

PROCEEDINGS OF
THE FIRST INTERNATIONAL
CONFERENCE OF
PARAPSYCHOLOGICAL STUDIES

PROCEEDINGS OF
THE FIRST INTERNATIONAL
CONFERENCE OF
PARAPSYCHOLOGICAL STUDIES

UTRECHT, THE NETHERLANDS
JULY 30 TO AUGUST 5, 1953

PARAPSYCHOLOGY FOUNDATION, INC.
NEW YORK, N.Y.

Copyright, 1955, by Parapsychology Foundation, Inc.

All Rights Reserved

Library of Congress Catalog Card Number: 55-12296

Manufactured in the United States of America
The Colonial Press Inc., Clinton, Mass.

CONTENTS

<i>Summary Report</i>	ix
<i>Introduction</i>	xi
<i>List of Conference Members</i>	xv
<i>International Parapsychology: From the Opening Address by Dr. Gardner Murphy</i>	xvii
WORKING GROUP A (Quantitative Studies)	1
Summary of Activities of Working Group A	3
Psychical Research as a Test of Probability Theory, <i>G. Spencer Brown</i> (Great Britain)	5
Leading Points Made About Spencer Brown's Report, <i>A. G. N. Flew, C. W. K. Mundle, M. Scriven</i>	7
Researches in Psychokinesis by Means of Placement Technique, <i>Haakon Forwald</i> (Sweden)	9
Some Unpublished Evidence Regarding the Occurrence of Psychokinesis, <i>R. A. McConnell</i> (U.S.A.)	12
Statistical Clues to the Psychological Dynamics of Psy- chokinetic Declines, <i>R. A. McConnell</i> (U.S.A.)	14
Some Possibilities and Pitfalls of Quantitative Methods in Psi Research, <i>R. A. McConnell</i> (U.S.A.)	15
Psychological Concepts, <i>William G. Roll</i> (Great Britain)	16
Is ESP a Statistical Artifact? <i>S. G. Soal</i> (Great Britain)	18
Experimental Design in Parapsychology, <i>Robert H. Thouless</i> (Great Britain)	21
Recent Experiments on Physical Aspects of the Muscle- Tonus-Reflex (Dowsing), <i>S. W. Tromp</i> (Netherlands)	24
PK and ESP Experiments with Martie Vasse, <i>Paul and Christiane Vasse</i> (France)	27

The Influence of Some Physical and Chemical Factors on Parapsychological Phenomena, <i>Joseph Wüst</i> (Germany)	30
Physical Measurements in Dowser-Exciting Zones, <i>Joseph Wüst</i> (Germany)	32
<i>Special Study Group</i> : Physical and Physiological Studies of Paranormal Phenomena	34
WORKING GROUP B (Psychotherapeutic and Psychoanalytical Approach)	
Summary of Activities of Working Group B	37
Parapsychological Dimensions in Medicine, <i>Gotthard Booth</i> (U.S.A.)	39
Parapsychological Observations During Psychoanalytical Treatment, <i>Wilfried Daim</i> (Austria)	41
Psi, Science and Psychoanalysis, <i>Jan Ehrenwald</i> (U.S.A.)	44
Telepathy and Telepathic Tracer Effects in Interpersonal Relationships, <i>Jan Ehrenwald</i> (U.S.A.)	46
Psi and the Problem of the Disconnection in Science, <i>Jule Eisenbud</i> (U.S.A.)	49
Chronologically Extraordinary Psi Correspondences in the Psychoanalytic Setting, <i>Jule Eisenbud</i> (U.S.A.)	51
A Preliminary Report on a Method of Measuring Psi Correspondences with IBM Machines, <i>J. Eisenbud, R. Hatfield, S. Jacobs, H. Keeley, and R. V. Rainey</i> (U.S.A.)	54
The Conscious and the Unconscious: A Misleading Dilemma, <i>Jean Gebser</i> (Switzerland)	56
Warning and Inescapable Prophecy, <i>G. F. Hartlaub</i> (Germany)	58
Precognition in the Therapeutic Setting, <i>Joost A. M. Meerloo</i> (U.S.A.)	60
C. G. Jung's Concept of "Synchronicity," <i>C. A. Meier</i> (Switzerland)	63
Parapsychology, Psycho-Hygiene and Medical-Psychological Instruction, <i>Heinrich Meng</i> (Switzerland)	65
	67

