a youthful Joan of Arc. Her appearance could not interpret itself as Rip Van Winkle's could.

Probably in most cases the impression comes in a mixed way—partly as ideas not, at least to begin with, of a sensory kind, and partly as visual or auditory images. Judging from the experience of other percipients it seems likely that the different avenues used are not always distinguishable even by the percipient himself; and as between different telepathic percipients, had we others to compare with Professor Murray, we should probably find that the comparative use of the different possible avenues partly depended on the make up of the percipient's own mind—on whether he was a good visualiser and so forth. I imagine the following case to be a good example of impressions coming in different ways in the same experiment and gradually producing a comprehensible whole.

February 24, 1918.

42. *Subject.* MR. ARNOLD TOYNBEE (agent): "Isle of Capri, and on it is the old Master of Balliol [Strachan Davidson] and my uncle [Arnold Toynbee] and they are reading the Bible, and my uncle says what a good book it is, and Strachan Davidson is chuckling."

PROFESSOR MURRAY. "I get T— L— on the Riviera being very funny about the book of Samuel. [He] had never read it. It's Italy I am sure, and it's somebody being impressed by the Bible or talking about it as though he had never read it before. I get the manner of Strachan Davidson.—I should say it was at Naples, or some place with the blue sea all about. Should say it was Capri. Oh your uncle Arnold Toynbee."

([Contemporary note]. Arnold had never seen his uncle [who died in 1883], and Mr. Murray had not known him.)

Here an *idea*, at first probably subconscious, of the discussion on the Bible must have introduced the irrelevant recollection of a similar conversation on the Riviera; getting the manner of Mr. Strachan Davidson seems to imply a *visual* or *auditory* impression or both; and "the blue sea all about" suggests a *visual* impression.

There is one case, Appendix No. 54, where Professor Murray gets almost all the items of the agent's subject correctly in detail—whether visually or not we do not know—but complains that he "can't get it together. [He] only get[s] fragments." Perhaps this only means that he imagined there was some kind of story connecting the items he got, whereas the agent had not indicated any. Of course all we know directly about the percipient's reception of the subject set by the agent is what the former can tell us about his conscious impressions. That subconscious work goes on in the production of the result is a matter of inference, but I think an inference fully justified. It can almost be proved true in certain cases, and I am inclined to think that as a matter of fact most of the work in producing Professor Murray's telepathic impression is subconscious. As evidence I may first refer again to the Doughty case, No. 26, (p. 231 above). Here, if our interpretation of the case is right, a name must have been unconsciously apprehended and unconsciously associated with the title of a book; this last then emerging faintly into consciousness. Sensory images, with interpretation following (not preceding) them, as in 33, (p. 236 above), strongly suggest subconscious manu-

facture—indeed I think imply it. So does emotion felt appropriately, but without realised cause, as in No. 38, (p. 239 above). Again, when the impression comes to the percipient's consciousness in the form of an appropriate quotation which has not been in the agent's mind there must, it would seem, be an idea behind it, prompting it, and that idea must be subconscious as the percipient is not aware of it.

Granting that the subconscious mind does play so important a part in receiving and forwarding the subject to be transmitted, we see that error may come in at four stages. The subject may get through from the agent to the percipient's subconscious mind in any degree of incompleteness ;¹ it may there be further distorted by false associations and inferences ; loss may occur again in emerging into consciousness owing to inhibitions or otherwise ; and finally, the conscious mind may reject some ideas or images, and misinterpret others.

For an example of conscious rejection of a perfectly correct impression see Appendix No. 74, where Professor Murray refuses to accept Lord Morley as part of the "subject" because he happened to be reading his *Recollections*, and therefore imagined a normal origin for the idea of him. I suspect the normal consciousness to have been responsible for a hasty (and rather muddled) misinterpretation of a visual image of a half-naked Arab initially presented to it in the following case :

February 24, 1918.

43. *Subject.* MRS. ARNOLD TOYNBEE (agent): "Allenby. British troops in Palestine and a sort of Arab man coming up and standing half naked by a well."

PROFESSOR MURRAY. "This is the good Samaritan guiding the English troops into Jericho. I don't know that he is the good Samaritan. He might be a biblical figure, coming up and speaking to General Allenby, and showing the way." ("Anything he is near?") "Well a well. I got him naked with no clothes."

¹ It is at this stage presumably that deficiencies in the agent as an available source for impressions would operate adversely.

[The impression here seems to begin with a visual image of the half naked Arab which suggested the man that fell among thieves on the way to Jericho, and thus the good Samaritan who helped him.]

If telepathic impressions usually come through the subconscious mind, which on other grounds than the experiments under discussion seems to me likely, it is possible that one important quality in a good telepathic percipient may be a power of drawing easily on the contents of his own subconscious mind.

APPENDIX I.

I quote here almost all the cases counted as successes which have not already been quoted in the body of the Report, and also cases of partial success or of failure which seem to present points of interest. The selection thus made does not of course in any way represent the average proportion of failure to success.

The experiments in this Appendix are in chronological order, but the numbers given them relate to the present paper only. The numbers 1 to 43 are attached to the cases quoted in the body of the Report (which, however, are not in chronological order), so that those in the Appendix begin with 44. The first eight took place before 1916.

The original notes are printed verbatim, remarks in round brackets being part of them. Explanatory additions and other remarks of my own are in square brackets. Remarks or questions by the agent in the course of the percipient's statement are in round brackets and inverted commas. The dates given are those of the experiment to which they are attached, and of those which follow it, until the next date given.

March 10, 1913.

44. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of that man—Dr. Leys—in a canoe with Masai on the river."

PROFESSOR MURRAY. "It's Conrad's Lord Jim with a lot of

blacks in a boat—Not sure if Lord Jim—somebody with blacks in a boat—It's not Hube [Professor Murray's brother, Judge Hubert Murray, Governor of Papua]—is it Norman Leys ? ”

July 18, 1915.

45. *Subject.* UNNAMED AGENT, PROBABLY MRS. ARNOLD TOYNBEE: “I think of that chorus in the *Hippolytus*, ‘I will take me to some cavern for my hiding.’ ”

PROFESSOR MURRAY. “Again I think this is poetry. I don't think I shall get it—I've got that bird-droves thing running in my head.”

[The “bird droves thing” is the chorus in question. *The bird droves chorus* in the *Hippolytus* had been chosen as a subject for transmission by Mrs. Toynbee five years earlier (see Mrs. Verrall's Report *Proceedings*, vol. xxix., p. 92), but on that occasion was a failure, Professor Murray only getting “something about Egypt and the Nile.”]

46. *Subject.* MR. W. ARCHER (agent): “I think of my brother walking off with the Red Cross collecting box.”

PROFESSOR MURRAY (instantly). “My mind is full of the pork pie incident.” (Right).

[He took the collecting box in mistake for a pork pie which he had bought.]

47. *Subject.* MR. W. ARCHER (agent): “I think of Nora dancing the tarantella in *The Doll's House* [Ibsen's play].”

PROFESSOR MURRAY. “No. I felt I was on the verge of it, but I can't get it.—No—I got a feeling of someone in a play. No, I seemed to be groping at something in an Ibsen play and could not quite get it.”

August 1, 1915.

48. *Subject.* MRS. ARNOLD TOYNBEE (agent): “I think of the girl in the first story of *Gösta Berling*—the girl skating.”

PROFESSOR MURRAY (at once). “This feels, generally speaking, Scandinavian, presumably Iceland,¹ and I feel as if it was Miss Philpotts skating in Iceland, but I don't think that's correct—oh it's a book. I should think it

¹ ([Contemporary note]: Had been talking about Miss Philpotts in Iceland.)

was *Tales from a Swedish Homestead*. It's *Selma Lagerlöf* and it's a very wild atmosphere—and there's a girl skating—and wild burly people."

(*Note*.—It was '*Tales from a Swedish Homestead*.' R. T. [Mrs. Toynbee] had been wrong.) ([*Contemporary remark*]: *Very good*.)

49. *Subject*. MRS. ARNOLD TOYNBEE (agent): "This is people going into a sort of night-club and opium den, and they go in out of Piccadilly Circus underground, and there are red sofas and a person with a skull cap, and people dancing."

PROFESSOR MURRAY. "This is curious. I've got a smell of some kind of incensy stuff—I should think it was opium or hashish—and it's like a sort of opium den and people coming into it—I can't get anything very clear. There are sorts of settees or divans round the room ("What colour?") "Red—I'm not getting it very clear. I think I feel as if it were in London—people going down into it." ("Where do you go out?") "I should say Regent Circus."

(*Note*.—Only got Red and Oxford Circus on being questioned.) ([*Contemporary Remark*]: *Very good, but not complete*.)

50. *Subject*. MRS. ARNOLD TOYNBEE (agent): "This is in Palestine, and there is a crucifixion going on; and it is not Christ being crucified, and there's a cart going by with Christ on it, like the Hardy poem."

PROFESSOR MURRAY. "There's something worrying about this. It seems like the crucifixion but, if so, it's seen from the point of view of a person who thinks it's the crucifixion of a new criminal,¹ as Pontius Pilate might have thought. It's Christ seeing somebody else crucified—in the earlier part of his life—No I can't get it."

(Was thinking '*Here the hangman stays his cart*.' [First line of A. E. Housman's *A Shropshire Lad*, No. xlvii., an appropriate poem.]) ([*Contemporary Remark*]: *Very good*.)

51. *Subject*. MRS. ARNOLD TOYNBEE (agent): "I'm going to think of the person that Louis XI. put in the cage for life, and people are looking at it, and the person's hanging up and a baby with him—a baby monkey."

¹ ([*Contemporary note*]: That's the point of the Hardy poem.)

PROFESSOR MURRAY. "I can't get this a bit. I should think it was a poem—a faint impression of someone leaning out of a basket—no, I don't think I can get it."

([Contemporary remark]: Failure.)

[I have included this failure so as to make the record of experiments on this day complete.]

April 23, 1916. ([It is stated on this day] "Hands only taken where written.")

52. *Subject.* MRS. ARNOLD TOYNBEE (agent): "Third Act in [Ibsen's] *The Doll's House*, with the doctor and Nora, and doctor saying thanks for the light."

PROFESSOR MURRAY. "This is Norwegian. Never had a Norwegian thing before [but see No. (47) above]—I've got this. It's Ibsen. Dr. Rank. Scene between Dr. Rank and Nora, where he says good-bye before he goes to die." [This is the right scene.]

(Mr. Murray did not hold [Mrs. Toynbee's] hand and did not look at her.)

[The same subject was again selected by the same agent on September 14, 1916, thus:

MRS. ARNOLD TOYNBEE. "I think of Dr. Rank saying 'Thanks for the light.'"

PROFESSOR MURRAY. "It's somebody who thinks he's going to die. It's a play. It's the man in *The Doll's House*—Dr. Rank. Yes, it's his final scene, where he comes in and says good-bye to them and leaves the note in the box."

Neither agent nor percipient appear to have realised that the subject is being repeated. It is rather curious that though Professor Murray on both occasions got the scene, he on neither got the sentence in it—Dr. Rank's last words—which characterised it for Mrs. Toynbee.]

53. *Subject.* MRS. ARNOLD TOYNBEE (agent): "Scene at the beginning of *Insulted and Injured* where the very old man with the dead dog dies on the door step."

PROFESSOR MURRAY. "A book. I don't think I've read it—got an atmosphere like Strindberg, or it might be Dostoevsky] (Holding hands). Oh it's dreadful—Yes, I think it's some persecuted weak old person dying with a dead

dog—I think they're deserted. I get that sort of feeling." ("Can you get the name?") "The book, I think, is *Insulted and Injured*—No, can't get his name." ("His name was Smith.") (Mr. Murray had not read the book.) (Mr. Murray wanted to get another name and [Mrs. Toynbee] wanted to call it *Despised and Rejected*.)

[I do not profess to understand this last sentence of the note-taker's, but it evidently represents a discussion which may perhaps be of importance in view of the fact that the subject, or probably an earlier phase of the incident,¹ was selected again by Mrs. Toynbee four months later (see above No. 1, p. 214). The two should be compared. As in the *Doll's House* case neither agent nor percipient seem to have observed the repetition.]

54. *Subject.* MRS. ARNOLD TOYNBEE (agent): "This [is] a scene in a Maupassant about a Frenchman who travelled to Genoa and met a funny Italian girl in the train, and they had supper in the hotel."

PROFESSOR MURRAY. "I think this is a book too. A train on the Riviera—sort of Riviera atmosphere—somebody awfully amused. I think he is a friend [? Frenchman] being rather gallant and amused to a girl whom he meets in the train—I think the girl is Italian—am sure I have not read the book. I can't get it at all well—Is there more I ought to get? I think he is a Frenchman going to Genoa? No I can't get it together. I only get fragments." ("It is all right.") "No. I can't get any more."

(There was a noise of clearing away in the dining-room.)

([Mrs. Toynbee] said the people were amused, and it was written amusingly.)

55. *Subject.* MRS. ARNOLD TOYNBEE (agent). (Lady Mary Murray suggested *Do one not* in a book now): "I thought of one out of a book by Anatole France about angels appearing in a pavilion. Also stockings."

PROFESSOR MURRAY. "[I] don't feel as if I am going to get this one. No, I get a sort of absurd impression of a man and woman in a kiosk seeing an angel. No, the

¹[I am not acquainted with the book,—E. M. S.]

atmosphere I think is quite serious—they are a sort of hero and heroine. I've a slightly psychical research feeling about it. I can't get it." ("The scene was perfectly absurd.")

56. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I'll think of the G—— C.'s having supper at the —— restaurant, and we were watching them from another table."

PROFESSOR MURRAY. "I think it is real life and not a book.

I can't get it except some people in a restaurant having supper." (Taking [Mrs. Toynbee's] hand) "I think it is Hilda Lessways—No, I'm wrong." ("Can you get the sort of restaurant?") "I don't think I can get [more]."

([Mrs. Toynbee] had been reading *Hilda Lessways*, and had been thinking of [Mrs. C.]. She said she nearly always invented things, and this was real life.)

May 28, [1916].

57. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of Rupert and Shaw Stewart ill in Egypt, and Sir I. Hamilton coming to see them under a sun canopy."

PROFESSOR MURRAY. "This is Egypt, people ill in a hospital

Oh it's Rupert Brooke, and I think Sir Ian Hamilton coming to see him—and Shaw Stewart with him—get them in a hospital—I think a hospital near the sea."

58. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think [of a scene in *The Birth of a Nation*, where a girl is running away from a negro—jumping over a rock."

PROFESSOR MURRAY. "This is a thing you have never done

before. It is a cinema. The girl running away from somebody and jumping over a rock. Oh it's America

It's a negro chasing a white girl. It must be in *The Birth of a Nation*."

59. *Subject.* MISS ETHEL SIDGWICK (agent): "I think of a dream I had of an airship which wasn't a ship, and a hero in armour standing up in it, in front of it."

PROFESSOR MURRAY. "This is not a book, and it's not

French. [Miss Sidgwick had been living in France.

Oh, I think it's a dream—Don't—I should say it was Zeppelin, and everything very shiny and people glittering

I seem to see a person all over shining armour, and he might be Romain Rolland."

(Miss Sidgwick had the whole dream in brilliant sunshine.)

September 10, 1916.

60. *Subject.* MRS. ARNOLD TOYNBEE (agent): "Frogs in the lake at Castle Howard, and coming up out of the water. The croaking of frogs."

PROFESSOR MURRAY. "No."

[I quote this, though a complete failure, because I believe it to be the only instance in the present series of inarticulate sound deliberately included in the "subject." It occurred in the middle of a series of failures.]

61. *Subject.* MR. ARNOLD TOYNBEE (agent): "I'll [think] of *Uncle Remus*—of Terrapin with a rope in his hand running away from the pool."

PROFESSOR MURRAY. "Don't think I've got this—Well I've got an impression of Rosalind [Mrs. Arnold Toynbee] chasing a tortoise in Jamaica with a lot of black people. It is black people and a tortoise. No, it's a turtle running away from somebody."

[A Terrapin is a kind of Turtle.]

62. *Subject.* MR. MELLOR (agent): "I'm thinking of myself addressing a strike meeting outside Balliol at the Martyrs' Memorial."

PROFESSOR MURRAY. "This is you yourself waving your arms and making a speech, and I suppose it is addressing a strike meeting. I suppose it is somewhere—you have fixed it somewhere. I guess outside the mill at Chipping Norton."

(Mr. Mellor had not said that he had waved his arms—he hid—but Lady Mary [Murray] had waved her arms to illustrate.)

[Lady Mary's action may have been responsible for Professor Murray's impression of arm-waving (*cf.* a case in Mrs. Verrall's report *S.P.R. Proceedings*, vol. xxix., p. 68 footnote). But on the other hand, the action may have been characteristic of Mr. Mellor's oratory.]

63. *Subject.* MR. MELLOR (agent): "I'm thinking of myself

as taking my seat as a Labour member in the House of Commons."

PROFESSOR MURRAY. "I think this is you again, but in some rather odd atmosphere. I think you are in the House of Commons. Yes—being introduced in the House of Commons."

(As Mr. Mellor had thought before. He thought it was curious his being there.)

64. *Subject.* MR. BASIL MURRAY (agent): "I'm thinking of the football match last winter between Charterhouse and Winchester in which Winchester beat Charterhouse."

PROFESSOR MURRAY. "I think it is a football match. Rather big swell match. Charterhouse [and] some big other school. For a guess I should say Winchester."

(Mr. Murray got it at Charterhouse. It was at Charterhouse. Basil thought of the people looking on and Mr. Murray got the crowd.)

September 14, 1916.

65. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of scene in *Romeo and Juliet*—'It is the nightingale and not the lark.'"

PROFESSOR MURRAY. "I've got this. It's 'Go not, sweet love, it is not yet near day. It is the nightingale and not the lark.'"

66. *Subject.* MRS. ARNOLD Toynbee (agent): "I think of the monk in his cell, and the boy in Tolstoi's *Youth* going to confess to him."

(Noise.)

PROFESSOR MURRAY. "I've got it blurred—A sort of shot—I was going to say it's something in Gorki's *L'Espion*. I feel as if it was Russian and an unhappy sort of boy—(takes hand). I should guess Dostoevsky."

[The taking of the hand here did not help.]

67. *Subject.* MR. MELLOR (agent): "I'm thinking of Ben Tillett addressing a meeting of strikers on Tower Hill on the occasion on which he wished God to strike Lord Devonport dead."

PROFESSOR MURRAY. "Oh—I think it's the crowd of people

praying that Lord Penrhyn—I think it was—might be struek dead. Ben Tillett's meeting."

68. *Subject.* MR. MELLOR (agent): "I'm thinking of myself starting Jim Larkin's meeting in the Corn Exehange, when town and gown were divided, each sitting in his appropriate place—like talking to a tomb."

PROFESSOR MURRAY. "I should say this was you at a meeting, and there's something funny about the meeting—as if it was divided into two bits, as if men on one side and women on the other—but I don't think it is men and women—I should say a strike meeting in the Corn Exehange. I should say that Dublin strike—something Irish. I don't think I can get it clearer—I don't think I was there." ("Anyone else?") "I should say Jim Larkin."

69. *Subject.* MR. MELLOR (agent): "I'm thinking of the men and women on strike at Chipping Norton standing up as Cole and I walked down their centre, singing the Red Flag—in the Town Hall."

PROFESSOR MURRAY: "Another strike, I'm sure of that—Chipping Norton strike, something or other at Chipping Norton. I think it's a erowd parting, as it were, and people walking up between them—[I] don't partieularly get anything more—I don't know if I ought to get any people? I naturally think of people I know eonneeted with the meeting." ("What doing?") "Cheering or waving flags—I don't think there's any triek about it—not Abraham Lineoln or Napoleon, as Rosalind might say."

70. *Subject.* MR. MELLOR (agent): "I'm thinking of C. D. speaking on the suffrage to a very small meeting in the L.P. rooms at Bristol, standing on the platform with his hands raised."

PROFESSOR MURRAY. "A faint impression of a small scrubby meeting—a little meeting in a room somewhere—Well I get an impression of a man awfully unlike Ben Tillett—a sort of blundering, silly, yet rather nice person—Quality of man and quality of meeting, working away—at (raising hands). Having said that, I should guess C. D."

April 29, 1917.

71. *Subject.* MISS AGNES MURRAY (agent): "I think of Masefield in his little hospital boat coming up to the mouth of Mudros harbour—watching the troops go off to Gallipoli."

PROFESSOR MURRAY. "Oh this is your poem in *The Nation* about Masefield—It's the scene of the people setting out for [? from] Mudros—Masefield watching them."

(No hands.)