Depth Psychology and Parapsychology, <i>Emilio Servadio</i> (Italy)	69
The Dream, Schizophrenia, and Psi Phenomena, <i>Montague Ullman</i> (U.S.A.)	71
Parapsychological Research at a Psychiatric Clinic, <i>H. J. Urban</i> (Austria)	75
WORKING GROUP C (Spontaneous Phenomena and Qualitative Research)	77
Summary of Activities of Working Group C	79
Precognition in the Qualitative Experiment, <i>Hans Bender</i> (Germany)	81
The Future of Parapsychological Research, <i>John Björkhem</i> (Sweden)	84
The Twenty-Year Experiments at Uppsala and Lund, <i>John Björkhem</i> (Sweden)	86
An Observation on Psi Function in Plants, <i>Gotthard Booth</i> (U.S.A.)	88
Traveling ESP, <i>Hornell Hart</i> (U.S.A.)	91
Reappraising the Literature of Psychical Research, <i>C. J. Ducasse</i> (U.S.A.)	94
The Need of "A Medical Verification Center," <i>W. Kat</i> (Netherlands)	96
Is There a Sixth Sense? <i>Raphael Kherumian</i> (France)	98
Biological Roots of Parapsychology, <i>William Mackenzie</i> (Italy)	100
Different Types of Space-Time and Parapsychological Phenomena, <i>M. Martiny</i> (France)	103
Parapsychology in Nature, <i>René Sudre</i> (France)	105
Psychoscopic Experiments on Behalf of the Police, <i>W. H. C. Tenhaeff</i> (Netherlands)	107
Antagonism in Mental Images and the Problem of Psi-Missing, <i>René Warcollier</i> (France)	110
A New Test for Studying the Psi-Missing Problem in ESP, <i>René Warcollier</i> (France)	112

A Plea for the Introduction of Edmund Husserl's Phenomenological Methods into Parapsychology, <i>Gerda Walther</i> (Germany)	114
WORKING GROUP D (Personality of the Sensitive)	117
Methodical Sensualism and Parapsychology, <i>Sven Krohn</i> (Finland)	119
The Exploration of ESP and Human Personality, <i>J. Fraser Nicol and Betty M. Humphrey</i> (U.S.A.)	121
Personality Tests and ESP Scores with College Classes, <i>Gertrude R. Schmeidler</i> (U.S.A.)	123
Psychodiagnostic Examination of Sensitives, <i>W. D. Rasch</i> (Germany)	125
Electro-Encephalography of Metapsychical States (Trance), <i>Orlando Canavesio</i> (Argentina)	127
<i>Resolutions</i>	129
<i>Statement Regarding the International Congresses Held Between the Two World Wars</i>	134
<i>Follow-Up Conferences in France and England</i>	136

SUMMARY REPORT

The first International Conference of Parapsychological Studies met at the University of Utrecht, the Netherlands, from July 30 to August 5, 1953. Sixty-three members, drawn from fourteen nationalities, and comprised largely of physicists, chemists, biologists, psychologists, sociologists, physicians, engineers and mathematicians, met to consider problems which arise in the investigation of types of communication between individuals which are not explicable in terms of any known form of contact through the sense organs, and types of contact between individuals and their physical environments which are not explicable in terms of contemporary physics and biology—processes designated generically as psi-gamma (paranormal cognition) and psi-kappa (paranormal action upon bodies not in physical contact with the individual). Such processes are often entitled "telepathy," "clairvoyance," "psychokinesis," etc.

After preliminary sessions delimiting the field of enquiry, four Working Groups were established: the first dealing with quantitative experimental studies of the various classes of paranormal activity; the second with interpretation of material gathered in the practice of psychiatry; the third with qualitative and spontaneous (not experimentally controlled) phenomena; and the fourth with the psychological study of those persons who appear to display a relatively large amount of paranormal sensitivity ("special sensitives").

Attention was given to the establishment and maintenance of scientific standards, the development of appropriate experimental and quantitative methods, the devices for discovering specially sensitive individuals, and the most profitable ways in which to combine and extend the concepts and methods of the

various sciences in an attempt to understand more fully the relations between the living organism and the environment. The various scientific groups, assisted by men working in the philosophy of science, discussed the possibility of developing a theory sufficiently comprehensive to give some sort of order to the variety of phenomena described.

While most of the problems had been investigated for many years on a small scale by individual scientists and by societies for psychical research, the spread of interest among scientists has been notable in recent years; and a primary activity of the Conference, beyond the authentication of various classes of facts, was the effort to develop a scientific program to deal with all types of unknown relations between individual and environment, whether at present classifiable or not.

There was, for example, marked interest in the problems of unexplained or "unorthodox" healing (recoveries from disease transcending the present concepts of psychosomatic medicine); and a medical committee was established and empowered to take the first steps towards the organization of a research center for the investigation and interpretation of such phenomena.

While most of the research workers in the field of parapsychology were known to one another through the technical journals, the opportunity to meet for a week under University auspices marked an important forward step in understanding across the barriers of nationality, language, and professional specialization.

INTRODUCTION

In placing before the members of the First International Conference of Parapsychological Studies and other interested readers the summaries of papers presented to the conference at Utrecht, a few words may be said regarding the context, the spirit, the achievement and the promise of this conference.

Coming of age during the last quarter of the 19th century, *parapsychology*, or *psychical research*, began very soon to achieve a genuine internationalism in spirit. Britain, the United States, France, The Netherlands, Germany, Italy, the Scandinavian countries, made outstanding contributions; and the documents from that era indicate a lively intercommunication, despite the barriers of national culture and of language. Indeed, parapsychology played its part in the international psychological gatherings of the period, and frequently broke into the psychological publications from the new psychological laboratories.

Under the leadership of Carl Vett, a series of international Congresses of Psychical Research was held in the period between the two World Wars, beginning with the Congress in Copenhagen in 1921. These paved the way for the somewhat different type of Conference held at Utrecht in 1953. It was felt desirable to limit the size of the gathering and to direct invitations mainly to those who had taken part in research investigations in this area of science. The extraordinary hospitality of the University of Utrecht, of the Netherlands Government, and of KLM, the Royal Dutch Air Line, and the very generous support of the Parapsychology Foundation of New York made possible the gathering held at the University

of Utrecht at the end of July and in the first days of August, 1953.

The Conference at its closing meeting determined that Proceedings should be published which would summarize the contributions of that week. The present publication is simply the fulfillment of that promise. It is, unfortunately, impossible to print the full text of the many addresses. A very considerable amount of editorial work was required in preparing a summary of each study presented to the Conference, referring this to the author for approval, yet maintaining some uniformity in style. The presentations are too brief, and in many cases, too lacking in documentation to serve as research reports in the full sense. In many cases, however, these studies in their complete form will find their way into the regular scientific publications of parapsychology and into the publications of other sciences. Let the reader kindly remember that this is simply a *Proceedings of the Conference*, neither more nor less. It will chiefly interest those who took part. It is appropriate, however, that it be deposited in libraries wherever there is a serious attempt at completeness of parapsychological materials.

Perhaps the fact should be explicitly pointed out, despite its obviousness, that in the interpreting of paranormal phenomena there are still enormous differences of opinion. No participant in the Conference is responsible for any views expressed but his own.

From the perspective of 1955, it appears that this Conference achieved its major purpose in moving toward a high level of seriousness in parapsychological science, enabling scholars from different lands to meet with one another, and orienting the public to the fact that a great university may today be proud to give its utmost hospitality to these studies so rich in challenge, so far-reaching in ultimate implications.

Parapsychology was once limited mainly to the work of societies for psychical research. But it is evident from the whole cycle of activities in the last twenty-five years, including notably the experimental work at Duke University, the

investigations at Harvard, Stanford, the City College of New York, Bonn, Freiburg, Oxford, Cambridge and the University of London, among others, that parapsychology as an aspect of university research has come to stay. Something like the structure of a science is being achieved. The Utrecht Conference is a milestone on the way.