72. *Subject.* MISS AGNES MURRAY (agent). "I think of Denis sitting on the top of the roof of his hospital, smoking cigars and teaching the night nurse to play piquet."

PROFESSOR MURRAY (pointed to Denis's photograph). "Denis somehow—it's not anything in the war—sitting on the roof of a house and laughing—sitting on the roof of his present hospital—seems cheery—"

(No hands.)

73. *Subject.* MR. TATHAM (agent): "Xenophon's soldiers coming in sight of the sea and saying *θάλαττα*, etc."

PROFESSOR MURRAY. "Not Xenophon's people coming to the sea and saying *θάλαττα*—?"

November 17, 1917.

74. *Subject.* MISS AGNES MURRAY (agent): "I think of Terence [Professor Murray's nephew] and Lord Morley sitting under a pyramid in Egypt discussing how long the war will last."

PROFESSOR MURRAY. "I've got two sorts of impression. One with Morley because of the book¹—that is wrong. The other with Terence. I don't see particularly what he is doing—I should say he was just sitting down. No I can't get it clear."

[This experiment illustrates interference by the conscious self in deciding what is likely to be right.]

75. *Subject.* MISS AGNES MURRAY (agent): "I think of Anna [Karenina] and Vronsky sitting in their drawing-room at their country house, being very much bored with each other, and waiting for a visitor to come up the drive."

¹ ("The book" means] *Lord Morley's Recollections*, which [Professor Murray was reading.)

PROFESSOR MURRAY. "I should say this was Russian—people very uncomfortable—a big, rich sort of house—in a book. I should say it was Anna and Vronsky. I have the feeling of the sort of misery when they are living together, and she is getting jealous."

[This describes the atmosphere and surroundings of Anna Karenina and Vronsky at their country house, but no such scene as that given in the "subject" is, I think, actually described in Tolstoy's book.]

76. *Subject.* MISS AGNES MURRAY (agent): "I think of King Arthur riding out on his horse [after] speaking to Guinevere when she is [looking] out of the Convent [window] and it is snowing hard."

PROFESSOR MURRAY. "I am getting this as a quotation.

'That mist which ever since I saw
One crouching in the dust at Almesbury
Has (something) all the passes of the world.'

[In Tennyson's *Passing of Arthur*: King Arthur to Bedivere after he has left the Convent and before the battle:

Yet let us hence, and find or feel a way
Thro' this blind haze, which ever since I saw
One lying in the dust at Almesbury,
Hath folded in the passes of the world.]

(Agnes was thinking to herself, "All day long the noise of battle rolled" [from the same poem]. These verses apply to [Arthur] when he was riding out with Bedivere after seeing Guinevere.)

77. *Subject.* LADY MARY MURRAY (agent): "I have had in my mind for some time George Trevelyan with his ambulance falling back in the rout from the Bainsizza plateau."

PROFESSOR MURRAY. "I get Geoffrey Young with his leg off, having to retreat with George Trevelyan in the Italian retreat."

[Mr. Geoffrey Young did have to retreat under these circumstances.]

November 18, 1917.

78. *Subject.* MISS AGNES MURRAY (agent): "I think of Joan

of Are going out to fight for the first time, and her watching her horse being saddled.”

PROFESSOR MURRAY. “I got a dim feeling of being in a battle, and being very much afraid. It’s the first battle. —As a mere guess—No—I was going to say G——, as we had been talking about him.”

79. *Subject.* MISS AGNES MURRAY (agent): “I think of the scene in *Sonia* where they are all sitting round in a country house, and the news comes that Violet’s husband is killed.”

PROFESSOR MURRAY. “This is a book. It seems to me something commonplace. News of somebody being killed comes to a party of people in a sort of big house. Smart people. Oh it must be—it’s not a Russian book, and it’s not a good book—doesn’t make much impression on me. It’s English. I don’t know if there is such a scene in *Sonia*. It’s the news of Loring’s death.”

[I cannot find any such scene as the agent describes in *Sonia*. The news of the death of Violet’s husband (Loring) came otherwise. But part of the book, to which Loring belongs, is in a country house atmosphere.]

80. *Subject.* MISS AGNES MURRAY (agent): “Lucifer sitting in Pandemonium and making a speech to all the fallen angels, and he is saying ‘Better to reign in hell than serve in heaven.’”

PROFESSOR MURRAY (as he walked into the room): “Ye something principalities and powers. It’s Milton and Lucifer.”

[Both agent and percipient think of Milton’s Lucifer making a speech. The remark quoted by the agent was, however, said in conversation with Beelezebub; and the words attributed to him by the percipient are not an exact quotation according to the notes. It must, however, be remembered that the notes have to be taken down in long hand and very quickly, so that quotations and names are not always quite accurately recorded. In this case, for instance, Professor Murray thinks he said “Thrones, Dominations, Princedoms, Virtues, Powers.”]

81. *Subject.* MISS AGNES MURRAY (agent): βάλε δὴ βάλε κήρυλος εἶην.

PROFESSOR MURRAY. “This is Hughes of New College, the

man I am doing B.Litt. with, and he is doing Greek metres, doing Alkman. *βάλε δὴ βάλε κήρυλος εἶην.*

82. *Subject.* MISS AGNES MURRAY (agent): "Mr. Gladstone visiting Lloyd George at 10 Downing Street, and trying to point out to him the indiscretion of his Paris speech."

PROFESSOR MURRAY. "It's a dignified person severely reproving somebody—giving them an awful dressing down. I should think it was Mr. Gladstone; it's something political. Can't think who Mr. Gladstone would be likely to rebuke. Oh he's rebuking Lloyd George."

83. *Subject.* MR. MAURICE JACKS (agent): "The scene in [Sir Walter Scott's novel] *The Fair Maid of Perth* where the great battle takes place, and Connacher swims the river and runs away."

PROFESSOR MURRAY. "I think this is somebody running away in a battle, or being frightened. I think it is in a book. Certainly not present fighting. I get a feeling of a Highlander as if it was *Waverley* or something like that, but I don't remember the scene."

84. *Subject.* MR. HAMMOND (agent): "I think of the bazaar in Cairo, and Indian and Persian merchants, shop next to shop, and selling their wares to tourists arriving."

PROFESSOR MURRAY. "Sort of crowded Eastern streets. I should say as a guess shopkeepers in Jerusalem shutting up their shops because the English troops are coming."

85. *Subject.* MISS BEATRICE ROSE (agent): "Scene in *Lady of [the] Lake*; and Roderick Dhu discovers himself and tells FitzJames he must protect himself with his own sword."

PROFESSOR MURRAY. "I believe I am going to do a quotation. I don't think it is right:—

'Come one, come all, this rock shall fly
From it's firm base as soon as I.'

What Roderick Dhu says in his fight with Fitzjames."

[Two connected scenes in *The Lady of the Lake* are mixed up by both agent and percipient I think, namely, the one where Roderick Dhu reveals to Fitzjames his identity, while showing him that they are surrounded by his clansmen, and

the one where shortly afterwards, away from Roderick's district, he challenges Fitzjames to single combat. The lines quoted by Professor Murray were uttered by Fitzjames (not Roderick) in the first scene when surrounded by Roderick's followers. It is perhaps owing to this confusion that the percipient doubted if his quotation was right.]

86. *Subject.* MR. PATON (agent): "Lord Rhonda, sailing away in a boat from the *Lusitania* and saying he is going to be equal with Satan's hypocritical and canting chief of the staff."

PROFESSOR MURRAY. "Torpedoed ship—people getting away in boats. Ought I to know who is getting away? Great big ship. I'm trying to think of anybody who escaped from the *Lusitania*."

[I quote this because the percipient does not seem to have grasped that the agent had the *Lusitania* in mind, although it had been mentioned, until he inferred it from facts which he divined though not mentioned by the agent—the facts that it had been torpedoed and was a great big ship.]

February 24, 1918.

87. *Subject.* MRS. ARNOLD TOYNBEE (agent): "A little Chinese person in an old Chinese poem. Brother and sister-in-law were unkind; father and mother were dead. By a river."

PROFESSOR MURRAY. "I am either not getting it at all, or it is a new sort of place. It is not Russian—don't think it is. Well it's something like [a] Russian boy. It's something like a small unhappy Russian child who has been unkindly treated like a Gorki, and I think it beside the Volga like Gorki. I think it's Chinese. I mix it up with a Chinese girl crying because her feet are being bent. Chinese motherless or fatherless child being maltreated by her relations."

(Mr. Murray mixed it as to whether it was a girl or a boy. Rosalind [Mrs. Toynbee] and Lady Mary had discussed [which it was].)

88. *Subject.* MRS. ARNOLD TOYNBEE (agent): "*Greenmantle* [by Buchan]. Where the German peasant woman takes them in in a snow-storm."

PROFESSOR MURRAY. "This is something out of a book. I don't think I have read it. It's not Russian. It's got no particular [national] character. It's a snow-storm. It's somebody—I think it's a peasant woman—giving shelter to a spy. I think it's a German peasant woman. I'm not sure. I think it's a German woman." ("What sort of a spy?") "I think he is English. I think it is a book of adventure."

(In the book he is a spy.)

89. *Subject.* LADY MARY MURRAY (agent): "People in the circle of Dante's *Inferno* who are driven by the wind all the time."

PROFESSOR MURRAY. "I've got quite clear the Keats lines:—

'Pale were the lips I kissed and fair the form
I floated with about that melancholy storm.'

The sonnet on [*A Dream, after Reading Dante's Episode of Paolo and Francesca.*]

(About 6 back Lady Mary had got a picture of [Paolo] and Francesca. Mr. Murray got the picture of the people being driven by the storm.)

[The episode of Paolo and Francesca is of course a very important part of Dante's account in the *Inferno*, Canto V, of the 'Circle' referred to by Lady Mary Murray.]

June 16, 1918.

90. *Subject.* MRS. ARNOLD TOYNBEE (agent): "Rousseau, when he was a servant in the house in Turin and the thing was stolen."

PROFESSOR MURRAY. "I get an impression—1st, that low French newspaper that Wade Gery was talking about. No, I think I am getting confused with your boys who stole. I get it much confused. A nasty sort of French person stealing. I don't think—It's a sort of artist educated person—He's a lacquey of somebody's. It's like Gil Blas, but I don't think it is [him]. It's somebody of that sort of date. Oh! it's Rousseau, when he stole the ribbon, etc."

(Rosalind had got the impression of a bad atmosphere.)

July 14, 1918.

91. *Subject.* MR. PENMORLAN MAIN (agent): "Dante meeting Beatrice on the bridge at Florence."

PROFESSOR MURRAY. "This isn't Greek, but it's high poetry of some sort. It's not Greek—Is it—It's Dante somehow. Is it Dante meeting Beatrice?"

92. *Subject.* MR. PENMORLAN MAIN (agent): "The death of Hereward the Wake, when he's ringed round by his enemies. Kills them one by one."

PROFESSOR MURRAY. "This isn't?—keep getting—the death of somebody. No—is it a sort of—I'm getting it very confused, but I feel as if it were something early Saxon or Norse—somebody with a battle-axe against crowds of people."

93. *Subject.* MR. PENMORLAN MAIN (agent): "Theseus and Heraeles, when Theseus is trying to persuade him not to commit suicide."

PROFESSOR MURRAY. "Is this your own thing? I got an impression of suggestion. Greek, I think—I should think Heraeles talking with Theseus."

94. *Subject.* MRS. ARNOLD TOYNBEE (agent): "OBlomoff lying in bed, and a lot of curious visitors coming to see him."

PROFESSOR MURRAY. "I think it's a legend or fairy story or something—It's like the levée of a French king—but it's somebody in bed—people coming in—streams of people—but I think it's a sort of legend or something I don't know."

(Curious book—allegory.) [Book by Ivan Gouteharoff.]

95. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I'm thinking of the scene in *Marie Claire*, where she finds that nun Sœur Marie Aimée erying."

PROFESSOR MURRAY. "This is a book—it's not English, not Russian—It's rather a—I think there are nuns in it—there are a lot of people—either a school or a laundry—and one of the nuns weeping—I think it's French. Oh it's a scene in *Marie Claire*, near the beginning—I can't remember it, but it's something like that—it's in the

place where she goes—one of the nuns crying—a double name—no I can't get the [name] Marie Thérèse."

96. *Subject.* LADY MARY MURRAY (agent): "A monastery that we slept in the first night in Peloponese with six beds round."

PROFESSOR MURRAY. "I think this is in Greece. I think it is the place where we were so afraid that the arch-priest meant to sleep with us."

(Right.)

97. *Subject.* COUNTESS OF CARLISLE (agent): "The Crimean soldiers after their return receiving their medals from Queen Victoria at [the] Horse Guards."

PROFESSOR MURRAY. "Is it the King giving V.C.'s and things to people? Yes [I] think it's an investiture of some sort."

98. *Subject.* COUNTESS OF CARLISLE (agent): "Sinking of the *Lusitania*."

PROFESSOR MURRAY. "I've got this violently. I've got an awful impression of naval disaster. I should think it was the torpedoing of the *Lusitania*."

99. *Subject.* MISS WINIFRED ROBERTS (agent): "I'm thinking of *Caliban on Setebos*, [Caliban] sitting in a cave thinking about things."

PROFESSOR MURRAY. "I think it's a poem. Is it a scene in a poem or a whole poem?" ("A scene.") It's like Browning—I think it's Caliban tearing the crabs."

(in *Caliban on Setebos*.) [The agent's description applies to the whole poem, of which the crabs incident is a part.]

August 17, 1918.

99A. *Subject.* MISS AGNES MURRAY (agent): "I'll think of Shelley nearly being drowned, and when he was pulled out [he] said, 'Oh what a pity. I wanted to see what the next world was like.'"

(Interruptions, windows opened, also noise outside.)

PROFESSOR MURRAY. "No, nothing at all."

[This is quoted because the same subject was given by the same agent in almost the same words in December 1915, and students may like to compare. See Mrs. Verrall's Report,

Proceedings, xxix., p. 105. On that occasion Professor Murray was successful.]

100. *Subject*. MISS AGNES MURRAY (agent): "I think early in the war, when the French were tremendously outnumbered, and one soldier stood up and said '*Debout les morts*.'"

PROFESSOR MURRAY. "I don't feel at all clear—but I think the war. French rather than English, and it's something or other said. Is it '*Debout les morts*'?"

101. *Subject*. MISS AGNES MURRAY (agent): I think of Joan of Arc when she was a little girl, sitting in the garden with all the apple blossom and sewing with her mother."

PROFESSOR MURRAY. "This comes to me like a scene—don't think it's a picture. Some children sitting under apple trees in blossom. I should think French, but I'm not sure—not getting it clear. One of them sewing, bending down over sewing."

[I quote this as a case of purely visual impression, like a picture, with no interpretation.]

102. *Subject*. MISS AGNES MURRAY (agent): "I think of J. M. A. H., and B. and I crossing in a little gondola from Villa Serbelloni to Varenna on a very beautiful day."

PROFESSOR MURRAY. "I think it's Italian. I'm not getting it clearly. I think it's that place on the Italian Lake that we stayed at—a beautiful hotel on Como—Villa Serbelloni? No, I can't get anything very clear—Too many of them—conjurers—buying umbrellas—crossing the lake in a steamer."

[I quote this as an example of the place intended having been apprehended, small remembered associations with it present themselves. But the one thought of by the agent does not emerge. Perhaps it had been normally forgotten and the telepathic impression was too weak to force it forward.]

102A. *Subject*. MISS AGNES MURRAY (agent): "I think of the boy in [Masefield's] *Daffodil Fields* arriving in the camp in America, finding them all drinking, swearing, gambling, and him being given a beautiful horse."

PROFESSOR MURRAY. "I think it's Masefield—I think it's

Masefield serving in the bar in New York and being surrounded by coarse swearing people.—No, I don't think that's it—not the bar in New York, somewhere else—I'm sure it's very nearly that. I think it's Masefield and I think it's a boy and there's an atmosphere of cursing and swearing and gambling and someone very miserable—America.”

[Here Professor Murray began by substituting an experience of Masefield's own life for a similar experience of one of his heroes. Masefield was once bar-tender in a New York saloon.]

103. *Subject.* MISS AGNES MURRAY (agent): “I think of Denis climbing a chimney in North Wales, and Whitehouse hanging on a rope fallen off, and Basil on the tip end of all.”

PROFESSOR MURRAY. “It's Denis and Whitehouse climbing. Whitehouse very frightened and uncomfortable.” (“More?”) “I think that Denis is going up a chimney and Whitehouse dangling. Not Switzerland. The Lakes or somewhere in England.”

104. *Subject.* MR. BASIL MURRAY (agent): “I'm thinking of going to *The Title* with B. and Mr. Margoliouth and Dad, and it was a wet night, and I had to go on in front.”

PROFESSOR MURRAY. “I get a faint feeling of some sort of expedition in the wet—Wait—Oh it's when we went to the Arnold Bennett play.”

(This is right.)

105. *Subject.* MR. BASIL MURRAY (agent): “I'm thinking of Fanny in [Miss Austen's] *Sense and Sensibility* disputing with her sister because her sister said that she was not practical enough, and would be no good as a wife.”

PROFESSOR MURRAY. “I think this is a book—a sort of old-fashioned domestic atmosphere. I don't think it's the *Irish Memories*—nothing like as breezy—An argument. I don't think I shall get it.” (“Can you give author?”) “Might be Miss Austen.”

106. *Subject.* MR. GEOFFREY CURTIS (agent): “I think of Philoctetes when his bow was stolen by Neoptolemus on the shores of Lemnos.”

PROFESSOR MURRAY. "This is Greek—Well I don't suppose you see it that way, but I'm getting quotations :

ὦ πῦρ σὺ καὶ πᾶν δαίμα καὶ πανουργίας
δεινῆς τέχνημ' ἔχθιστον."

(Right.)

107. *Subject.* LADY MARY MURRAY (agent): "This is the people in Dante's *Inferno*, in Limbo, walking about. The quiet old people of the classics, Virgil and others."

PROFESSOR MURRAY. "This is another quotation :

'O anima cortese Mantovana.'

[The quotation is Beatrice's address to Virgil in Limbo when she goes to ask him to guide Dante.—*Inferno*, III. l. 58.]

March 8, 1919.

108. *Subject.* MISS AGNES MURRAY (agent): "Driving along the road to Apremont—nothing but ruined villages; and seeing a black sentry standing on a heap of ruins."

PROFESSOR MURRAY. "This is you driving a Limping Lizzie

It's—I think it's you driving a car in France through a country that's been devastated by the war. Villages broken down. Oh yes, you stop and talk to a French soldier—Senegalese or a nigger of some sort. Ought I to know the exact place? I should have said some place on the road to Metz."

(It was on the road to S. Mihiel. [Miss Murray said]: "I meant an American Black—I thought of speaking to him and asking the way.")

109. *Subject.* MISS AGNES MURRAY (agent): "I think of President Wilson and Megan Lloyd George in a yacht cruising round Italy (said Italy, meant Sicily) and being entertained by Polyphemus."

PROFESSOR MURRAY. "This comes to me quite straight as a quotation from Theocritus :

ὦ τὸ καλὸν ποθορεῦσα τὸ πᾶν λίθος, ὦ κνανόφρυν Νύμφα.

It's Polyphemus to Galatea. It's Polyphemus—oh it's a made up thing—some modern girl going there in a yacht and Polyphemus speaking to her. Ought I to say when

she is? In a yacht cruising about—I don't think a character in a book—Oh Elizabeth Asquith—Oh I don't know—I suppose Miss Lloyd George—” (“Person with her?”) “Wade Gery.”

110. *Subject.* MR. BASIL MURRAY (agent): “I'm thinking of Mr. Wade Gery dreaming that he's flying on the back of a white gull into a black cloud—and when he wakes up he's in hospital cart in Mesopotamia.”

PROFESSOR MURRAY. “I think it's a man in a hospital in bed, and he's sort of sitting up in bed and smoothing his forehead, trying to recover a dream he's had—a dream [of] flying into some sudden great black thing—somehow rushing into a big black cloud or something.” (“Who it was?”) “Oh—well—no—Wade Gery comes into my mind, but I don't . . .”

(NOTE.—Professor Murray said [after the experiment]: “I could have got the gull—because I got him on a flying machine, but knew it wasn't that.”)

111. *Subject.* MISS BEATRICE ROSE (agent): “I think of Harry Vardon practising putting carefully at St. Andrews, solving that he'll win the championship a sixth time.”

PROFESSOR MURRAY. “Somebody practising golf—Do not think I can get who it is—Should think at St. Andrews. Ought I to see who it is? The only person I can think of is Andrew Lang.”