GARDNER MURPHY

The Menninger Foundation

Topeka, Kansas

May, 1955

LIST OF CONFERENCE MEMBERS

Following is a list of members of the International Conference of Parapsychological Studies at Utrecht.

Mrs. Edward W. Allison (U.S.A.)
Mr. Robert Amadou (France)
Prof. Hans Bender (Germany)
Dr. John Björkhem (Sweden)
Dr. Gotthard Booth (U.S.A.)
Mr. G. Spencer Brown (Great Britain)
Dr. Hilde Bruch (U.S.A.)
Dr. Orlando Canavesio (Argentina)
Dr. Wilfred Daim (Austria)
Dr. E. J. Dingwall (Great Britain)
Mrs. Laura Abbott Dale (U.S.A.)
Dr. Jacques Donnars (France)
Dr. Jan Ehrenwald (U.S.A.)
Dr. Jule Eisenbud (U.S.A.)
Prof. H. Th. Fischer (Holland)
Mr. Antony G. Flew (Great Britain)
Dr. Haakon Forwald (Sweden)
Prof. Gebhard Frei (Switzerland)
Mr. Jean Gebser (Switzerland)
Dr. Wm. H. Gillespie (Great Britain)
Mrs. K. M. Goldney (Great Britain)
Prof. Hornell Hart (U.S.A.)
Prof. Gustav Hartlaub (Germany)
Dr. Peter Hohenwarter (Austria)
Dr. Betty Humphrey (U.S.A.)
Dr. Winfried Hümpfner (Austria)
Mr. David Kahn (U.S.A.)
Dr. J. Kappers (Holland)
Dr. W. Kat (Holland)
Mr. Raphael Khérumian (France)
Dr. J. M. J. Kooy (Holland)
Prof. D. J. van Lennep (Holland)
Prof. Sven Krohn (Finland)
Dr. William Mackenzie (Italy)
Mr. A. Mak (Holland)
Mr. Gabriel Marcel (France)
Dr. Marcel Martiny (France)

Dr. R. A. McConnell (U.S.A.)
Dr. Joost A. M. Meerloo (U.S.A.)
Dr. C. A. Meier (Switzerland)
Prof. Heinrich Meng (Switzerland)
Mr. A. M. J. Mitchell (Great Britain)
Mr. C. W. K. Mundle (Great Britain)
Dr. Gardner Murphy (U.S.A.)
Dr. H. Musaph (Holland)
Mr. J. Fraser Nicol (Great Britain)
Mr. Edward Osborn (Great Britain)
Mr. F. Claude Palmer (Great Britain)
Mr. Denys Parsons (Great Britain)
Prof. C. A. van Peursen (Holland)
Dr. J. J. Poortman (Holland)
Mrs. Dorothy H. Pope (U.S.A.)
Prof. H. H. Price (Great Britain)
Dr. Wolf Dietrich Rasch (Germany)
Mr. William G. Roll (Great Britain)
Dr. Louis Rose (Great Britain)
Mr. William H. Salter (Great Britain)
Prof. Hans Schaefer (Germany)
Dr. Gertrude Schmeidler (U.S.A.)
Mr. Michael Scriven (U.S.A.)
Prof. Emilio Servadio (Italy)
Mr. Aage Slomann (Denmark)
Dr. S. G. Soal (Great Britain)
Prof. Stefano Somogyi (Italy)
Prof. F. J. Stratton (Great Britain)
Mr. René Sudre (France)
Prof. W. H. C. Tenhaeff (Holland)
Dr. R. H. Thouless (Great Britain)
Dr. S. W. Tromp (Holland)
Dr. Montague Ullman (U.S.A.)
Prof. Hubert J. Urban (Austria)
Dr. Paul Vasse (France)
Mrs. Paul Vasse (France)
Mr. René Warcollier (France)
Dr. G. D. Wassermann (Great Britain)
Dr. Thorstein Wereide (Norway)
Dr. Joseph Wüst (Germany)
Mr. G. Zorab (Holland)

This list does not include a number of prominent Dutch scholars, University professors, psychiatrists, analysts, and officials of the Netherlands Ministries of Education and of Public Health.