[Mr. Andrew Lang lived at St. Andrews.]

112. *Subject.* LADY MARY MURRAY (agent): “This is that officer at Palermo who, when the troops wouldn't cross the big open street, took a chair and sat in the middle. Shots sweeping down the street.”

PROFESSOR MURRAY. “This is quite different, it's Italian.” [The immediately preceding experiment—a partial success—was concerned with Mesopotamia]—Garibaldi—no it's the officer sitting in the chair and smoking the cigarette.”

May 29, 1919.

113. *Subject.* MISS AGNES MURRAY (agent): “King George V. watching a tennis match at Ranelagh with [Mr.] Asquith and General Smuts.”

PROFESSOR MURRAY. "I get an impression of Maylike people. I get the King and Mr. Asquith at some function or other—awfully blurred—I should think looking on at a tennis match."

114. *Subject.* MISS AGNES MURRAY (agent): "King Charles I. riding on a white horse in red trappings, riding over the border to visit Mary Queen of Scots."

PROFESSOR MURRAY. "This is historical. It's a Vandyke picture Charles I., or rather Charles as in the Vandyke picture riding somewhere. Oh he is riding to Scotland to get in the civil war." (LADY MARY MURRAY: "It's nonsense.") "Is he going to elope with Mary Queen of Scots?"

(Agnes and all the company were thinking of the Vandyke picture.)

December 3, 1919.

115. *Subject.* MISS AGNES MURRAY (agent): "I think of Mr. Spooner driving along Holywell in a very high two-wheeled buggy."

PROFESSOR MURRAY. "It's somebody driving an Australian buggy—sort of high two-wheeled thing—Driving on a sort of muddy, wet day, down Holywell. Ought I to know who it is? I should say a young American. No impression."

([Miss Murray] "thought of the mud, but did not say so.")

116. *Subject.* MISS AGNES MURRAY (agent): "I think of Beatrice and Dante walking along by the Tiber and feeding pigeons."

PROFESSOR MURRAY. "I think it's Italian—I think—What's the book. I think it's—Oh Dante's book about Beatrice, a description of his walking with Beatrice by the Arno." ("Not quite it.") "It's Dante walking with Beatrice, and I think it's by a river. I can't get any thing more."

[I quote this as probably a case of interference by the 'supra-liminal consciousness.' For if it was a real Dante and Beatrice out of a book, the only river they could have been walking by was the Arno.]

December 20, 1919.

117. *Subject.* MISS AGNES MURRAY (agent): "I think of the Grecian runner bringing the tidings of Marathon, delivering his message and falling down dead."

PROFESSOR MURRAY. "—think not—Oh—yes it's somebody running—running with news; it's a Greek thing—I should say he was running to Athens with news of Marathon. Guessing: does he drop dead at the end?"

118. *Subject.* MISS AGNES MURRAY (agent): "I think of the four riders of the Apocalypse riding on their horses through the night—Death and disease and two others riding towards Paris."

PROFESSOR MURRAY. "Is it cavalry galloping at night? Funny—I first thought it was going to be a Walkyrie ride, and then I think of it as French somehow—I don't think I'll get it clearly. It's people riding hard at night, and it's in France."

December 27, [1919 ?]

119. *Subject.* MISS AGNES MURRAY (agent). "I'll think of Aserpine playing in a field of flowers and Dis riding on a black horse and fetching her away to the underworld."

PROFESSOR MURRAY. "I may say that I'm thinking strongly of the Homeric hymn to Demeter about Persephone being carried away."

120. *Subject.* MISS AGNES MURRAY (agent): "I'll think of Queen Elizabeth having a tea party at Windsor, and they're seated on the ground eating sugar cakes."

PROFESSOR MURRAY. "Is it something grotesque? I should think it was Queen Elizabeth dancing a Jaz or something like that—Having afternoon tea with a great crowd of people—Windsor Castle." ("What eating?") "Prawns—don't know."

121. MISS AGNES MURRAY (agent): "I'll think of a shepherd sitting with Elizabeth Asquith on a rock in Sicily reading *Tronius*."

PROFESSOR MURRAY. "I may not get this. I get a sort of feeling of Theocritus, shepherds in Sicily singing—a shepherd with a pipe under a rock in Sicily—Something

absurd about it—is he reading a book—Oh it's some—it's some quite modern young woman with him—I don't know—I should say Elizabeth Asquith." ("What reading?") "*Trojan Women.*"

122. *Subject.* MISS AGNES MURRAY (agent): "I think of : drive in my ambulance that I went over devastated country—howling snow-storm. Got off and had supper with Frenel Poihus."

PROFESSOR MURRAY. "Atmosphere—awful cold, storm, desolation—you driving an ambulance at night in storm—not sure snow. Very stormy night in the devastated country. Meeting some Americans?"

123. *Subject.* MISS AGNES MURRAY (agent): "A scene a the end of the new Galsworthy (*Saint's Progress*) where Moll is binding sheaves and Jemmy Post comes up and speaks t her."

PROFESSOR MURRAY. "I should say a book—I don't thin it's a book I've read . . . I should think a sort of rusti scene, a girl in a corn-field and a young man—I should like to get at the author—No—I should say English an modern—I think she's carrying sheaves of corn."

124. *Subject.* MISS AGNES MURRAY (agent): "The Gree quotation which describes Hector leaping over the wal of Troy and his face was like sudden night."

PROFESSOR MURRAY. "Oh this feels like Homer—

"Ἐκτωρ, ὅσσε δέ οἱ πυρὶ λαμπετοῶντι εἴκτην."

(Wrong quotation. She meant ὁ δ' ἐρεμνῆ νυκτὶ εἰκόσος).

125. *Subject.* PROFESSOR M'DOUGALL (agent): "I'll think a scene in [Hardy's] *Tess of the Durbervilles*, where Tess driven violently down the hill by that wretched man."

PROFESSOR MURRAY. "I should say this is a book—I thin it's Hardy—sort of tragic—I should think it was *Tess*—can't get it—when she's in the cart and the horse ir pales itself on a pole."

(Wrong scene.)

December 26, (1921 ?)

126. *Subject.* MR. BASIL MURRAY (agent): "I'll think of t

singing in *The Wasps*, when the Athenian citizens, dikasts, come and sing outside Bdelycleon's house, and Philocleon tries to climb out to them."

PROFESSOR MURRAY. "I think it's Greek—I think it's Aristophanes—it's a chorus of Gerontes—the people in *The Wasps*."

[The Gerontes—old men—were dikasts.]

April 22, 1923.

127. *Subject*. MR. BASIL MURRAY (agent): "I'm thinking of sailing that boat with T. Wade Gery down the Weir last term, and diving out and swimming to the bank."

PROFESSOR MURRAY. "The boat being caught in the Weir at Godstowe when you were with Wade Gery. I got the boat being crashed up."

128. *Subject*. MR. BASIL MURRAY (agent): "I am thinking of a scene in *The Shadow of a Titan*, in which a young woman plays chess with a young man to see if he will marry her, and while he is out of the room she moves a bishop to cheat and wins."

PROFESSOR MURRAY. "It's a thing in a book. I've got at present; I think it is, the Arch of—It is a very unpleasant sort of book violent people playing chess about something preposterous. It's a man and a woman playing chess and they are playing for a wager of some kind. Whether he shall marry [her], and I think he is to, and he rushes away and fled the country or something like that. She cheats—but probably I'm guessing."

129. *Subject*. MR. BASIL MURRAY (agent): "I'm thinking of the sinking of the *Titanic* and one of the bandsmen who was playing *Nearer my God to Thee* to nearly the end, and then he lived off and sat on his 'cello until he was picked up by a boat."

PROFESSOR MURRAY. "This is something awful—a big shipwreck. I suppose it is the *Lusitania*. No it's not the *Lusitania*. It's the thing that ran into the iceberg—the *Titanic*. Singing of hymns. Is there some special incident? ("Yes.") I feel as if somebody was crashing

a fiddle or a 'cello or breaking up a musical instrument—people being picked up out of the water—saved. Don't much think I shall get it clearer than that."

([Professor Murray said afterwards] "I knew it was *Nearer my God to Thee*. I ought to have said it.")

May 26, 1923.

130. *Subject*. MR. DENIS MURRAY (agent): "That Leyland car coming up the finishing straight at Brooklands in the last race."

PROFESSOR MURRAY. "I've got a great feeling of something whizzing along at a tremendous speed—aeroplane or car—motor-car racing, finishing up. It's a race, I suppose, at Brooklands, and the thing's coming at a tremendous speed—just at the finish."

November 22, 1923.

131. *Subject*. MRS. ARNOLD TOYNBEE (agent): "I think of William IV. driving round to drop the German King at his lodgings before attending dinner."

PROFESSOR MURRAY. "A sort of royal coach. Quite unlike the things you generally do. I get a sort of feeling of a Hanoverian King driving in a coach—I should say it was William IV. Is he driving to meet the King of Prussia—or something like that—in Germany?"

132. *Subject*. LADY MARY MURRAY (agent): "Poem I have just read in *Punch* of the dead men at Oudenarde lying under the earth, and hearing the English coming tramping and singing."

PROFESSOR MURRAY. "It's Rupert Brooke waiting for the English bugles coming and blowing up the Hellespont. It's the poem—It's crowds of them, it's the English soldiers—all the English dead killed in earlier wars hearing the English coming back."

(Masefield's book says it, and Agnes wrote a poem.)

133. *Subject*. MR. BASIL MURRAY (agent): "Mother and Tony [a little grandson] going on the engine with Mr. Peek to pick up bluebells at Bacton."

PROFESSOR MURRAY. "Tony driving an engine. I get him on an engine with Mr. Peek, stopping and getting out

[to] pick flowers. I got him first with Stephen—Not Overstrand, not North Walsham—Don't think I know [where]."

January 27, 1924.

134. MRS. ARNOLD TOYNBEE (agent): "I think of the little Tartar wrapping himself up by the muddy river." [In some book, not recorded.]

PROFESSOR MURRAY. "I feel puzzled about this—not exactly Russian, but it's got that sort of feel. I should say it was Russia or some place like that—a great muddy river and a little man wrapping himself in a cloak by the side of it." ("Anything more about the little man?") "I should say he was a Tartar."

135. *Subject.* MRS. ARNOLD TOYNBEE (agent): "This is Herr von Delius reading a lecture on Klopstock in his kitchen."

PROFESSOR MURRAY. "No, I don't get that."

MRS. ARNOLD TOYNBEE: "Oh I thought you'd get this quite clear."

[Quoted for the sake of the agent's impression.]

136. *Subject.* MRS. ARNOLD TOYNBEE (agent): "I think of Achilles running with the birds." [In the *Iphigenia in Tauris*, 434 ff.]

PROFESSOR MURRAY (long pause). "I should say it was ancient Greek. I think it's Achilles in a chariot—riding a horse—but he never did ride on a horse. Is that right?" ("Nearly right, not all or quite right.") "I don't think I shall get any more."

137. *Subject.* MR. BASIL MURRAY (agent): "I think of *Times* correspondent in Palatinate carrying dying Separatist to seat at side of café when murdered."

PROFESSOR MURRAY. "I should get this. I've got atmosphere quite strongly. It's people being shot in a café—it's the—Separatists in Palatinate being shot" ("Special incident?") "Special incident? I should say it was *Times* correspondent in Palatinate carrying the person away."

April 6, 1924.

138. *Subject.* MR. BASIL MURRAY (agent): "I'm thinking of

the Atlantic Fleet off Rosyth entertaining the Swedish squadron and firing a salute as the Swedish boats sailed under the Forth Bridge."

PROFESSOR MURRAY. "I should say it was ships—It's a great fleet of ships, and I think—they're certainly not fighting a battle—I think they're having some sort of festivity—It's quite near land—not in the open sea."

139. *Subject.* MR. BASIL MURRAY (agent): "I'm thinking of the scene in Conrad's *Chance*, when the sailor comes to meet his young woman at the Commercial Hotel in the London Docks, and goes in and has a sort of renunciatory scene with her—makes a great storm."

PROFESSOR MURRAY. "This is a thing in a book. I can't get it properly, but I've got a sort of atmosphere of the book. I think it's the Conrad where that old swindler went to sea in a ship." ("The scene?") "I'm afraid I can't, etc.—I'm awfully near it, but I can't quite get it. I think it would be some one coming up the companion." [This describes the right book but the wrong scene.]

140. *Subject.* MR. BASIL MURRAY (agent): "I'm thinking of Byron standing on the Island of Salamis and seeing an American film company staging a battle."

PROFESSOR MURRAY. "This has got something wrong in it, hasn't it? Isn't it something absurd? I don't know—I feel it offends me—but it starts with [Blank here—probably should be *The Isles of Greece*] the Byron thing—Well I think it's something—

The mountains look on Salamis,
And Salamis looks on the sea, etc.

And then something wrong—something to do with a cinema or American tourists."

[In the quotation from Byron's *Isles of Greece* Salamis is substituted for Marathon.]¹

¹ An account of some experiments with Professor Murray of special interest, carried out after this paper was in print, but mentioned when it was read, will be found in Appendix II., on pp. 336-341 below.

SOME REMINISCENCES OF FIFTY YEARS' PSYCHICAL RESEARCH.¹

BY SIR WILLIAM BARRETT, F.R.S.

"Science is bound by the everlasting law of honour to face fearlessly every problem that can fairly be presented to it."—LORD KELVIN.

JUST fifty years ago this month I first began a serious and systematic investigation of psychical phenomena, and was so impressed with the supreme importance of the subject that so far as my time and strength permitted I have continued the investigation to the present time with unabated interest. Of course, other and far abler men both preceded me and worked contemporaneously with me; to some of these I will refer directly.

EARLY PSYCHICAL RESEARCHERS.

By psychical research I mean the critical investigation, and, where possible, the verification of alleged supernormal phenomena, or of hitherto unrecognised human faculties.

So far as regards narratives of spiritistic phenomena, these of course go back to remote ages, and records are to be found in many different countries. Years ago Andrew Lang had several conversations with me on the value of the S.P.R. devoting some time to historical research on this subject, for he attached great importance to the fact of the wide diffusion, both in space and time, of phenomena similar to those we are now engaged in investigating.²

¹ Read at a Private Meeting of the Society on June 17, 1924.

² The laborious and admirable work by William Howitt, entitled *History of the Supernatural*, is well known and should be consulted by all who are interested in the history of psychical research. It made a great impression on me when I read it some fifty years ago. The term *supernatural* should, however, have been *supernormal*, as all phenomena—however novel and inexplicable they may appear to be—are really *natural*; only God is above and beyond Nature.

Biblical references show that Spiritualism was rampant in the early history of the Jews; King Saul himself being a notable spiritualist, consulting his medium at Endor. As I have said elsewhere, before science had established a universal reign of law or of the great world order, the pursuit of these spiritistic phenomena was justly condemned by the ancient prophets as likely to lead to intellectual and moral confusion. It seems probable, however, that many of the prophetic writings were done automatically, as in the book of *Chronicles* David says that the instructions he gave regarding the building of the Temple were not his own ideas, for "the Lord made me understand in writing *by his hand upon me.*"¹

One of the first psychical researchers of whom I can find any report was the learned and famous German Jesuit, Fr. A. Kircher. In his Latin folios, published in 1640, he discusses the cause of the motion of the 'pendule explorateur' (a little ball or ring suspended by a string held by one hand) and of the forked divining rod, both of which at that time were the subject of acute controversy. Kircher showed that if the 'pendule' or the rod were held, not by the hand, but by a rigid support, no motion occurs under any circumstances. He was thus led to discover the principle of unconscious muscular action, a discovery claimed two centuries later by the distinguished French chemist, Chevreul, and by Dr. W. B. Carpenter subsequently.

Some twenty years after Kircher's work appeared, one of the founders of the Royal Society, the Hon. Robert Boyle, 'the son of the Earl of Cork and the Father of Chemistry,' in his *Philosophical Works* discusses the question of the divining rod, and urges further experiments to test its value in the discovery of mineral veins, for the evidence he collected was conflicting. He remarks that eye-witnesses, who were far from credulous, told him of the great value of the rod, and one gentleman in whose hand it moved when he passed over a vein of ore, affirmed "that the motion of his hand did not at all contribute to the inclination of the rod, but that sometimes when

¹ See I *Chron.* xxviii. 19.

he held it very fast it would bend so strongly as to break in his hand.”¹

In one of the first volumes of the *Philosophical Transactions of the Royal Society* Boyle asks the question whether anyone could inform him “whether diggers do meet with the subterraneous demons which are said to inhabit the lead mines of Somersetshire, and in what shape and manner they appear?” In a subsequent number the famous Dr. Glanvil, also a Fellow of the Royal Society, replied that he lived near the lead mines in the Mendips, and that whilst the miners heard the knockings of the demons, and by following the directions of these knockings were led to plenty of ore, nevertheless he had not found anyone who had actually *seen* the demons or gnomes themselves, and therefore he could not describe their appearance or habits.² A curious fact is that these knockings are heard and the gnomes believed in by lead miners in various parts of England and Ireland. The simple scientific explanation of these sounds I think I have discovered, but it would take me too far to go into the matter here. The point I want to bring out is that Boyle and Glanvil and many of the early Fellows of the Royal Society were true psychical researchers; as Prof. de Morgan has said, “they set themselves to work to prove all things, that they might hold fast to that which was good; they bent themselves to the question whether sprats were young herrings and whether a spider could crawl through the powder of a unicorn’s horn.” They enquired whether there was any value in magnetical cures and any good in Kenelm Digby’s sympathetic powder. Even a century later the great Sir Isaac Newton describes in a series of letters—which I have seen, as they have been preserved by my friend, Mr. Blayny Balfour—how he spent much time and money in testing the value of certain alchemical powders which were said to turn lead into gold.

The early spiritualists really took the method of these pioneers of physical science. Though they might have

¹ Boyle’s *Philosophical Works* (1733), vol. i., p. 172 and 173.

² *Phil. Trans.*, No. 19, Nov. 1666; and Glanvil’s reply is in *Phil. Trans.*, vol. iii., 1668.

been frequently too credulous, yet what they aimed at was to collect facts however improbable they appeared to be, and as De Morgan says, "The spiritualists beyond a doubt are in the track that has led to all advancement in physical science; they have the spirit and the method of the grand time when paths had to be cut through the uncleared forests in which it is now the daily routine to walk. Their spirit was that of universal examination, wholly unchecked by fear of being discovered in the investigation of nonsense."¹

One of the earliest Fellows of the Royal Society, to whom I have already referred, was Dr. Joseph Glanvil; he was chaplain to Charles II. and a prebendary of Worcester. The historian Lecky describes him as "a man of incomparable ability." Speaking of one of Glanvil's works, Lecky remarks, "it would be difficult to find a work displaying less of credulity and superstition than this treatise." Glanvil's *Saducismus Triumphatus*, published at the end of the seventeenth century, discusses the evidence concerning witches and apparitions, and gives the fullest report of those remarkable poltergeist phenomena known as the 'Demon of Tedworth' or the "Disturbances in Mr. Mompesson's house in Wiltshire." Glanvil truly remarks that "matters of fact well proved ought not to be denied because we cannot conceive how they could be performed. Deceit and fallacy will only warrant a greater care and caution in examining." Glanvil had the warm support not only of Robert Boyle, but also of the famous Henry More.

In his record of the hauntings of the Epworth parsonage in 1716, and in his endeavour to get first-hand evidence of other supernormal phenomena, John Wesley—as Mr. J. Arthur Hill has said—"would have made an excellent member of the S.P.R.," and it is certainly surprising—as Mr. Hill adds—"to find in an earnestly religious man of that day, such as John Wesley, so much critical interest in our subject."

Coming to more recent times, the memoir of the eleventh Duke of Somerset, the great grandfather of our friend and

¹ Preface to *From Matter to Spirit*, pp. 18-20.

fellow-worker, Miss Ramsden, shows that the Duke was really a keen psychical researcher, for he critically examined several psychic cases, among others the well-known dream of a Cornish farmer, Williams, who on May 11, 1812, woke his wife and told her that he had dreamt he had seen a man shot in the lobby of the House of Commons, and described his appearance, etc. The dream was repeated, and told to several people; subsequently it was found that the details of the dream exactly corresponded with the facts connected with the assassination of Mr. Percival, the Chancellor of the Exchequer, on the eleventh May, the very evening Williams had his dream.¹ Percival's descendant—my venerable friend, Miss Percival of Chobham—has also given me a written contemporary record of this remarkable dream.

Among the Fellows of the Royal Society who warmly advocated the investigation of psychical phenomena, was Dr. Mayo, F.R.S., Professor of Physiology in King's College, London, whose writings on the subject, published about the middle of the last century, are well worth perusal, containing as they do many new and interesting facts, which at the present day seem little known.

This period was also notable for the great interest excited by mesmeric phenomena. The remarkable report of the committee appointed by the medical section of the French Academy of Sciences on this subject, together with the amazing phenomena to which they testify, excited widespread interest. Eminent English physicians and surgeons, such as Dr. Elliotson of St. Thomas' Hospital and Dr. Esdaile, presidency surgeon in Calcutta, made numerous contributions to our knowledge on this subject, especially as regards the therapeutic and analgesic power of mesmerism. Esdaile, as is well known, conducted a very large number of *major* surgical operations, absolutely painlessly, under the mesmeric trance; and if the use of chloroform as an anaesthetic had not been discovered about this time, the value of mesmeric trance in surgical operations would have been universally acknowledged. But

¹ See p. 335 in Lady Gwendolen Ramsden's *Correspondence of Two Brothers from 1809-1819* (Longmans & Co.).

in spite of the eminence of Dr. Elliotson and others, mesmerism was nevertheless denounced by the profession as a whole, and the *Lancet* called it "an odious fraud." It was not until Braid of Manchester employed the word *hypnotism* instead of mesmerism—and thus dissociated the subject from Mesmer, who was more or less of a quack—that the medical profession began to treat the subject with less contempt. Braid also gave a reasonable explanation of the phenomena, but subsequently this proved to be inadequate to account for all the facts. The valuable experimental work of the continental hypnotists, and of our own members, Edmund Gurney, Dr. Lloyd Tuckey and Dr. Milne Bramwell, have now placed hypnotic treatment among the recognised therapeutic agencies of the medical profession.

FOUNDATION OF THE SOCIETY FOR PSYCHICAL RESEARCH.

Some twenty-five years before our Society was founded a few of the younger Fellows of Trinity College, Cambridge, chief of whom was Mr. B. F. Westcott—afterwards the famous Bishop of Durham—started a 'Ghost Society' very much on the lines of our S.P.R. In our *Journal* for April last year I gave the object and the brief history of this Society, which included among its members several Cambridge graduates who subsequently became eminent, such as Archbishop Benson, Prof. Henry Sidgwick, and others. I will hand over for preservation among the archives of our Society the original document of the 'Cambridge Ghost Club' (as it was called), given to me by my friend the Archdeacon of Dublin.

As regards the foundation of our own Society, I have corrected elsewhere the misunderstanding which Prof. Richet and others have fallen into;¹ and also I wrote, by request, a fuller account of the early history of our Society.² Though it is true I happened to be the chief instrument in the foundation of our Society in 1882—and of kindred societies in Canada and the United States in

¹ See *Journal of the S.P.R.*, vol. xxi., October 1923, p. 139.

² See *Light*, June 21, 1924.

1884—yet the high position and respect the S.P.R. has won is chiefly due to Sidgwick, Myers, and Gurney, the three great pillars upon which the edifice of our Society was originally built. These eminent men were unlike in many ways: Sidgwick by his adhesion to the S.P.R. greatly impressed the academic world, for his influence, wisdom, and caution were widely recognised; Myers by his enthusiasm, brilliant talents, and profound intuition, was the corner stone of the S.P.R. till his death in 1901: Gurney with his industry and immense range of knowledge was essential to the early progress and stability of our Society.

Crookes was really the first scientific man to devote his experimental skill, from 1870 to 1874, to the critical investigation of the physical phenomena of spiritualism. It is pitiful to think of the scientific ostracism to which he was subjected and over which his genius eventually triumphed. I am not, however, surprised at the Royal Society refusing to publish his spiritistic investigations, for, a few years later, my modest paper read before the British Association in 1876 was refused publication by scientific societies, of which I was member, on the very natural ground that science dealt with the evidence furnished by our recognised senses, whereas my paper dealt either with phenomena which transcended the usual channels of sense or with phenomena that transcended the material world.

EARLY STEPS IN PSYCHICAL RESEARCH.

Many friends have asked me how I first became interested in psychical research. Perhaps I may be forgiven for relating an old story. Between the years 1862 and 1867 I was assistant to Professor Tyndall at the Royal Institution. The atmosphere surrounding my early years there was entirely opposed to any belief in psychical phenomena. Faraday, to whom electrical engineers owe the source of all their vast undertakings—yet who lived and died a poor man—Faraday I saw almost daily, before he left the Royal Institution and went to live at the Hampton

Court Cottage given to him by the Prince Consort. I can never forget the debt I owe that famous man for his generous kindness and guidance to a young ignoramus like myself. Faraday had published about 1855 his famous experiment on table-turning, showing how unconscious muscular effort accounted for what *he* saw. A little later he publicly declined to sit with the medium Home, saying he had lost too much time over such matters already. Tyndall also had denounced spiritualism as an imposture. Both Huxley and Herbert Spencer were frequent visitors to the Royal Institution laboratory, and both of these eminent men treated all psychical phenomena with contemptuous indifference. Among other frequent visitors was an Irishman, Mr. John Wilson, who invited me to spend my vacations at his place in County Westmeath. For a couple of years I did so, and found to my astonishment that Mr. Wilson was a firm believer in—and experienced investigator of—mesmerism, as it was then called. He showed me some most extraordinary experiments upon a sensitive subject from his estate. I was naturally incredulous and asked to be allowed to repeat the experiments myself, selecting another subject. We found a young uneducated Irish girl, who proved to be extremely sensitive. In the mesmeric trance—in spite of every precaution that I took to prevent deception—whatever sensations I felt, whether of touch, taste or smell, were transferred to the subject, and, moreover, ideas and words which I thought of were reproduced more or less accurately by the hypnotised subject. A brief account of some of these experiments may be found in the first volume of our *Proceedings*, p. 240.

When I returned to London I repeated these experiments with a couple of boys whom I found susceptible to hypnosis. These experiments revealed to me the extraordinary power of either verbal or silent suggestion upon the hypnotised subject. For instance, placing a pair of shoes upon the table, I told one of the lads that I was going to float round the room and pointed to the position I was supposed to have reached near the ceiling. Then, clapping my hands, I suggested that I was safely back in

my shoes on the table. The boy stared at me with incredulity and related afterwards, both to me and to others, that he had really seen me floating round the room. A similar result was obtained by me with another subject when I was on a visit to America in 1884. Hence I was led to believe that spiritualistic phenomena, when not fraudulent, were really due to the *hallucination* of the observer; that, in fact, the phenomena, such as Home floating out of the room or putting his hands into the fire, were really *subjective* and not objective. I had been in correspondence with Mr. Crookes on scientific matters so far back as the year 1864, when I published in the *Philosophical Magazine* my first scientific research. In 1870 Crookes began his experiments with the famous medium D. D. Home; soon after this he wrote to me (in a letter which I have kept) as follows:

“ May 14, 1871.

DEAR MR. BARRETT,

I must have some conversation with you respecting these obscure phenomena. If you can help me to form anything like a physical theory I should be delighted. At present all I am quite certain about is that they are *objectively* true. I have had all my wits about me when at a seance, and the only person who appeared to be in a state of semi-consciousness is the medium himself. The other evening I saw Home handling red-hot coals as if they had been oranges. Will you favour me with a visit one evening when you are disengaged.

Very truly yours,

WILLIAM CROOKES.”

I had several interviews with Crookes, but unfortunately had no opportunity of any sitting with Home, and a year or two later I was appointed to the Chair of Physics at the Royal College of Science, Dublin. In 1874 I made my first acquaintance with the physical phenomena of spiritualism, and was able to put to the test my preconceived theory of hallucination, which was gradually dispelled, and I became convinced of the *objective* reality

of the phenomena. It so happened that one of the London weekly reviews had sent me about this time a number of books on spiritualism to review, and in a lengthy review I suggested the hallucination hypothesis, but in a postscript added that this view was open to serious doubt.

The record of my experiments in Ireland on the physical phenomena of spiritualism was read before the S.P.R., and will be found in our *Proceedings*, vol. iv., p. 25, etc. I was singularly fortunate in these early experiments on physical phenomena, as the mediums were personal friends, and the experiments took place in *full light* either in my own house or in that of my friends. After this lapse of time I think I may mention without indiscretion that the name of the young medium I called Florrie was Miss Clark; her father, a leading London solicitor, had taken a furnished house near my residence in Kingstown. The house belonged to Mr. James Wilson (brother of my Westmeath friend), who asked me to call on Mr. Clark. Mr. Wilson was the father of the late Commander-in-Chief, Sir Henry Wilson, an old student of mine. My prolonged investigation of Florrie Clark, in *full daylight*, and other experiments with the family of the Lauders (one of the leading photographers in Dublin), so impressed me with the supreme importance of the whole subject that I determined to let no opportunity pass of pursuing these investigations. Shortly afterwards I prepared a paper on the various psychical phenomena I had witnessed; this was accepted by and read before the British Association in 1876.¹

Verbatim reports of my paper were given both in the local and the spiritualist journals of Sept. 1876.² It will be seen from the reports of this paper that, while some notable scientific men such as Dr. W. B. Carpenter vigorously opposed my paper, others still more notable spoke in my support; such, for example, as Mr. (afterwards Sir William) Crookes and the late Lord Rayleigh (both of whom

¹ The greater part of this paper (which the British Association refused to publish) will be found in *Proceedings of the S.P.R.*, vol. i., p. 23; *et seq.*

² These are preserved in a scrap-book, which I still have.

subsequently became Presidents of the Royal Society), also the president of the Section, Mr. A. R. Wallace, and the distinguished anthropologist Col. Lane Fox, who afterwards became General Pitt-Rivers. I may add that a warm letter in support of my paper was received by me from the famous astronomer who subsequently became Sir William Huggins, also a President of the Royal Society.¹ The main object of my paper was a plea for a scientific committee to examine the validity of the evidence that I had adduced on behalf of what appeared to be thought-transference and other supernormal phenomena, especially those relating to spiritualism. Unfortunately, in the violent dispute which followed between Carpenter and Wallace, my resolution was lost sight of.

For weeks a great controversy ensued in the London *Times*, which, like all the other newspapers (with the exception of the *Spectator*), poured ridicule upon my daring to bring such a contemptible subject before the British Association. Among other of my vigorous opponents in *The Times* were Professors Lankester and Donkin (now Sir Ray and Sir Bryan); both of these distinguished men are still living and have not abated their hostility to the subject. Here it is interesting to note that in 1876 I ventured to state in *The Times* that before we could hope to arrive at any definite conclusion as to the origin of spiritualistic phenomena, we must first ascertain whether such a thing as the transfusion of thought between sitter and medium really existed and its extent; and, secondly, whether such a thing as clairvoyance or a transcendental perceptive power had any foundation in fact? Both these questions have now been answered in the affirmative, and this renders the above caution the more necessary.

'Book tests' show that Richet's theory of cryptesthesia, which seems to be another name for clairvoyance, needs serious consideration. The critical examination of Stainton Moses' script by our member Mr. Trethewy has shown that many apparently spirit communications are transcripts

¹ It is interesting to note that of the few scientific men who then had the courage to support my B.A. paper, no less than four received the Order of Merit.

of some matter which had been written or printed, it may be long ago, and, as a rule, only to be found in places inaccessible to the medium. *Nothing* seems able to elude the prying eyes of the transcendental self, whether it be incarnate or discarnate. In many sittings of to-day the same thing holds good.¹ For example, that excellent but illiterate medium, Sloan, of Glasgow, when in a trance state will often give details concerning a sitter whom he has never seen before and whose name even he does not know, yet in subsequent investigation many of the facts stated by the medium will be found printed, either in *Who's Who* or other books to which the medium appears to have had no possibility of access.

Hence, with these and other facts known to us, we must realize that, however trustworthy may be the *evidence* we obtain of supernormal phenomena, the *interpretation* of that evidence may in time alter—as our experience grows wider, and our knowledge of human psychology more extensive and profound. Albeit I am personally convinced that the evidence we have published decidedly demonstrates (1) the existence of a spiritual world, (2) survival after death, and (3) of occasional communications from those who have passed over.

It will be obvious that in the present paper I cannot give even an outline of the evidence that has led me to the foregoing conclusions. The so-called physical phenomena afford striking evidence of amazing supernormal power, but no proof of the survival of human personality can be derived from them. In fact, many people believe that they are simply due to the 'psychic force' of the medium and sitters; however, this is an opinion I do not share. Even the so-called 'ectoplasm,' which is seen issuing in certain cases from the body of the medium and sometimes taking human shape, may be attributed to some mysterious, unknown, and unconscious power possessed by the medium. There can be little doubt that the source of the ectoplasm is in some way derived from the human organism; but I believe

¹ The most amazing illustration of telesthesia, or travelling clairvoyance, I have ever known I hope to read before the S.P.R. shortly.

an unseen and intelligent supernormal agency *external* to the medium causes this ectoplasm to take definite forms and apparent vitality. I myself have not had the opportunity of ever witnessing these ectoplastic phenomena, and therefore I defer to the opinion of such experienced and critical observers as the late Dr. Geley, Prof. Richet, and others.

PHYSICAL PHENOMENA.

As regards the ordinary physical phenomena I have had a long series of experiments with various mediums, going back to the time of Dr. Slade in 1876. Slade always sat with me in broad daylight, and though I have little doubt that he not unfrequently resorted to trickery, yet there was also no doubt he had genuine and remarkable mediumistic powers; his so-called exposure by Prof. Ray Lankester was quite inconclusive. Those who are interested in the matter will find in Stainton Moses's *Psychography*, pp. 104-110, a record of some of my experiments with Slade, in part quoted from the *London Times* of September 1876, and also a careful report written by my friend Mr. Conrad Cook, who accompanied me to a sitting with Slade in August 1876.

The only case of 'materialization' witnessed by me, which seemed to be inexplicable by fraud, occurred with the medium, Husk, many years ago. It may be worth while describing this experiment as it has never been published.

Mr. Wm. de Morgan had kindly lent Myers and myself his studio in Cheyne Row, an almost bare room, furnished with a small deal table about 3 feet by 5 feet, and a few chairs. After dinner Myers brought Husk to Cheyne Row in a hansom cab, and we immediately sat round the table. There were six present including the medium. William de Morgan and his sister (being sceptics), were placed in control of the medium, whose feet were tied to the legs of the table, and his hands were grasped by the sitter on each side. Mrs. de Morgan (their mother), at facing Myers, and I sat at the other end of the

table and had control of the light. After the wrists of all present had been loosely joined together by silk thread, I blew out the candle and phenomena very soon occurred. The medium went into a trance, lights, very like fireflies, were seen darting about over our heads, movement of some objects in the room was heard, and a deep guttural voice spoke to us calling himself 'John King.' In reply to our request he said he would try and show himself. A violent convulsion of the medium occurred, and suddenly right in front of me appeared a clothed human figure from the waist upwards: the lower part of the body might have been concealed by the table. The face was illuminated by a bluish light which seemed to issue from an object held in the hand of the materialized figure. The face was undoubtedly a living one, for I saw its eyes open and close and its lips move; I asked who it was and the guttural voice said "John King." It was a dark bearded and rather unpleasant face, quite unlike that of the medium. I exclaimed, "Do you all see the figure? I am going to light the candle," and immediately risked doing so. The figure vanished the moment the match was struck, and the medium was found in deep trance, lying back in his chair and groaning: when the medium had recovered he was sent home in a cab. On comparing notes, each sitter described the face according to the different aspects it presented from his or her position at the table. We found upon experimenting that it was impossible to reproduce the figure by leaning over the table, nor could the medium have put on a mask, as his hands were held the whole time and the tying of his legs and wrists were found intact. De Morgan asked Myers and myself to come the next morning and see if we could in any way imitate what we had seen. Though de Morgan remained somewhat sceptical, Myers and I both agreed that it was extremely difficult to explain the phenomena by trickery on the part of the medium, who, moreover, was found deeply entranced a few seconds later.

With regard to the so-called 'spirit photographs,' I have been extremely sceptical of their genuineness

until quite lately. Recently, however, experiments conducted by my friend Mr. de Brath, in one of which he kindly allowed me to take part, appear to afford *indubitable* evidence of supernormal psychic photography. This conclusion confirms the opinion held by some expert and critical experimenters, who have discussed their results with me. Of course faked 'spirit photographs' abound and are easy to produce; whilst heartless rascals exist who prey upon the grief of a credulous sitter. Healthy scepticism has therefore been inevitable and wise. But we shall never arrive at any knowledge of the conditions requisite for these and other marvellous psychic phenomena, until hostile incredulity becomes no longer possible. Then, as Sir John Herschel says, "occurrences which, according to received theories *ought not* to happen, are the *facts* which serve as clues to new discoveries."¹

These disputable subjects illustrate the importance of our society recognizing the fact that a difference of opinion—a *right* and a *left* wing—will necessarily have to exist among its different members. I mean that there are some who have been convinced at first hand, from their own experience, that the existence of certain psychical phenomena—especially those associated with spiritualism—admit of no doubt whatever, and are impatient with those who have not had this experience and are therefore more inclined to be cautious and even sceptical. The former class of our members wish to push forward and perhaps attach less importance to conclusive experimental evidence than they did at first: the latter class wish to go much more slowly and proceed step by step. This difference of opinion, though healthy, naturally leads to a divergence of interest in our subject, and from time to time threatens to break up the solidarity of our society.

Nor must we forget that psychical research, as stated in the original articles of our society, embraces far more than spiritistic phenomena, and I hope that our research officers will ever bear in mind the varied objects of our

¹ *Discourse on Natural Philosophy*, section 5.

society, which will be found printed in the first volume of our *Proceedings*.

Personally I am very anxious that earnest attention should be given to the so-called 'Reichenbach Phenomena,' wherein certain sensitives after long immersion in complete darkness perceive a luminosity emanating from the poles of a magnet and also from the human fingers. I have published in the *Philosophical Magazine*, and also in the early volumes of our *Proceedings*, the experiments which led me to the conviction that such phenomena do really occur under suitable conditions.

Another point, which I hope will sooner or later be the subject of further experiment, is the question of the old mesmeric hypothesis of 'effluence,' for which both Gurney and myself obtained what appeared to be satisfactory evidence forty years ago, and which Prof. Alrutz has in recent years confirmed.

The immediate work before us is to convince scientific authorities that various types of supernormal phenomena do *really* exist, and are capable of experimental proof. I do not think that the indifference of official science to our investigation, which has now replaced their former hostility, will be affected by an appeal to the *emotions*, such as the evidence obtained of survival after death. Science will approach the supernormal from an entirely different angle; it may possibly be pulled over the line of its present indifference by a growing recognition that telepathy does really exist. Unfortunately, the difficulty of finding suitable subjects both for telepathy and telesthesia is a great drawback. For this reason I am led to the conviction that the first movement of thought of official science in our direction will occur from the impossibility of finding any *normal* explanation of the phenomena of *dowsing*. And this subject is of all others the simplest and easiest to investigate. It has not only a wide practical importance, but it raises no religious opposition, even from the most timid of narrow-minded people. Moreover, the number of efficient dowers can easily be ascertained and experimented with. Having devoted more than twenty years to the critical investigation of this subject, I believe that it

affords the easiest and most conclusive evidence that a supernormal perceptive power—akin to clairvoyance—exists in certain persons, of either sex, of all ages and all degrees of education.

This faculty is to be found not only in various races of men, but appears to exist, as a new and necessary sense, in many of the lower types of life. I am convinced that the mysterious migration of birds, even of very young ones, over vast tracts of land and sea, and also the *homing* instincts of many birds and animals, will be found to be akin to the dowsing faculty in man.¹

DIFFERENCE BETWEEN PHYSICAL AND PSYCHICAL RESEARCH.

There is, of course, a fundamental difference between physical research and psychical research. The former deals with matter and energy, and the condition of the mind of the observer, whether he be sceptical or not, is of no consequence. The latter deals with the phenomena of the subconscious, and the mental attitude both of the experimenter and his subject, is of prime importance. An interesting illustration of the difference between the mental states in the two cases occurred to me some time ago. I happened to be staying in Edinburgh with that famous physicist, Professor Tait, when the news of the discovery of the telephone came to us by cable. I asked Tait what he thought of it. He replied, "It is all humbug, for such a discovery is physically impossible." When I asked him how it was that well-known men had asserted that they had heard speech transmitted a couple of miles through a wire, Tait replied it was "probably a case of the conduction of sound by long straight wires." A little later, when the telephone was shown at the British Association by Sir W. Thomson (afterwards Lord Kelvin) and experiments with it were successfully made, Tait's obstinate incredulity did not interfere with the success of the experiment. A similar instance occurred in Paris when the

¹ See Chapter Two of my little book *Creative Thought*, published by Watkins, Cecil Court, London, W.C.

Abbé Moigno, a well-known scientific writer, first showed Edison's phonograph to the Paris Academy of Sciences; the Abbé himself related to me what occurred. All the *savants* present declared, as Professor Tait did, that the reproduction of the human voice by an iron disc was physically impossible owing to the subtle wave forms produced by speech, though they admitted music might be so transmitted. The Abbé was even accused of having a ventriloquist concealed beneath the table. He left the chamber in disgust and told them to try the instrument themselves—which they did quite successfully in spite of their utter incredulity.

How different is the effect that is produced by mental environment in psychical phenomena is well known. Those experienced observers, Stainton Moses and C. C. Massey, have said, "the most unfavourable disposition to take to a medium is suspicion, and the most favourable is confidence." Sceptics may think that this is to deliver oneself over as a prey to the deceiver, and some men do certainly get taken in, but experience after a time leads them to discover their mistake. In the psychical world "faith," as Mr. Massey says, "is a condition of obtaining evidence, the key to the gate of the invisible world." By faith Massey means that a *sympathetic* state of mind establishes a rapport between the observer and the medium. The fact that we need no sympathy with our instruments, when testing a physical or chemical discovery, naturally leads the physicist or chemist to a state of scornful amusement, when told that his own attitude of mind is of importance in psychical research. But it appears to be a fact that even if at the back of our minds we entertain feelings of prejudice and hostility, we can hope for little success in psychic enquiry, however much we may disclaim the feeling of hostility. This, of course, does not mean an attitude of credulity or any relaxation of careful and critical observation.

All psychical researchers need to bear in mind that every sensitive or medium is a *suggestible subject*; if you go expecting fraud you may possibly create the very fraud you suspect. If you make preparations beforehand to lay

a trap for the medium, it is probable that both medium and experimenter will fall into the trap.

There is another aspect of our enquiry, known to most of us—that is, that psychical phenomena largely depend upon involuntary and not voluntary effort, upon the subconscious and not the conscious self. Even in the simple phenomena of telepathy it is the subliminal self that is operative. Further, I believe that the common practice of experimenters *energetically willing* the idea to be thought of, is of no value, and may indeed be detrimental to success. In the early experiments which Myers, Gurney, and myself conducted with the Creery children at Buxton we found that the best results occurred when no strenuous efforts were made. In fact, when we made the experiments as amusing as possible, we had the greatest success, though every precaution was taken to prevent collusion or signalling.

Another fact which seems to me brought out very clearly in our experiments is that psychical phenomena, whether of telepathy, clairvoyance, or the higher phenomena of spiritualism, are manifestations of, or through, the *transcendental self* of the subject, and are therefore independent of the fundamental units of the physical world—matter, time, and space. It is true that, in the case of telepathy, the mental response of the percipient to the idea in the agent's mind, naturally suggests the physical analogue of the resonance of a silent tuning-fork to a sounding one which is in perfect unison with it. Indeed, I was inclined at first to think that telepathy was somewhat similar to this—that it was a *nervous induction* across space, analogous to the well-known facts of electric and magnetic induction. But whilst telepathy has been made more conceivable, and more credible to the public generally, by the discovery and use of wireless telephony, we must remember that the two phenomena are wholly different. One belongs to the *physical* order, the other to the *psychical* order. The laws regulating the transmission of energy across space apply to the one, but not to the other. Immense effort is necessary to transmit a wireless message across the Atlantic, but apparently no effort at all is required to transmit a

telepathic impact, of which we have instances, from New Zealand to London. On the contrary, a *passive* condition of both transmitter and receiver in telepathy seems essential, so far at least as their consciousness is concerned.

The word 'thought-transference' is apt to be misleading, as it seems to suggest a transmission of ideas between two persons across material space; but, as I said, space does not seem to enter into the question at all. Here it may be interesting to note that in the first publication of the discovery of this super-sensuous faculty, I called it not 'thought-transference,' but the *transfusion of thought*.¹ We are now coming back to this idea, for telepathy is probably the intermingling of our transcendental selves or souls. The common and grossly materialistic conception of the soul is that it is limited to the confines and contour of the body. This is surely an erroneous conception if, as we believe, the soul is an *immaterial* entity, not simply a function of the brain. For all we know to the contrary, the human soul may spread through a vast orbit around the body, and may intermingle with other incarnate or discarnate souls. Tennyson speaks of a dream condition, "when the mortal limit of the self was loosed, and past into the Nameless, as the cloud melts into Heaven." Moreover the intimacy and immediacy of the union between the soul and God is the fundamental idea, not only of the New Testament, but of all great Christian thinkers.

CONCLUSION.

As evidence of the great value which some eminent men attached to our investigations at their very outset, I will only quote from a couple of letters which I received more than forty years ago. That distinguished scientific man of the last generation, Dr. Angus Smith, F.R.S., writing to me in 1876, on the theoretic importance of thought-transference, remarked that "the indications now obtained point

¹ See *Proceedings, S.P.R.*, vol. i., p. 48, where will be found an extract from a letter of mine to *The Times* dated Sept. 1876.

to some mighty truth more decidedly than even the aberrations of Uranus to the newest of the great planets. If we could prove the action of mind at a distance by constant experiments it would be a discovery that would make all other discoveries seem trifles." This was also the view of that eminent biologist, Mr. G. J. Romanes, F.R.S., who, when writing to me on the same subject in 1881, remarked "if the alleged phenomena are true I hold it to be unquestionable that they would be of more importance than any other in the science and philosophy of our time."

Quite recently our former President, Professor W. M'Dougall, F.R.S., in his presidential address to the American S.P.R. speaks of psychical research as the most hopeful barrier against the oncoming tide of materialism, and he remarks that "a civilization which resigns itself wholly to materialism lives upon and consumes its moral capital and is incapable of renewing it. . . . Unless psychical research can discover facts incompatible with materialism, materialism will continue to spread; no other power can stop it, both revealed religion and metaphysical philosophy are equally helpless before the advancing tide." As regards religion being helpless, I cannot, however, go so far as M'Dougall.

Richet's point of view, which is purely materialistic, appears at first to contradict M'Dougall's remarks. We know that Richet, with splendid courage and loyalty to truth, has avowed his belief in the most incredible psychical phenomena, some of which even we may perhaps hesitate to accept. But Richet's philosophy compels him to reject the spiritualistic hypothesis and to explain everything by modified psychic force theory; a theory which was once accepted by Crookes but subsequently rejected by him. Richet attributes all the subjective phenomena of psychical research to 'cryptesthesia,' and some of the objective to 'pragmatic cryptesthesia.'¹ But these polysyllables do not

Richet uses this term instead of psychometry (soul measurement), which he rightly says is so detestable a word that he proposes to call "pragmatic cryptesthesia, *i.e.* cryptesthesia by means of material facts."

help us any more than the names given by some learned psychologists who tell us that all psychological phenomena are simply illustrations of the "exteriorised effects of unconscious complexes!" One is reminded by this formidable nomenclature of the numerous and recondite hypotheses by which Ptolemaic astronomers tried to make their observations square with the geocentric theory of the universe. To the plain man it seems simpler, less improbable and more in accordance with facts, for biologists to recognise—what astronomers long since have done—that the universe after all is *not* explicable from the restricted view-point either of the earth or of the brain. Nevertheless, Richet's views will doubtless form the half-way house of many *savants* who hold mechanistic theories of the universe. However, I venture to predict that neither they nor Richet will remain many years in that convenient but anomalous resting-place.

Sooner or later psychological research will demonstrate to the educated world, not only the existence of a *soul in man*, but also the existence of a *soul in Nature*. Our biologists have hitherto been so largely wedded to materialistic views that they have overlooked the vast importance of the psychic factor in evolution. The recognition of such a purposive and a pervasive factor, running throughout the whole realm of nature, will be found necessary to invoke in order to explain many biological phenomena that now receive very inadequate solution from current theories. Long ago Lord Kelvin said, "Overpoweringly strong proofs exist of intelligence and benevolent design in Nature."

At the present day, when the very foundations of religion appear to be shaken, and men are deserting the faith of their fathers, and the whole civilised world is becoming more and more materialistic in its views, it is evident that psychological research will ere long be regarded, by thoughtful men, as the most valuable handmaid to religion. Scarcely a week passes without my receiving letters or visits from perplexed men, both among the clergy and laity, who have found their religious creeds crumbling beneath their feet, and want to know what help the

might obtain from psychical research. Mr. Gladstone's opinion on this subject is well known and often quoted; and Frederic Myers, as we know, has eloquently expressed his views. In his *Human Personality* again and again he returns to this aspect of the subject, and in his last chapter remarks, "We do not seek to shape the clauses of the great Act of Faith, but merely to prove its *preamble*. . . . To be able to say to the theologian or philosopher: Thus and thus we demonstrate that a spiritual world exists—a world of independent and abiding realities, not a mere epi-phenomenon or transitory effect of the material world—but a world of *things*, concrete and living, not a mere system of abstract ideas' . . ."; and he adds, "This would indeed, in my view, be the weightiest service that *any* research could render to the deep disquiet of our time—to the world-old, and world-wide, desire"¹ of mankind.

¹ *Human Personality*, vol. ii., p. 297.

SOME FURTHER CONSIDERATION OF THE *MODUS OPERANDI* IN MEDIUMISTIC TRANCE.

BY UNA, LADY TROUBRIDGE.

HAVING read with great interest Doctor Sydney Alritz' comments on my paper "The *Modus Operandi* in the so called Mediumistic Trance (*Proc. S.P.R.*, Vol. XXXII. p. 344), I feel that in view of the fact that that paper was written some years ago, and that I have since then sat very constantly with Mrs. Leonard, it may be of interest not only to Doctor Alritz but to other members of the Society if, in addition to answering to the best of my ability the questions which Doctor Alritz asks me, I mention some further characteristics of Mrs. Leonard' trance which I have observed, especially during so-called Personal Control. These might tend to confirm or modify some of the tentative conclusions advanced by Doctor Alritz.

I will begin by dealing with the actual questions which he asks me in his Paper (*Proc. S.P.R.*, Vol. XXXIV. pp. 166-180), and by answering them so far as I am able.

The first question he addresses to me is in Note 1 page 175, when referring to the hyperæsthesia of the fingers observed when Mrs. Leonard is under 'Personal Control.' Doctor Alritz asks: "Who complains of the hyperæsthesia of the fingers as being 'actually distressful'?" The complaint has been made repeatedly by the personal control known as A.V.B., and has been insisted upon in various ways; notably by asking that the sitters will refrain from wearing tweed clothes with a rough surface. The trance personality A.V.B., *i.e.* the medium when controlled by A.V.B., who usually supports herself upon the sitter's shoulder, complained that the irregularities in such material felt to her fingers like great knots and pits

and that the loose hairs of the stuff felt like prickly bristles. She said that contact with such garments was very unpleasant.

I have not known any other control make the same complaint, although other sitters may have met with this phenomenon during personal controls which I have not witnessed. It would be interesting to know whether this has been the case.

Dr. Alrutz's next question is of a less simple nature, and considering my reply to it, it must be borne in mind that I am for the moment treating the trance-utterances at their face value; accepting the trance 'drama' for what it purports to be. Doctor Alrutz asks on page 176: there is not "*Some evidence of Feda's knowing the contents of the minds of the personal controls from the circumstance that Feda, at least on the face of it, transmits the thoughts of the personal controls, for instance A.V.B.?*"

My answer is that there is no evidence of Feda's knowing anything of the contents of the minds of the Personal Controls or of entities purporting to communicate through her agency, beyond that which they elect to tell her, or show her or in some other way deliberately communicate to her either during her control of the medium, or at such times as she claims to have 'been with them' in their *post mortem* surroundings. There is on the other hand very strong evidence, on the face of it, that Feda is quite unable, at any time, to tap the mind of a 'communicator' at will.

As I have said before, A.V.B. will very often, during Personal Control, initiate a new topic by stating that she is purposely not mentioning it "through Feda," as she did not wish Feda to know anything about it. Or that she would not risk Feda "beginning to think about it," and consequently colouring the facts with her own surmises.

In corroboration of A.V.B.'s claim that Feda can be kept in the dark regarding Personal Control utterances, there emerges the fact that I do not think that in eight years of sittings the Feda Control has ever shown the

slightest knowledge of any matter which the A.V.B. Control has claimed to keep from her, and I cannot help thinking that some slip would have occurred before now if the claim of the A.V.B. Control to occupy a watertight compartment were purely fictitious.

Another thing that tends to support this claim has been of increasingly frequent occurrence during recent years. As the A.V.B. Control has developed it has tended to usurp more and more of the sitting, and indeed for some time past the Fedas Control has seldom been allowed more than a fleeting appearance of a few minutes duration before making reluctant, *very* reluctant way indeed, for the usurper A.V.B. The manner of Fedas routing is usually as follows:—

Having said "Good morning," and made a few irrelevant remarks, Fedas tries to gain time by seeking to obtain from A.V.B. some really evidential matter. Occasionally A.V.B. will apparently humour her, and she will be successful. She will then retain the Control sometimes until the topic initiated is exhausted, and some point of value made clear. But sooner or later, generally sooner, she will hesitate, repeat herself, pause, and exhibit futile efforts to "get more" from the communicator. Then she will begin the routine complaints: "She wants to communicate herself—she won't tell Fedas any more—she's not even looking at Fedas—she's making it impossible for Fedas to get anything!..." Appeals to A.V.B. as Communicator "Ladye, *won't* you tell Fedas some more?—Wouldn't you like to give a name for Fedas to tell them?..." Followed by: "It's no use, Mrs. Una, she's just shutting her mouth tight and looking at something else! Fedas'll have to go, and Fedas *did* want to talk more!" Occasionally in desperation, Fedas will seek to evoke some other communicator. Then it will be: "Ladye, couldn't you bring Mrs. Twonnie's father?" Or she will even attempt irrelevant conversation with the sitters:—The medium's new hat, the sitter's new dress, a present a sitter has promised Fedas—anything will do in order to retain control a little longer, but information from communicators obtained against their will, at any time, Fedas, as far as our ex-

perience goes, cannot get; and she is too honest to pretend that she can do so.

Doctor Alrutz then asks another very important question. He wishes to know, on page 176: "Is there any evidence that the thoughts of a certain Personal Control, say of A.V.B., which Fedra *transmits*, and the utterances of A.V.B. as a Personal Control, really belong to each other or to a common personal source?" And Doctor Alrutz adds: "If there is such evidence would not this then show that Fedra at times really does get at the minds of what we call the Personal Controls?"

Now the meaning of the above paragraph in Doctor Alrutz's paper is not quite clear to me, as it appears to me that it might be interpreted in two ways.

Does Doctor Alrutz, when he speaks of Fedra "at times" getting at the minds of "What we call Personal Controls" mean that she does so when they are (supposedly) controlling the medium, or is he for the moment referring to the discarnate entities from whom both 'Fedra material' and 'Personal Control material' purport to emanate?

As I have already said, if Doctor Alrutz is basing any suppositions upon the assumption that Fedra has optional access as eavesdropper to any Personal Control utterances, or can tap the thoughts of an unwilling 'communicator,' then in my opinion all the evidence is against such being the case. But if his question suggests that evidence of similarity of character between A.V.B. utterances retailed by Fedra, and Personal Control utterances of the same A.V.B., would be evidence that both had a common source in her surviving entity to whose thoughts Fedra was occasionally permitted access for purposes of transmission; then my answer is that such evidence of one character or personality running right through the utterances abounds. It is one of the chief grounds upon which one could base a supposition that a common source lies behind the entire A.V.B. phenomena. The same applies to a number of other 'Personalities' manifesting during Mrs. Leonard's trance, partially through the Fedra agency and partially as 'Personal Controls.'

To discuss at any length the nature of this 'common

source' was, as I stated, distinctly outside the scope of my former paper, and is and probably will remain premature, so long as the '*modus operandi*' of the trances under consideration is almost completely unknown to us. But it may possibly be of some interest to say a few words as to what sources are definitely *insufficient* in themselves as wholly accounting for the entire manifestations of the 'Leonard A.V.B. Personality' as known to Miss Radclyffe-Hall and myself after eight years of constant sittings with Mrs. Leonard.

As was stated in our joint-paper on Mrs. Leonard's phenomena (*Proc. S.P.R.*, Vol. XXX., p. 339 ff.), both Miss Radclyffe-Hall and I were intimately acquainted with A.V.B. for many years, up to the actual time of her death, which took place fifteen months before either of us ever saw or sat with Mrs. Leonard. We have in that paper given a full account of our early investigations with that medium, and gone at length into our reasons for believing that no normal knowledge on her part of the living A.V.B. existed, that would account for even the simpler early manifestations.

This belief has been consistently strengthened throughout the intervening years. Not only by the corroboration afforded by Mrs. Leonard's untarnished career of integrity and by the results of the investigation of her phenomena by the Society for Psychical Research. But by the fact that no humanly conceivable system of enquiry, observation, deduction, or of all three put together, could, in our opinion, suffice for the production of the great mass of verifiable utterances regarding matters known to A.V.B. during her lifetime, of facts and incidents regarding ourselves and others that were also known to her, of contemporary events and actions affecting us mentioned during the trances, and above all of a salient and intensely characteristic personality of which the point of view, sense of humour, judgment, prejudices and partialities, the actual voice and laugh, in fine all those traits and peculiarities which go to make what we call 'Personality' as so constantly characteristic of the living A.V.B. as we knew her that they could not fail to be equal

recognised as such by anyone who had really known her.

It may be objected that since we ourselves knew her so well it is unnecessary to seek beyond our minds for the source of the phenomena, assuming that Mrs. Leonard possesses when in trance an extensive and almost infallible access to the mind of anyone present. Undoubtedly much of what is uttered by the Feda and Personal Controls might be obtained in this way, provided that we are justified in assuming an extent of telepathic faculty so far hardly supported, in my opinion, by results obtained in thought-transference experiments between living persons. (By stretching our credulity *very* far beyond our knowledge perhaps quite as far as would be necessary for the acceptance of the spirit hypothesis?) we can assume that since we have in past years heard and known A.V.B.'s voice and laugh, and have intimately known her character, and since that knowledge must remain sub-consciously in us, together with an instinctive knowledge of what would be her comments on and reactions to certain situations or stimuli, all such useful content of our minds can be drawn upon by the entranced Mrs. Leonard, and selected, sifted and dramatised for her purposes.

But I am bound to say that in absence of all proof of such possibility, this theory makes my own personal credulity feel rather like Alice in Wonderland's neck after she had sampled one side of the toadstool.

That a fitful and intermittent telepathy between medium and sitter does operate and account for some of the phenomena produced I am practically convinced, and indeed the fact is admitted by both the Feda and A.V.B. Controls; but I cannot bring myself to the belief that it is as extensive as is sometimes suggested by those who are determined on explaining everything without recourse to the spiritistic hypothesis. Even were I to admit it as the explanation of all that occurs during the trance which could by this means be obtained from the mind of someone present, this admission would not dispose of the entire A.V.B. phenomena or account for all the evidence of Personality and Identity.

We should still be compelled to seek a source for the residuum, and that source is not the medium's own normal knowledge, judgment or personality.

It cannot be too strongly emphasised that Mrs. Leonard's normal self and character do not in any way suggest or resemble those of A.V.B.

Mrs. Leonard is not without a marked character and personality, her opinions are definite as are her approvals and disapprovals, and no one knowing her at all would could call her colourless.

A.V.B. was also a very definite personality, and in many ways unusual and characteristic.

Had A.V.B. and Mrs. Leonard met in the flesh they would have liked and respected each other, I do not doubt but I equally do not doubt that had any intimate knowledge of each other been possible they would have differed on many matters great and small, reacted very differently to identical *stimuli*, and maintained contrary opinions with equal determination.

Therefore I declare that the source of the Leonard A.V.B. Personality as such is not to be found in a mere coincidental resemblance to that of Mrs. Leonard, even when we are dealing with matter which necessitates a supernormal knowledge of events or facts.

Consideration must also be given to utterances both by the Feda A.V.B. and the A.V.B. Personal Control in subsequently verified facts unknown at the time of utterance not only to the normal Mrs. Leonard but also to anyone present at the sitting.

It is true that such utterances are not of frequent occurrence; but they do occur, and cannot be ignored.

Coincidence has been invoked and done to death in this connection, but anyone who has studied the utterances for as long as we have, or anyone for that matter who will study in the *Proceedings* of the Society Mrs. Henry Sidgwick's Paper on Leonard Book Tests (*Proc. S.P.R.*, Vol. XXXI., p. 242 ff.) and a later paper on Experimental Book Tests tabulated by Colonel Baddeley (*Proc. S.P.R.*, Vol. XXXIII., p. 606 ff.), and will consider the relative average of success obtained, will not long remain contented with

the coincidence hypothesis as an adequate explanation of everything that occurs in the Leonard trances which is unexplainable as emanating from either Mrs. Leonard's normal knowledge or from that of anyone present at the time of utterance.

I am not proposing to offer any explanation, I am merely stating observed facts, and I will add that on a number of occasions the trance-utterances have referred correctly to recent or almost contemporaneous actions by persons some distance away. I am unfortunately unable to include here any actual examples or extracts from records of sittings, as I am away from home and have not access to any papers or books of reference. I am therefore confined to dealing with the matter in a general way, which, however, I must ask my readers to believe, does not flatter the phenomena under discussion.

In conclusion, I should like to record here some additional observations of the peculiarities of the trance which have struck Miss Radclyffe-Hall and myself since my last paper was written. Since then the A.V.B. Personal Control has manifested frequently and regularly. It has much developed and strengthened, and some of my earlier comments must be modified, some reversed.

The voice of the A.V.B. Personal Control is now quite as strong as Fedá's, at any rate during the greater part of the Control, which has gradually usurped nearly the entire sitting. Fedá, as stated above, seldom appears at our sittings in these days save as a very brief introduction to the A.V.B. Control, and I think that but for our insistence she might well have been dispensed with altogether for more than a year past. When, however, her control began to shrink to its present proportions, we made a definite request both to Fedá herself and to the A.V.B. Control that Fedá should always put in a preliminary appearance, however brief. We felt that any alteration of the customary procedure might increase the strain on the medium's system, and initiate that deterioration in her phenomena which we have observed in other mediums who admit of frequent, extended and various Personal Controls, especially without introduction by an

habitual Control. Moreover, Fedá, as stated above, is always anxious to appear and reluctant to go, retiring only when the A.V.B. Control, to all appearance, renders her presence impossible. The A.V.B. Personal Control now therefore manifests practically throughout the entire sitting, but the sittings are seldom of more than one hour's to one and a half hour's duration, the Control collapsing, usually quite abruptly, within that time, and giving evidence of having 'held out' to the very last gasp. Therefore it cannot be said that even yet the A.V.B. Control possesses the field with quite the same facility as Fedá, who has been known to chatter volubly for nearly three hours on end!

I stated formerly that the percentage of evidential matter given by the A.V.B. Personal Control was much inferior to that obtained through the Fedá Control, and this I think is no longer the case. In these days the A.V.B. Control certainly equals Fedá in the ease with which evidential matter is volunteered and evidential topics initiated, and the manner of giving these by the A.V.B. Personal Control being much more direct than are Fedá's methods, more ground is often covered in less time. Fedá still retains, either by choice or of necessity, her childish phraseology, and her habit of elaborately describing an object which one would think must be as familiar to her as to the sitter. As it is invariably quicker to call a book a book than to describe it in the 'Fedá manner' as "A square thing—no, not quite square, oblong—and flat, or nearly flat—and Fedá thinks it's got a hard outside of some shiny stuff—wait a minute, cloth?—And paper, yes—paper inside with printing on it—etc., etc., etc.," the A.V.B. Personal Control, in the course of an hour's work will easily outstrip a two hours' Fedá Control in the number of evidential points volunteered.

On the other hand, Fedá holds the palm when it comes to answering a direct question put by the sitter. During our early experiences with Mrs. Leonard, a definite question, even when put to Fedá, required a world of tact and judgment on the part of the sitter. The selection of the

opportune moment, the manner of phrasing the enquiry, the easy nonchalant tone of voice, the assurance that a reply was really immaterial, all these were necessary to obviate an immediate self-consciousness on Feda's part which would jeopardise not only the required answer but the whole evidential current of the sitting. In these days this difficulty is almost non-existent where Feda is concerned. A direct question, simply asked, will often elicit an equally direct answer or a suitable description. At other times Feda will frankly express inability to reply, or will promise, and in that case generally give, a later answer. All this exactly as one would do oneself in the course of an ordinary conversation. But this particular increase of facility does not apply equally to the A.V.B. Personal Control. A direct question will more often than not strike her literally dumb, she is seldom able to give an immediate and direct answer, and indeed the injudicious asking of such a question will often cause some minutes of complete silence, and will only serve to break the thread of the voluntary matter being given. This is however not invariably the case, and A.V.B. is decidedly improving; in fact only recently a question as to the nature of a new pet that we had acquired was triumphantly answered by A.V.B., who immediately wrote the word 'Parrot' in printed letters on the back of my hand, naming each letter as she wrote it. She added, quite correctly, that it was an unusual bird in its markings, that it was more restless than any parrot she had ever seen, constantly moving to and fro sideways, and that it appeared to slip upon its perch, of which it did not seem able to get a proper grip. However, in this matter of answering direct questions, the A.V.B. Personal Control is still very far behind Feda, and such a call upon her self-possession is not usually successful.

Another point mentioned in my paper, and to which Doctor Alrutz refers, is the long exhalation of breath which so often heralds the arrival, so to speak, of a personal control.

Since the further development of the A.V.B. Personal Control another curious feature connected with the me-

dium's breathing has been observed on several occasions. Some months ago the A.V.B. Personal Control expressed a desire to learn to sit upright in her chair, instead of, as heretofore, lolling forward on the sitter's shoulder. This upright position did not appear materially to affect the manifestations of the control, she spoke audibly, coherently and evidentially as usual. But on several occasions the medium became scarlet in the face, a series of gasps was followed by moments of apparent asphyxia, and finally the A.V.B. Personal Control fell forward into the sitter's arms breathing heavily and proffering the explanation that she had nearly choked the medium because she had "forgotten to breathe"!

The hyperæsthesia of hearing also mentioned in my paper as affecting Mrs. Leonard just before a sitting, or, as Doctor Alritz puts it, "When hypnosis is coming on," does not, as Doctor Alritz surmises, depart with the coming of the deep trance condition and the emergence of Fedá, or even with that of the A.V.B. Personal Control. There have been signs of it quite often when the Fedá Control is in full swing. Not only is Fedá easily put off and annoyed by trifling noises—I have heard her break off from a subject in hand in order to compare the muffled sound of a lift to the roaring of a lion—but, amid her own noisy chatter, she will notice and draw the sitter's attention to a tiny distant sound like a church bell or an aeroplane, even though the sound in question be so faint as to be almost inaudible to the sitters listening attentively in the hushed séance room. As for the A.V.B. Personal Control, on a quite recent occasion when she was resting on my shoulder, she complained that I was champing my teeth, and that the sound I made appeared to her like the firing of cannons!

I do not know whether what I have written here concerning the Leonard-Fedá-A.V.B. Phenomena will bring forth any further interesting comments from Doctor Alritz. I hope it may, but in any event I am most grateful to him for making me realise that I had a duty too long delayed. Having put forward in my earlier paper, for the benefit of those interested, certain

aspects of Mrs. Leonard's trance and some tentative hypotheses based upon my experience up to the time of writing, and having urged others to probe more deeply into the subject, it is only right that I should give equal publicity to further experiences and observations which have led me to reconsider and modify some of my suppositions and suggestions, and which may influence others to do likewise.

And—a big AND—I honestly do *not* believe that if Doctor Alritz, having induced a deep hypnosis in a subject, were able to restore to that subject the “Vocal organs, peripheral *and* central, and then by the help of telepathy make these restored parts of [the subject's] organism talk and give utterance to [his] thoughts,” he would have achieved a process that could be compared, in any conclusive manner, with what takes place when the Leonard organism gives, *via* the Feda Control or the A.V.B. Personal Control, a really evidential sitting.

If Doctor Alritz were able to attempt such an experiment with Mrs. Leonard (and I feel sure he agrees with me as to the inadvisability of subjecting a valuable medium to experiments of which it is impossible to foresee the consequences) he might obtain very interesting results. But I should not even then be prepared to decide upon the source thereof. We should still have to consider the rival claims of: 1. Dr. Alritz. 2. Mrs. Leonard herself. 3. The Feda Control. 4. The A.V.B. Personal Control. And last but not least, of the Unknown Quantity.

THE LIFE OF CROOKES.

BY SIR OLIVER LODGE, F.R.S.

The Life of Sir William Crookes, O.M., F.R.S. By E. E. FOURNIER D'ALBE, D.Sc., F.Inst.P. With a Foreword by SIR OLIVER LODGE. Pp. xix + 413. (T. Fisher Unwin, Ltd.)

WHOEVER should have undertaken to write the *Life of Sir William Crookes* must have known that he was undertaking a difficult task. The amount of material available was enormous: for Crookes was a man who kept documents of every kind, probably in a state of orderly arrangement but multifarious in scope, and of very different intrinsic value. Along with papers of historical interest there were things little better than domestic memoranda, such as a list of things packed for a voyage, or a list of purchases made before coming home, or memoranda of the fees obtained for professional services, or correspondence about what sort of fee it would be reasonable to charge: any number of letters also, many of no particular interest, such as acceptances of invitations, or applications for tickets for ceremonials,—in fact, a good deal of what might legitimately be stigmatised as “rubbish.” Beside all this, however, there were letters and controversies about the discovery of thallium, attempts to deal with the cattle plague, correspondence and controversy about the radiometer, speculations and predictions about wireless telegraphy, and dealings with diamond, gold, and radium; some of these being of considerable, some of small, interest. And it must have been very difficult to decide what to include.

One result, perhaps an unfortunate result, of the biographer's decision to include a large number of trivial documents is that methods of abstracting gold, in one form or another, loom rather large throughout the volume, and are continually occurring; sometimes in the domain of chemistry, sometimes approaching the realm of high finance, but rather frequently in

the petty details of business economy and company speculations. The biographer's aim no doubt is to produce a composite portrait, and not to slur over anything that throws light upon the character of his subject; but it may be held that the result is rather unfortunate. Trivial things occur in the lives of all men, but they are usually taken for granted, not emphasised or given a permanent position in biography; so that when they are emphasised, or even recorded, these details loom larger than they ought, and rather spoil the balance; not because they are anything more than commonplace, but just because they are commonplace.

What had to be brought out was that Crookes, by his own exertions, did achieve a sufficient fortune to enable him to devote the main part of his life to science. Details of the fees which he received in consultation or in legal procedure, after he had established his reputation, are utterly unimportant and should be out of the picture; they distract attention from the real business of life. Financial matters which lead to disaster, or which lead on the other hand to increased facility for work, are bound to be included; but unnecessary details about minor things of that sort are abhorrent.

The main outlines of what one would look for in the biography of a man of science, after dates and parentage or ancestry and educational opportunities, are such as these:—the circumstances which led him to take up science as a profession or a hobby, some account of his early struggles and gaining of recognition, and then a vivid representation, with contemporary documents, illustrating the main work of his life. For the carrying out of such a task in the case of William Crookes Dr. Fournier d'Albe seemed eminently suitable; for he had graduated, so to speak, either literally or metaphorically, in both physics and psychics, and was sufficiently acquainted with chemistry to appreciate the work of a great chemist. But in spite of a brave, and no doubt earnest, effort to overcome the difficulties of the task, the result must be regarded as somewhat disappointing: the outcome strikes a reader who knew Crookes and his work as rather less than fair to his memory. Superlatives are introduced from time to time, no doubt; some more, some less appropriate; but it can in no sense be called a panegyric. Possibly the biographer had not

much personal acquaintance with the subject of his memoir in his study and laboratory. Undoubtedly it must be very difficult to form an estimate of a man from a miscellaneous array of letters and documents. From that point of view, the wonder is that it has been done so well.

This reviewer's own personal estimate of Crookes is sufficiently indicated in the introduction which he wrote for Dr. Fournier's book; and it is unnecessary to add to that. He would only like to testify of his own knowledge, what the book perhaps sufficiently indicates, that the mutual devotion of Crookes and his wife can hardly be exaggerated; that they lived to celebrate the sixtieth anniversary of their union; and that when she died he was inconsolable until he obtained what he considered proof of her continued companionship.

Some remarks must now be made concerning a few of the chemico-physical and psychic details recorded in this volume. On the whole Crookes was more of a chemist than a physicist. His training had been that of a chemist; and although he made important discoveries in physics, he generally stated them in such a way as to arouse opposition and controversy. Controversy indeed ruled throughout his life, sometimes taking a painful form. One of the most painful controversies must have been that at the Royal Institution with Sir James Dewar. It is mentioned in this review only to bring forward a privately known proof of Crookes's magnanimity: for when, soon afterwards, it was proposed at the Royal Society that its highest honour, the Copley Medal, should be given to Dewar, Crookes, a previous recipient of that medal, came out of his comparative retirement and earnestly supported the proposition; which, needless to say, was carried.

The chief discoveries associated with Crookes's name are the new element Thallium,—discovered spectroscopically and exhibited at the 1862 Exhibition, though even about that there was much vexatious controversy; the radiometer,—again with much disagreement about its mode of action; the spinthariscopes,—a useful and convenient and, as it turns out, important outcome of experiments on radium; and, chief of all, radiant matter or cathode rays or "matter in a fourth state,"—the foundation of a whole new branch of physics, and

the early beginning of the later discovery by others of the electron. It will probably be held by posterity that the electrical work in high vacua, part of which was summarised and demonstrated in his discourse to the British Association at Sheffield on August 22nd, 1879, marks the climax of Crookes's life and achievement.

The discourse itself was rather brilliant, and passages from it are quoted in this volume, but the experiments in high vacua, by which it was illustrated, were far more brilliant; and it is difficult to over-estimate their great and epoch-making importance. From a sort of toy, exhibited at scientific soirées, the vacuum-tube rose to a position of extraordinary dignity and usefulness, and may be said to dominate the physics of the latter portion of the nineteenth and the early part of the twentieth century.

Members of the S.P.R. will be able to form a good estimate of the main outlines of Crookes's work by reading the obituary notice by a contemporary man of science, Sir William Barrett, in *Proceedings*, (Vol. XXXI., pp. 12 to 29), with a portrait and with a useful appendix giving a list of the contributions to the S.P.R. by Sir William Crookes.

So far, we have said not a word about that painful and unpopular episode or period in Crookes's life wherein he took full advantage of exceptional opportunities offered him for the examination of supernormal phenomena, during the years 1871 to 1874, a period of great importance to the disciples of psychic science, and one in connexion with which they will always hold Crookes and his pioneering work in high honour and remembrance. But, as often happens to investigators of unpopular novelties, the work brought upon himself, as far as the public were concerned, only ridicule, painful controversy, and condemnation. He entered upon the subject with a light heart, he left it with a heavy one. He imagined that by careful experimenting, and by frankness, he would disarm hostility and convince the scientific world. Others have been under a similar impression, both before and since! We now know, or at least the writer does, that Crookes observed many things which, however incredible, were true; and that, by aid of the unusual powers of D. D. Home

and Florence Cook, he had opportunities for investigation denied to most of us. But the citadel of orthodoxy was too strong; Crookes failed to storm it; it is intact to this day, though breaches have been made in its wall, or at any rate some of the garrison have deserted. But for the rest of his life—though he would willingly speak privately on the subject, and though his convictions were quite unaltered,—he no longer thought it necessary to incur the odium and the numerous disabilities incurred by pressing the subject on his scientific confrères. So, after a vigorous and stormy few years, he went on with what he considered his scientific work proper, and therein achieved so much that, in spite of the hostility he had aroused, scientific honours and medals flowed upon him; and ultimately he was even elected, though not without some searchings of heart, to the Presidency of the Royal Society.

Undoubtedly the researches of Crookes into psycho-physical phenomena must have been among the material which was in the minds of the founders of the S.P.R., when in the late seventies and early eighties, Sir William Barrett (the only remaining living founder) discussed with Henry Sidgwick, Frederic Myers, and Edmund Gurney, together with Alfred Russel Wallace and probably some others, the prospects of a society which might be founded to take up that large and neglected field of investigation to the very existence of which the long established scientific societies were blind and deaf when not contemptuous. Fortunately, or so it seems, the first fruits of the Society, and indeed of Barrett's own work on the subject, lay in the comparatively innocuous and less sensational direction of the kind of thought transference to which Myers gave the name "telepathy." Crookes indeed, later in life, rather regretted that his good fortune had not led him to *approach* the subject from that end. At the same time the more physical end seemed natural to an experimenter in chemistry and physics: and he probably had too little training in psychology and literature to be able to make the headway which the co-operators who founded the Society did undoubtedly make. Nevertheless, physical phenomena are among those occurrences which had been testified to again and again; and they were by no means excluded from the purview of the new Society. Indeed a special committee was initiated from

the first to try to carry on and complete the investigation begun by the Dialectical Society in the previous decade. And if opportunity had offered, they would doubtless have been willing to continue and develop the observations of Crookes.

Even telepathy, however, would not have been acceptable to the scientific magnates of that day. There are still some to whom it is not acceptable now. And Barrett encountered hostility when, in 1876, he tried to read a paper on the subject before a scientific body, and offered to make demonstration of the telepathic powers possessed by members of a family with whom he himself had made careful observations.

The best known of Crookes's experiments, and those which caused the most outcry and derision, were the remarkable series of experiments in full blown materialisation,—for a scientific treatment of which the time was evidently not yet ripe. The Florence Cook and Katie King episodes are not fully described in this volume. A fuller extract from the records of the time is given by Dr. Fournier d'Albe himself in his book, published by Longmans in 1908, *New Light on Immortality*, Chapters 2 and 3 of Part III.,—a book which is well worth referring to; though it contains statements by Mrs. Ross Church (Florence Marryat) which cannot be credited, and to some of which Crookes himself later gave unqualified denial. (See *Proc. S.P.R.*, XII., p. 268.)

Crookes was the victim not so much of controversy as of sheer denunciation; his most voluble antagonist being Dr. W. B. Carpenter, one of the learned physiologists of the time, who was subsequently Registrar of the University of London,—a man of weight and influence, but, as is now seen, of far less than scientific caution and fairmindedness. Another antagonist was the eminent man of science Sir Charles Wheatstone, to whose inventions the early progress of telegraphy owed so much. On the other hand there were one or two who had already become convinced of some of the facts, not only the famous geologist, A. R. Wallace, but the well-known electricians Cromwell, and his brother S. A. Varley; who indeed encouraged Crookes to take up the subject, and assisted him in some of his early experiments with Home,—making, among others, an electrical test which, though not really more conclusive than

mechanical ones, might appear more conclusive to the public mind. S. A. Varley was a man for whose contributions to cable telegraphy Lord Kelvin in later life frequently asserted that he had not received a due meed of recognition and approbation. That by the way; and only as showing, to a generation which has now nearly forgotten these workers, that their experimental ability was by no means to be despised.

There were others, of course, not so exactly in the line of scientific ancestry, who countenanced these phenomena and were fully convinced of their reality. And perhaps it was partly due to association with these that Crookes—already recognised as a discoverer—conceived that when he found himself able to add his own first-hand testimony, and utilise the exceptionally favourable opportunities which then prevailed, his word would be received and opposition would crumble. Wisely, he made selection of what he thought would be palatable material he did not seek to interest the officers of the Royal Society—chief among whom was the world-famous mathematical physicist Sir George Gabriel Stokes—in any of the strange and ultra-normal physiological and apparitional phenomena which he had witnessed; but he did seek to make a demonstration of the powers of Home, reduced to their bare elements, by means of a very simple mechanical arrangement for proving the existence of an unknown force, which he called “psychic force.” This experiment he begged both Stokes and Wheatstone to come to see; but they declined, saying that if the arrangements were really as he described them, the thing could not possibly work. To this Crookes replied that he did not say the thing was possible or likely, but only that it happened. He succeeded in getting Dr. Huggins, the astronomer, to see the apparatus working, and also to be present while an accordion, held in Home’s hand by its dummy end in a cage, with its keyboard hanging down, moved about and sounded its notes. But Sir William Huggins refrained from *conspicuously* championing the phenomenon, and preferred for a considerable time to remain anonymous, at least so far as the public were concerned. He, however, was not one of the officials of the Royal Society at the time, though subsequently in due time, he became its President.

All this, with many other details, appears more or less

clearly in Chapter XII. of the book under review,—a long chapter dealing with this phase in Crookes's life,—and it is unnecessary to say more about it here; except regretfully to say that the author's treatment in a few particulars is not altogether fair to Crookes's memory, and not such as Crookes in his lifetime would have approved. Certain metrical statements by Crookes are stigmatised as erroneous, while the still more erroneous statements of objectors are cited without correction as if they were true. There must have been a certain amount of carelessness in this part of the book; and the genuineness of the whole affair appears to be left under a cloud of suspicion which is very far from being justified by the statements themselves, and which by no means correctly represents the attitude of Crookes himself at any part of his life.

In this review, therefore, it seems desirable to call attention to the particularly simple experiment above mentioned, and point out some of the gratuitous errors which, judging from the text, were made at that time by critics of importance. Unimportant and anonymous critics did not hesitate to ridicule the whole thing; that is only to be expected, and is of no moment, but what responsible scientific authorities say, at any period, is historically important, and, if uncorrected, is naturally taken as accurate. The following remarks, therefore, may serve as a summary and supplement to this part of the book.

Crookes arranged an apparatus of the simplest possible kind in order to verify that an unknown force actually operated, and in some sense to record and measure its amount. For his purpose he arranged a horizontal mahogany board three feet long, $8\frac{1}{2}$ inches wide, and 1 inch thick; with one edge supported on the edge of a table, and the other end suspended by a registering spring-balance, hung from a firm tripod stand. The medium was seated at the table and his hands were placed lightly on the fixed or fulcrum end. The result was that after a time the board tilted down, and the balance at the other end indicated that its spiral spring had been stretched as if loaded by a weight, sometimes as much as from 3 to 6 lbs. He also made a registering apparatus, with smoked glass moved by clockwork, so that a trace should be recorded, indicating by objective and permanent record the amount of the force at different times. All this was published

in *The Quarterly Journal for Science* for July 1871, and continued in October 1871, with confirmatory testimony by Sir William Huggins and Serjeant Cox. The testimony was later reproduced, with an appendix of correspondence illustrating the controversial reception the experiment met with, in a book called *Researches in Spiritualism*, which appears to be now out of print.

These experiments are referred to in the volume now under review, page 218 and thereabouts. To avoid the suspicion that the medium, when touching the board, might trespass beyond the fulcrum and be surreptitiously pressing with exceptional violence, so as to produce a force comparable to a pound weight or more at the far end of the lever, Crookes marked the position of Home's fingers on the board, and subsequently placed on or near the fulcrum a vessel of water, into which the medium was to dip his fingers without touching the board at all. And to avoid accidentally or purposely touching the rim or sides of this vessel, he arranged above it another water container, a sort of copper bowl, fixed to an independent support; the bowl being (unfortunately and perhaps unnecessarily) perforated at the bottom so that water in the bowl communicated with the water in the vessel below; and the medium only dipped his fingers into this upper copper bowl, shown in an illustration on page 220 of the book. But still the spring balance at the far end of the lever, now untouched except through water, exhibited a force of nearly a pound.

The most absurd arguments were used against these experiments. For instance, a writer in the *Journal of the Franklin Institute* says that, though Crookes's evidence practically shows that the board apparently weighed only 6 lbs., it ought, from its size and from the specific gravity of mahogany, to weigh 13 lbs.; he therefore indicates a suspicion that the board was a trick board, supplied by the medium! To which Crookes replied that the board had been in his possession for years, that it had already formed part of several previous pieces of apparatus, and that, whatever it *ought* to weigh, it did actually weigh only 6 lbs.

Another objection, more responsibly made by Sir Charles Wheatstone, was that a water connection was no guarantee

against the exertion of force, since—so he argues—if only 3 cubic inches of water were displaced by the fingers, it would by hydrostatic laws be equivalent to a pressure of from 12 to 13 ozs., or nearly a pound. This arithmetical error is reproduced on p. 219 of *The Life of Crookes* without correction. As a matter of fact the weight of three cubic inches of water is only an ounce and threequarters! This matter, though apparently trivial, is historically important because a special effort was being made to interest the Royal Society. In its early days the opportunity for witnessing such an “absurd” experiment would have been welcomed by the Society; but now, in its later dignity and immense knowledge, it is repelled by the apparently impossible. Crookes is accused by his biographer of having, in this crucial instance, made a *faux pas*, with serious consequences to Science. It is not really so: though in his original description he probably had a momentary lapse, and had expressed himself with less than meticulous accuracy. He was not a professor of Physics. When he came to reply to objections, he might have admitted the hydrostatic argument and at the same time attacked the erroneous arithmetic; but, instead, he contented himself with a demonstration that as a matter of fact no appreciable deflexion of the lever could normally be caused in that way, even when the bowl was not exactly over the fulcrum. Crookes expressly states that dipping his whole hand to the full extent in the upper bowl of water did not produce the least appreciable action on the balance at the other end of the lever. This is in accordance with common sense. The whole weight of a man *on the fulcrum* would not account for the stretching of the spring. That the weight of whatever water was displaced would give some extra pressure on the fulcrum is true enough, but that this effect would be very small is obvious from the picture of the apparatus, and nothing appreciable could normally reach the far end of the lever.

Wheatstone's concluding comment, when this was pointed out, was that it appeared to him contrary to all analogy that any force, acting according to physical laws, should produce the forcible depression of a lever by acting on its fulcrum! To which Crookes replied that he entirely agreed; that that

was the whole gist of the experiment, and the only reason he regarded it as worthy of attention.

The episode illustrates one of the difficulties which is bound to be encountered by investigators of novel physical phenomena. If a new kind of force is exerted, the experiments are almost bound to be surprising and, so to speak, incredible—so incredible that responsible leaders in science may be unwilling to subject themselves to what they regard as the farce of attempted demonstration. As in Galileo's time, they may refuse to look through the telescope; or, if they do, may regard it as a deceptive instrument. Many Continental investigators, and some in this country, are now inclined to suppose that the force in these and other more striking instances of telekinesis is due to or is associated with the mechanical intervention or employment of an invisible previously unknown material, probably emanating from the medium, in the form of what we now call ectoplasm,—a form of substance which was then not recognised or perhaps suspected by anyone. Nothing but direct observation and instrumental confirmation can establish such things as realities; and in the absence of theory experiment must always be scrutinised with exceptional severity. A plausible theory need not jump into existence at the same time as new facts are observed; but until there is *some* guiding theory or clue the facts seem detached from organised science, and are rebutted and disbelieved on theoretical grounds. Disbelief is only natural, and its foundation in common sense is rather like a modified version of David Hume's arguments against miracles, viz. that it is more likely that a witness should lie than that a miracle should happen; because the one is consonant with human experience and the other is not. That is quite true; but if the thing really does happen, and if it can be shown contemporaneously to happen, the argument has no weight; the facts, when proven, are themselves an expansion of human experience; and they clearly establish the need for overhauling and enlarging our theoretical foundations. Things that are unlikely may nevertheless be true. Our knowledge of nature is not so extensive that we are able to say beforehand what is possible and what is not possible in a novel region of enquiry. That is where even Faraday—that prince of investigators—made, in an *obiter*

dictum, one of his few mistakes. The history of science is too much disfigured by the premature rejection and contempt with which novelties have often been received. They are accepted, in the long run, by some subsequent generation; but the responsible generation living at the time does not rise to the height of its opportunities. Contemporary men of science unfortunately write themselves down, not only as ignorant, which was inevitable, but as blind and prejudiced and sadly bigoted: though it is true that in their lifetime their contemptuous attitude gains them credit for robust common sense and sanity. They are wise, therefore, in their day and generation.

It is singular, and perhaps depressing, that the obscurantist attitude of theologians in the past had been so amply imitated by the pontiffs and high priests of science in the recent present. They still oppose their admirable theories and great knowledge of the universe to resist the incursion of fresh information; they oppose observed facts on *a priori* and utterly inadequate grounds. No one ought to consider his knowledge of the universe so complete and final as to be competent to negative careful testimony based on critical and responsible experiment and observation, especially if the observer has already proved his competence in more recognised branches of knowledge. Explanatory hypotheses may be criticised severely, but the facts demand attention.

In the light of our present or subsequent knowledge, historical rejections of truth, and inability to recognise the value of testimony, or even to accept a chance of being convinced by actual experience, tend to arouse our impatience; but there is some excuse. Most of the orthodox facts of to-day had to encounter similar opposition at their entry, and were at one time heterodox. It has been said that even scientific fact is not generally accepted until it becomes a habit: and, as illustrating pardonable and natural scientific scepticism, it may be instructive and helpful to quote here from an old letter from a scientific friend about Crookes's experiments, preserved and cited with approbation by Crookes himself:—

“Any *intellectual* reply to your facts I cannot see. Yet it is a curious fact that even I, with all my tendency and desire to believe spiritualistically, and with all my faith in your power of observing and your thorough truthfulness,

feel as if I wanted to see for myself; and it is quite painful to me to think how much more proof I want. Painful, I say, because I see that it is not reason which convinces a man, unless a fact is repeated so frequently that the impression becomes like a habit of mind, an old acquaintance, a thing known so long that it cannot be doubted. This is a curious phase of man's mind, and it is remarkably strong in scientific men,—stronger than in others, I think. For this reason we must not always call a man dishonest because he does not yield to evidence for a long time. The old wall of belief must be broken down by much battering."

The fact that Crookes fully adhered to his exceptional experiences, throughout his life, is sufficiently plain to members of the S.P.R. from his "Notes of Séances with D. D. Home," written for the *Proceedings* of the S.P.R. in 1889 (see Vol. VI., page 98 *et seq.*). Also from his holding the Presidential Chair of the Society for three years, 1896-1899, and from his Presidential Address to the Society in 1897 (see *Proc.* Vol. XII., page 338).

While, later still, in the critical and quite unprivileged atmosphere of the British Association, when he was President of that body at its Bristol meeting in September 1898, the concluding portion of his address speaks of "one interest" which to him was "the weightiest and the farthest reaching of all," and continues:—

"Thirty years have passed since I published an account of experiments tending to show that outside our scientific knowledge there exists a Force exercised by intelligence differing from the ordinary intelligence common to mortals. . . . To ignore the subject would be an act of cowardice—an act of cowardice I feel no temptation to commit. . . . There is nothing for the investigator to do but to go straight on. . . . to follow the light wherever it may lead. . . . I have nothing to retract. I adhere to my already published statements. Indeed, I might add much thereto. I regret only a certain crudity in those early expositions which, no doubt justly, militated against their acceptance by the scientific world."

Though several letters about the preparation of this Address are printed in the volume under review, pp. 353-370, it seems

legitimate to add, now, that while drafting the address Crookes was also in correspondence with F. W. H. Myers ; and we may trace Myers's hand in its final and ante-penultimate paragraphs. I know that Crookes accepted these suggestions with joy, and rejected several other eloquent literary passages with regret. It is only fair to his memory to quote here the final paragraph ; though it is among those quoted in the book, and although Members of the S.P.R. will find the whole of the psychic portion of this British Association Address easy to refer to in *Proc. XIV.*, pp. 2 to 5.

“In old Egyptian days a well known inscription was carved over the portal of the temple of Isis : ‘I am whatever hath been, is, or ever will be ; and my veil no man hath yet lifted.’ Not thus do modern seekers after truth confront Nature—the word that stands for the baffling mysteries of the universe. Steadily, unflinchingly, we strive to pierce the inmost heart of Nature, from what she is to re-construct what she has been, and to prophesy what she yet shall be. Veil after veil we have lifted, and her face grows more beautiful, august, and wonderful, with every barrier that is withdrawn.”

TELEKINETIC AND TELEPLASTIC MEDIUMSHIP.

BY E. J. DINGWALL.

- I. *Experimente der Fernbewegung.* By DR. A. FREIHERR VON SCHRENCK-NOTZING. (Stuttgart, 1924.)
- II. *Die okkultische Bewegung in der Gegenwart.* By PROF. KARL MARBE. (*Preussische Jahrbücher*, Bd. 197; Heft 1; Juli, 1924, pp. 47-59.)
- III. *Experimente zur Fernbewegung: eine kritische Erörterung.* By DR. ALBERT HELLWIG. (Literaturblatt Beilage zur *Frankfurter Zeitung*, Juni 20, 1924.)
- IV. *Experimente an einem telekinetischen Medium. Untersuchungen an einigen okkultischen Medien.* By PROF. HANS HENNING. (*Ztschr. f. Psychol. und Physiol.*, 1924, Bd. 94, Heft 5, 6, pp. 278-292).
- V. *Die Krise des Okkultismus.* By PROF. MAX DESSOIR. (*Vossische Zeitung*, Juli 13, 1924.)
- VI. *Der Betrug des Mediums Ladislaus Laszlo.* By DR. A. FREIHERR VON SCHRENCK-NOTZING. (Leipzig, 1924.)

THE importance of a new contribution to human knowledge can often be estimated by a consideration of the attacks made upon it by the learned world. The scientific mind is, unfortunately, only too often divided into watertight compartments, and presents the strange spectacle of the true and the false, the sublime and the ridiculous, all flourishing under the same mask of a united personality. In the ordinary sciences of to-day, religion has but little influence. The biologist does not fear that by presenting his work he is encroaching upon the domain of the Almighty, neither does the geologist regret that his results do not appear to tally with the statements in the Book. Facts concerning natural phenomena are now only condemned for these reasons in such places as Kentucky or the Kingsway Hall, whilst serious minded people smile quietly and pass on. But in psychical

research the scientist joins the priest, and the philosopher the journalist in deriding phenomena just as real and objective as the meteor or the eclipse. As long as reports were confined to the novelist or to the seeker after wonders, the learned world could afford to smile disdainfully and proceed on its way, but when the facts were reported by men of science themselves the case assumed quite a different complexion. The more important the record the greater the attack, and the more virulent the abuse from all quarters. Even if in England we have failed to realise the importance of Dr. von Schrenck-Notzing's contribution (I), in Germany the attacks made upon it reflect great credit upon its author. For the truth is that it is by far the most important work on telekinesis since the S.P.R. Report on Palladino or Dr. Ochorowicz's observations on Mlle T. Torn from the centre of spiritistic circles in which he was becoming rapidly hardened through the traditions of the time, young Willy Schneider was taken by Dr. von Schrenck and educated with a view to a single purpose. That goal in brief was to train the mediumistic faculty so that the same phenomenon could be repeated under the same conditions at specified times and before varying observers. It is in the achievement of this purpose that the importance of Dr. von Schrenck's record may be said principally to lie. The methods of control and the phenomena observed are substantially the same as those described in the *Journal* for October, 1922. Control consists broadly in the holding of the medium's hands and wrists by two persons and the outlining of his body by luminous pins. Phenomena occur usually 1 m. 10 cm. from the medium and are not hindered by the presence of an intervening gauze screen. Four methods were used: (A) the medium within a gauze enclosed structure and the objects to be moved upon a table in front of the observers. (B) The medium sitting freely in a chair and the objects enclosed within a gauze cage about 1 m. 10 cm. from the medium. (C) The medium and the objects being 1 m. 10 cm. apart, the latter being separated from the observers by a four-winged gauze screen. (D) The medium and sitters being entirely cut off from the objects by a gauze enclosure. In all these four cases the medium is held by two persons as described above. (See I., Abb. 3-6, p. 43.)

Besides printing an account of his own sittings, Dr. von Schrenck records those held in the Psychological Institute of Munich University. The same phenomena were witnessed repeatedly under the same conditions and, as far as can be gathered from the reports, no member of the examining commission came to unfavourable opinions as to the authenticity of the phenomena presented. The record is mainly one of impressions and observations. Fresh experiments were not apparently encouraged if we except the tunnel apparatus described on pp. 11, 12. In his attempt to describe the phenomena Dr. von Schrenck leans towards the hypothesis of teleplastic structures proceeding from the medium (pp. 44, 47, 49), a theory to which colour is lent by the fact that the mesh of the gauze is opened when the objects are separated from the medium (pp. 46, 47). Similarly the experiment with tissue paper described on p. 48 supports the same hypothesis, and the observations printed on pp. 14, 16, 23, 46 and 163 will especially interest those few amongst us who have ever attempted to examine the physical phenomena from this point of view.

Recognising the immense importance of the book and the unanswerable character of the records, German students who had the reputation of being hard-headed sceptics set about to devise suitable replies. At least two avenues of attack were open. One was to declare that the whole thing was ridiculous, a preposterous and futile farce which could be left unnoticed. Professor Karl Marbe adopted this course and (*incredibile dictu*) the *Preussische Jahrbücher* opened its columns in hospitality (II). Beginning with Steiner he passes to the sideric pendulum and the divining rod, proceeding to tell us that "up till now there is not the slightest proof of telepathy" (p. 53). From telepathy Professor Marbe passes to Dr. von Schrenck, but obviously cannot find any flaw in the control or in the results. He therefore resorts to ridicule and aspersions concerning Willy's character and conduct. Finally in a burst of almost hysterical frenzy he thus describes the book. It is, he says, only "ein Album der Blamage, sondern auch als eine Publikation, die mit den wahren Interessen des Volkes im Widerspruch steht" (p. 59) [not only a publication which makes the author ridiculous, but also one which conflicts

with the true interests of the people]. Dr. Hellwig is calmer than Professor Marbe (III). He has read the book *sine ira et studio* and has made "hundreds and hundreds of eritical notes," but unfortunately, he gives us no striking example of them, contenting himself with vague complaints, such as the lack of light and Willy's aversion to apparatus. The second avenue of attack was adopted by Prof. Henning (IV). It consists essentially in the production of a person who can present all the phenomena of Willy Schneider under the same control conditions and yet manage to produce them fraudulently. Professor Henning has accomplished this grand feat. He has discovered a Russian medium whose name he forgets to give us. This person, under the full light of three half-watt lamps of sixty candle power each, works in the centre of the investigators. Objects, such as a large book, a tray, a china plate, a newspaper or a walking stick rise into the air at a distance from the medium and float to any observer at command. A cigarette case opens itself and a cigarette floats out of it finally settling in the medium's mouth. The phenomena are just as good if the medium's hands and feet are held. Control of the medium's person can be insisted upon not only before and after the sittings but at any time during the production of phenomena. None of the observers could explain the manifestations, and no confederates were necessary, "*nur zwei fast mikroskopische kleine Behelfe*" [only two almost microscopic little devices] which could be used without the help of hands, feet or head.

Professor Henning's contribution to the *Zeitschrift für Psychologie* may be interesting to those engaged in the analysis of dreams according to the Freudian interpretation. But as a practical contribution the story is spoilt by Professor Henning revealing some of the amazing methods of this modern Yogi. The first device is a piece of thread on the end of which is a ball of wax and the second is a soup spoon in the sleeve for levitating a table—but we will not continue. It will merely suffice to add that this amusing skit by Professor Henning has actually been taken seriously in Germany in the same way as Dr. Mercier's *Spirit Experiences* was accepted in certain quarters in England. Professor Max Dessoir published a laudatory article in the *Vossische Zeitung* (V). He proposes

that Willy shall be tested by Henning's Russian medium, but we fear that the latter is even more shadowy than the phantoms produced by the former. The fact alone of Henning's skits being treated seriously by such a prominent scholar as Professor Dessoir indicates the amount of animosity prevalent abroad on the subject of Baron von Schrenck's experiments with Willy Schneider. For the experiments form a solid basis upon which to work, and Baron von Schrenck was indeed fortunate to obtain the help of such a medium as Willy Schneider. The easy and at the same time efficient methods of control are typical of what can be done with a good medium for telekinesis.

How different are the problems presented by teleplastic mediumship! In the one case control is simple if only the medium can be persuaded to consent to it. In the other control is difficult even when the medium offers himself apparently unreservedly. In my discussion of the problems involved in the case of Eva C.¹ I tried to point out how difficult it is to prevent objects being smuggled into the séance room despite the utmost vigilance on the part of the controllers, and Dr. von Schrenck in his turn criticised my objections in the *Proceedings* for 1923. In the first paragraph of that criticism Dr. von Schrenck compares his experiments with Eva C. with those with Willy Schneider. But the comparison is, I think, invalid, since telekinetic mediumship differs entirely from teleplastic mediumship in methods of control. In dealing with the control of Willy Schneider I have said elsewhere that my objections to the Baron's control of Willy would be as strong as those against his control of Eva C. *were Willy to sit for teleplasm.*² There is no doubt whatever in my own mind that Eva C., Willy Schneider, Jan Guzik, Pasquale Erto, etc., *can* bring objects into the séance room in spite of the control exercised in Munich, London or Paris. Moreover the recent case of Erto shows quite conclusively that such is the case in at least one instance. But the important point to emphasise is not what the mediums can bring in, but what use they can make of what they do bring in. Willy no doubt *can* bring in a telescopic rod, but of what use is it to him? None whatever. With telekinesis the con-

¹ *Proceedings*, 1922, 309-331.

² *Journal*, 1922, p. 370.

trollers can prevent mediums using their apparatus presupposing such to be brought with them. With teleplastic mediumship the apparatus is the phenomenon. Judgment must not be founded upon a sure control, although a good deal can be done in this direction. It must seek a firmer basis upon the appearance and (above all) behaviour of the phenomenon itself. A dummy hand swathed in cotton wool does not behave like that described upon p. 678 of Professor Richet's *Traité de Métapsychique* (2^e éd.), neither does a dummy head resemble that mentioned by Dr. Geley on p. 13 of the *Bulletin* of the Inst. Gén.-Psychol. (Nos. 1-3, Paris, 1918). But since we cannot dictate as to what supernormal phenomena must or must not resemble, the case becomes even more complicated. And in this very complication lies part of the secret of the tragic and at the same time farcical story of Ladislaus Laszlo (VI). Laszlo was an electrical artisan and is generally considered to be neuropathic. In December 1921 he made the acquaintance of M. Wilhelm Tordai, who was legally connected with the Finance Ministry at Budapest. Asking to be investigated, Laszlo attracted the attention of M. Tordai who became convinced of the authenticity of the phenomena and formed a circle for their investigation. The conditions were the same as those usually obtaining at such experiments. Before the sitting Laszlo changed his clothes, donned a bathing costume and occasionally took a bath. The cabinet and surroundings were also said to be carefully examined. Dim white light was used together with red light or sometimes total darkness. Besides producing alleged teleplasm, luminous phenomena were observed. In this connection it is interesting and highly illuminating to read the accounts of the observers before the exposure. I select the following passages and translate them *verbatim*.

“Luminous phenomena appeared, at first close to the medium's body but latterly at a distance of several metres from him. The size of these lights varied from that of a pea to that of a pigeon's egg. At times these lights moved in rapid zig-zag lines resembling comets. . . .”

“A trembling of the whole body then set in. The hands and feet become cold. Saliva in abundance drops to the ground. After the flow of saliva there emerges from the mouth a band of plasma 3 cm. broad and 20 cm. long.”

On April 24th, 1923, a special test took place. The medium was stripped, searched, and taken to a special room containing the minimum of furniture. A purgative was administered, the stomach pump was employed and he was watched for twenty-four hours before being taken to the séance room. At the sitting four photographs were taken of alleged teleplasm emerging from the mouth. They show a strip 5 to 6 cm. broad and 60 to 70 cms. long. At other sittings the medium wore a veil as in the case of Eva C. The director thus describes the phenomenon.

“At this experiment I had slipped my hands under the veil, separating it with forefinger and thumb and keeping it as far away from the mouth of the medium as possible. With the surface of my hand I controlled and guided involuntarily the movements of the plasma. This time again, we could clearly observe, in the red light, the withdrawal of the substance through the veil and afterwards ascertain that the veil was intact” (p. 6).

In criticising this account Baron von Schrenck compares the photograph with those taken with Eva C. and Stanislaw P. He declares that with Eva the mouth is wide open and the veil is not drawn into the cavity whilst with Stanislaw a small portion of the substance is seen inside the veil.¹

How far Baron von Schrenck is correct in this assertion I am not prepared to say. During the sittings with Eva in London it was observed that the veil was drawn into Eva's mouth, and I published a statement upon that very point.² Moreover it appears to me that in Fig. 155 the veil is again drawn into Eva's mouth, and I cannot think that the case of Stanislaw P. can be called conclusive from the fact that a portion of the substance is seen behind the mesh apparently inside it.

The apparent vitality of the substance was also noticed by the Hungarian observers. With red light falling directly upon the plasma a piece was seen upon the ground at a distance of 60 cm. from the medium. “As if attached to an invisible

¹ See *Materialisations-Phaenomene*, 2^e Aufl., figs. 155, 213.

² *Proceedings*, 1922, p. 322.

thread, it crawled to his feet, climbing up the body and disappeared into the mouth.”¹

Upon other occasions the observers handled the substance. The report reads: “A few seconds later, the white, cold and foam-like plasma which lay on our hands withdrew into the medium’s mouth” (p. 7). Upon hearing of the marvels Baron von Schrenck visited Budapest and had four sittings with Laszlo.

In his published accounts it is clear that he was far from satisfied with the phenomena and general conditions. Indeed at the conclusion of the series, he wrote to M. Tordai expressing his uncertainties. He advised him to so seize the phenomenon and ascertain its real nature. M. Tordai, however, disregarded his advice and gave a lecture upon Laszlo’s mediumship. A professional showman was present at the lecture, and, approaching Laszlo offered him an engagement. To him Laszlo confessed that the whole thing was fraudulent, and proofs of his guilt were finally established. One of the sitters had assisted him and examples of the substance in the shape of old pieces of muslin soaked in fat, etc., were discovered.

In Dr. von Schrenck’s pungent criticism of the case two principal points are raised. His first objection is that the products were so artificial in appearance that they had to be regarded with extreme scepticism. Now it is clear from the passages I have quoted above that the Hungarian observers were quite convinced of the authenticity of the phenomena even though they themselves may have noticed marks of artificiality. It is to be remarked that they reported self-mobility, change of form and the passage of the substance through the veil. Indeed from their reports it is difficult to understand how the deception was carried on unless we remember the religious atmosphere of the performances. Passages from the Bible were read and the medium’s guide, “Dr. Grunhut,” gave salutary advice. The circle had instituted the best

¹ Cf. *Mat.-Phaen.*, Figs. 128 and 130 where in the one case the substance lies on the medium’s chest supported by a black thread from the mouth and in the other (the second photograph) the same appearance is seen suspended from the breasts, the black thread being entangled with it.

control they could devise and it can scarcely be contended that it was not severe. It is true that it was totally inefficient, like that of the medium Erto, but it was the best these inexperienced observers could suggest. In spite of all the medium succeeded in smuggling in his apparatus. Even the artificial appearance of the products cannot be considered proof of their normal origin. Dr. von Schrenck himself would scarcely deny, I think, that certain of the productions of Eva C. and Stanislaw P. suffer from the same objection.¹ The answer to this point Dr. von Schrenck himself partly furnishes when he speaks of the control of the hands. For if the hands are held then the arrangement of the products becomes a matter of some difficulty. Laszlo's hands were sometimes held and sometimes not. Often the hands were free behind the curtains between the appearance of different phenomena.² Scrupulous, though inefficient, in the bodily control, the Hungarian enquirers failed to perceive the enormous importance of the hand-control. It is this inability to discriminate the important from the unimportant, not only in actual sittings but in considering the literature of the subject, that is at the root of many of the difficulties of psychical research. For if observers cannot distinguish the differences between, we will say, the phenomena of Willy Schneider and those of Palladino, or of Laszlo and Eva C., then the results can never be accepted by serious students. The history of Laszlo is not more incredible than the amazing performances of Eldred whose exploits were the wonder of the spiritualistic world for some two years. A solid basis for our work can only be found in such laborious series of experiments as those conducted by Baron von Schrenck with the medium Willy Schneider. If this series contrasted with the Laszlo series teaches us anything, it is the radical differences of treatment necessary in the investigation of telekinetic and teleplastic mediumship.

¹ Cf. *Mat.-Phaen.*, Figs, 36, 82, 88, 110, 137, 149, 209, etc.

² Dr. Geley in his account of his sittings with Eva C. (*L'Ectoplasmie et la Clairvoyance*) (Paris, 1924) says (p. 198):—"Je répète que ses mains restaient toujours en vue et tenues [italics his] en dehors des rideaux." An examination of his accompanying photographs show that in the only four which show both hands, in one only is one hand held.

REVIEW.

Supernormal Faculties in Man: An Experimental Study by EUGENE OSTY. Translated from the French by STANLEY DE BRATH, M.I.C.E. (London: Methuen & Co. 1923. Pp. xi, 245. 15s. net.)

DR. OSTY is a French medical man who published in 1913 a work on *Lucidity and Intuition*, embodying what he had learnt by "three years' experimental study of the strange faculty possessed by certain persons of revealing the course of an individual life, and that without regard to the normal exercise of their intelligence, to information from their ordinary senses, and to the insuperable obstacles which time and space put in the way of our ordinary perception,"¹ and sums up his subsequent researches in the present book. These, he claims (p. vii), show that supernormal cognition is produceible at will, independent of beliefs and faith in witnesses, and is susceptible of exact observation and indefinitely repeated experimentation.

It can hardly, however, be maintained that he succeeds in making good this very large claim. For, though his book is readable and full of interesting stories, and no one after reading it could doubt either his good faith, his ingenuity, or his enthusiasm, it is disappointing to find that his method of 'experimenting' is merely that of consulting the oracle of the professional *clairvoyants* who seem to abound in France, and recounting their successes with a considerable display of technical terminology. This method may be repeatable indefinitely, and even *ad nauseam*, but it hardly deserves to be called 'experiment' or even 'precise observation,' and correct

¹ Mr. de Brath translates "revealing the sequences of individual lives independently of normal intelligence, of normal sensorial information, and also of the unavoidable obstacles". . . , a rendering which reveals the chief defect of his translation. It is adequate, though not always accurate, in ordinary narrative (as when on p. 234 he translates '*gros*' and '*mince*' by '*big*' and '*small*'), but tends to become obscure in theoretical passages.

results are certainly not producible by it at will. Dr. Osty of course knows this as well as anyone; but it is only towards the end of the book, in a valuable chapter on 'errors in metagnomy' that one learns that errors abound and "pervade metagnomic séances in variable proportions. . . . Some séances contain scarcely any, others contain a few, others many" (p. 205), and that Dr. Osty, though he has had "ideally good séances," has never come across "an impeccable percipient" (p. 215). All are capable of starting off on a wrong clue, and incapable of distinguishing between a genuinely supernormal vision, an impression telepathically imbibed from another mind, and a product of the 'fabulation' of their own subconscious imagination. Moreover, their visions are always fragmentary, and therefore frequently misleading; and public séances, "or even private séances at which several persons are present" are conducive to error (p. 233). Yet it is evident that private sittings at which only one 'experimenter' is present, and has to record all that is said by both parties, are liable to errors of a different type: they can never inspire confidence like a sitting of which a contemporaneous *procès verbal* is extant. If in addition one recognises that every subject is different and has idiosyncrasies to be humoured, and that hardly a glimmer of a theoretic explanation of the facts alleged is in sight, it will not seem extravagant to say that we are still very far from being in a position to call supernormal cognition an experimental study reproducible at will.

True there remains a considerable body of evidence in its favour, which can hardly all be explained away. Nor need it be denied that Dr. Osty has materially added to it. But its quality is unsatisfactory and not always above suspicion, and, so far as it is fact, it is still uncomprehended fact. Only minute and co-operative study can be expected to yield the clues that will lead to explanations and to experimental control over it. And for this purpose it will be necessary to have more, and more complete, accounts of the exact proceedings at the sittings at which apparently supernormal knowledge is obtained. Dr. Osty (p. 239) regards these demands as unreasonable, and never gives a record of even one of his sittings in full, as a specimen of his procedure. The reader therefore has to take his accounts on trust, and cannot check his in-

ferences. His excuse is that the accumulation of mere observations without hypotheses is very slow work, and that such records are very dull reading. True, but the question is whether they are not scientifically necessary in the present state of the inquiry. They are at any rate more important than that every investigator should start afresh with a new terminology of his own, especially when it is incorrectly formed. For the term 'metagnomy' which Dr. Osty has adopted from Boirac should mean not 'beyond-intelligence' but '*after-judgment*' (or 'opinion'). Lack of agreement about terminology is one of the least of the difficulties of psychical research; but what is surprising is that the French students of these subjects, who are lacking neither in numbers, nor in enthusiasm, nor in ability and scientific repute, should not band themselves together into a Society like ours.

F. C. S. SCHILLER.

APPENDIX II. TO MRS. SIDGWICK'S PAPER ON
PROFESSOR MURRAY'S EXPERIMENTS IN
THOUGHT-TRANSFERENCE.

THE experiments made on December 6 and 7, 1924, of which the record is given below, are of interest for three reasons. In the first place, only two (Mr. G. W. Balfour and Mr. Basil Murray) of the company had been present at any of the previous experiments; in the second place, these are two of the very rare occasions on which experiments have been attempted elsewhere than in Professor Murray's own home or home-circle; and in the third place, three out of the five successes or partial successes on December 6, 1924, were obtained when the subject had been chosen by some one who had never been present before at experiments of Professor Murray's.

Mr. Basil Murray was asked to choose the subject of the first three experiments on December 6, because, the surroundings being strange, it was thought that there would be a better chance of success if a beginning were made with an agent to whom Professor Murray was accustomed.

The experiments on December 7, 1924, failed,—probably because the conditions were unfavourable. It should be noted that in one instance Professor Murray's impressions seem to have been influenced by things that had happened earlier in the day.

December 6, 1924.

FISHERS HILL, WOKING

Present—LADY BETTY BALFOUR, MRS. HENRY SIDGWICK,
MISS LEONORA PIDDINGTON, MESSRS. G. W. BALFOUR,
BASIL MURRAY, J. G. PIDDINGTON, LORD BALFOUR,
AND PROFESSOR G. MURRAY.

While the subject of each experiment was being chosen and recorded Professor Murray waited in the dining-room,

the rest of the company being in the drawing-room. During his absence the drawing-room door was shut on every occasion, and on the first occasion the dining-room door was also shut. On subsequent occasions the dining-room door was left open. When the subject of the experiment had been chosen and recorded, Mrs. Sidgwick on each occasion but one left the drawing-room in order to summon Professor Murray. The drawing-room is separated from the dining-room by another room about thirty-six feet in length. While the subject was being chosen and recorded Professor Murray was separated by at least forty-six feet from the person nearest to the drawing-room door. The account of the subject chosen was dictated to the recorder in a quiet tone of voice: in fact in so quiet a tone that more than once the recorder had to ask for words to be repeated. On each occasion Professor Murray held the hand of the person who had chosen the subject. J. G. Piddington acted as recorder of all the experiments except the 9th, which was recorded by Basil Murray.

During two, if not three, of the first three experiments—all of which failed—there was talking among the experimenters after the subject had been written down, it not having been sufficiently realised at first that talking or other kind of noise or disturbance is thought to diminish the chances of success.

First Experiment, 9.51 p.m.

Subject (chosen by Basil Murray). “I’m thinking of Mussolini interviewing a number of Press correspondents at Rome. They were waiting in a large room, and he was three-quarters of an hour late, and eventually arrived with eight Fascisti walking backwards bowing to him as he came in.”

PROFESSOR MURRAY. “I don’t think I shall get anything.

I’ve a faint impression of Sir Basil Zaharoff.”

Second Experiment, 10.1 p.m.

Subject (chosen by Basil Murray). “I’m thinking of David Copperfield and Peggotty driving in the ‘bus.”

PROFESSOR MURRAY. “No.”

Third Experiment, 10.4 p.m.

Subject (chosen by Basil Murray). "I'm thinking of Lord Cecil reading the Covenant at the Council at the last Assembly, on the occasion of the Corfu incident, to the Italians and Greeks."

PROFESSOR MURRAY. "No."

At this point Professor Murray said he thought he would not be successful and had better stop. Piddington asked him to have one more try.

Fourth Experiment, 10.5 p.m.

Subject (chosen by J. G. Piddington, who, as he records it, reads it out). "I'm thinking of Queen Victoria when she learnt that she was next in succession to the throne saying 'I will be good'."

PROFESSOR MURRAY. "It's something in a book. No. it's a picture. It's the news coming to Queen Victoria that she is Queen."

Fifth Experiment, 10.10 p.m.

Subject (chosen by J. G. Piddington, who, as he records it, reads it out). "I'm thinking of Napoleon on the retreat from Moscow with Murat riding by his side."

PROFESSOR MURRAY. "No impression."

Sixth Experiment, 10.12 p.m.

Subject (chosen by Basil Murray).

"He stood and heard the steeple
Sprinkle the quarters on the morning town:
'One, two, three, four,
On market place and people
It tossed them down.'"

PROFESSOR MURRAY. "This is poetry" (said as he entered the room). (Pause). "De dum de dum de steeple de dum de dum the town, one two three four. Yes, I don't know the thing, but I rather think it's something like 'He stood and heard the steeple something and something on the dreaming town something down.'"

Note.—These same lines had been chosen several years before for an experiment, and the experiment had partially succeeded. See page 233 above.

Seventh Experiment, 10.20 p.m.

Subject (chosen by Basil Murray). "I'm thinking of a scene in Galsworthy's *The White Monkey*, where Soames Forsyte is defying a shareholders' meeting.

PROFESSOR MURRAY. "I don't think I shall get it. Faint impression of a line of Homer."

Eighth Experiment, 10.24 p.m.

Subject (chosen by Basil Murray). "I'm thinking of my sister Rosalind riding on a grey horse across Port Meadow with Rupert Brooke."

PROFESSOR MURRAY. "It's galloping—somebody galloping on grass over—I should say Port Meadow. It's (pause) I should think it was Rosalind."

BASIL MURRAY. "Yes, anyone with her?"

PROFESSOR MURRAY. "I should be guessing. Mr. Z. I should say it was a grey horse."

BASIL MURRAY. "That's odd, because I was thinking of Mr. Z. I very nearly said that she was riding a dead horse."

PROFESSOR MURRAY. "I very nearly said 'a dead horse.'"

Note.—Mr. Z. was a horse-dealer who sold a friend of the Murrays a dead horse.

Ninth Experiment.

Subject (chosen by J. G. Piddington). "I'm thinking of Thomas à Becket being murdered in Canterbury Cathedral."

PROFESSOR MURRAY. "This is something rather horrible" (spoken at once on entering the room). "Oh! (Pause). It's some one being murdered in a church or something like that. (Pause.) I first thought it was something in the Bolshevik revolution, but I'm sure it isn't Russian. Oh! I should think it was the murder of Thomas à Becket."

Note.—When the experiment was over, Piddington said that he had thought of including in the subject "and saying 'Into thy hands, O Lord, I commend my spirit'"; but not being sure whether à Becket had said these words, he did not include them; but nevertheless he had thought of the text during the experiment. Professor Murray said he had had no impression of the text.

When the ninth experiment was over Professor Murray suggested that Lord Balfour should choose the subject of the next experiment.

Tenth Experiment, 10.37 p.m.

Subject (chosen by Lord Balfour). "I'm thinking of Robert Walpole talking Latin to George I."

PROFESSOR MURRAY (speaking as he enters the room). "Something Eighteenth Century." (Here Lord Balfour nodded assent.) "I don't think I shall quite get it exactly. Doctor Johnson meeting George III. in the King's Library; but I'm sure he's talking Latin to him—which he didn't do. I don't think I shall get it right. Wait. I've nearly got it. Eighteenth Century. Somebody talking Latin to a king."

December 7, 1924.

FISHERS HILL, WOKING

Present—MRS. HENRY SIDGWICK, HON. MRS. G. COLE, MISS L. PIDDINGTON, MESSRS. G. W. BALFOUR, BASIL MURRAY, J. G. PIDDINGTON, LORD BALFOUR, AND PROFESSOR G. MURRAY.

Conditions the same as on December 6, 1924, except that on every occasion the dining-room door, as well as the drawing-room door, was shut, and that Professor Murray was summoned back to the drawing-room by Miss Piddington instead of by Mrs. Sidgwick.

When asked whether he would be willing to try further experiments Professor Murray had said he would be quite willing to do so, but that he anticipated failure, as he was not in the tranquil and serene mood favourable to success. The day had been a disturbing one for the whole party, as in the morning Lady Betty Balfour had broken her leg.

First Experiment, 9.32 p.m.

Subject (chosen by Basil Murray).

"I was the man the Duke spoke to;

I helped the Duchess to east off his yoke, too."

[BROWNING, *The Flight of the Duchess.*]

PROFESSOR MURRAY. "Is it Basil? I don't expect this is right. The only thing I'm getting is enormous tropical forests."

BASIL MURRAY. "I was thinking of 'Ours is a great wild country.'" [*i.e.* the first line of the passage in the poem which describes the Duke's country:—which, however, is not a tropical one.]

PROFESSOR MURRAY. "I also had the feeling of a tree falling down."

Note.—Earlier in the day there had been conversation about tropical forests; and the accident to Lady Betty Balfour had been in part caused by the fall of the rotten branch of a tree.

Second Experiment, 9.37 p.m.

Subject (chosen by Basil Murray). "I'm thinking of my sister throwing a ball to Jack Medley at a terrace at Alassio, and of him falling over backwards in the attempt to catch it—over the edge of the terrace."

PROFESSOR MURRAY. "No. Nothing at all."

Third Experiment.

Subject (chosen by J. G. Piddington). "Sir Walter Raleigh in a bad temper refusing to spread his cloak before Queen Elizabeth."

PROFESSOR MURRAY. "I thought for a moment I should get that. No."

J. G. PIDDINGTON. "Did you get anything?"

PROFESSOR MURRAY. "I got a momentary impression of the Duke of Wellington."



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OF THE

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