INTERNATIONAL PARAPSYCHOLOGY

*From the Opening Address by DR. GARDNER MURPHY,
July 30, 1953*

I would emphasize five words: *scientific, international, democratic, informal; courageous.*

The world of today is being transformed by science; by the discipline, the imagination, the patience, the care, the objectivity, the sharing of responsibility that mark the work of the scientist. Though we may differ from one another in countless things, I believe we speak to one another in the terms of science.

By the word "international" I mean more than the transcending of national boundaries; I mean the common human universality of the problems with which we deal and of the efforts to cope with them. We think today of Richet, of Driesch, and of Myers not as of a Frenchman, a German, and an Englishman alone, but of prophetic men of genius who spoke to all humanity. In the background of our labors today how much we owe to the Swiss Flournoy, to the Dane Vett, to the Mexican Pagenstecher. It is my deep regret also that these national delegations cannot represent the national effort of each land; and I will express especially my deep regret that Dr. Rhine could not be with us, though I rejoice that Dr. Hart is here to represent the Parapsychology Laboratory, and that Mrs. Pope, Managing Editor of the *Journal of Parapsychology*, is with us. Each delegation will similarly think of those whom we wish we could have with us. But I would especially express, at least for myself personally, the regret that whole nations and cultures, such as those of India, of Japan,

and of China, capable of a great contribution to our subject, cannot be with us now; and to voice the hope that another international meeting will include more of humanity than is comprised in the Western European culture.

My third word was "democratic." Here in the Netherlands my thought turns to the great struggle for democracy and great movement of the people towards science and the arts which have characterized the Dutch in recent centuries. Believing that science can become the property of all the people, and that technical experts and intellectuals have a responsibility to simpler folk who have no technical education but nevertheless have an interest in understanding what science is trying to achieve, I hope that somehow we can not only treat one another as brothers, equal and at one in our quest for truth, but that somehow we can convey to the public which supports our enterprise the essential gist of our efforts, with scientific caution but also with simplicity, directness, and candor.

My fourth word was "informal." As a necessary part of democracy, I suggest the values of a conversational spirit, a humility, a freedom from fuss and honorifics, a willingness to let ideas speak to us through whosoever's mouth is at the time uttering a message. Dr. Pobers, beautifully sensing the need for much ultra-informal and intimate personal exchange of views, has provided much time free of formal meetings; but I would beg to go further and suggest that all our deliberations, avoiding hyper-dignity and the authoritarian spirit, take essentially the form of conversations.

My fifth and last word was "courageous." I suggest that the primary reason why parapsychology has failed to receive the intellectual and moral support which its importance requires is timidity, fear of ridicule; at a deeper level, fear of getting out of touch with our neighbors. Frequently our data call for boldness both in announcing facts and especially in setting up hypotheses bold enough to do justice to the extraordinary nature of the facts. As Kirtley Mather has reminded us, we frequently have need of "outrageous hypotheses," hypotheses

which outrage the common sense of today. There is, I think, a very fundamental difference between a fanciful speculation and an outrageous hypothesis from which new directions in experimental research may take their start.

How much shall we attempt to accomplish this week?

Breadth we shall certainly seek, but if this is to be the historic occasion which I hope it may become it certainly cannot attempt to survey all the facts, or even all the classes of facts, known to our subject. Rather, for the sake of perspective, it will, I think, have to attempt clarity, order, good sense, and a respect for sound method, and beyond it all, a sense of understanding one another, a spirit of intellectual comradeship in which true communication is possible. In terms of what was said earlier about informality, move about from one working group to another, and outside of the scheduled meetings introduce yourself to anyone with whom you wish to talk, or organize a little group to pursue your own interests at a time convenient for all concerned.

We shall attempt first of all to set up the organizational structure of the week's work; then establish the four working groups announced on the program which you have received, using the working group on the "Personality of the Sensitive" as an occasion for plenary meetings in which every approach, biographical, cultural, clinical, experimental, quantitative, philosophical, integrative, can be attempted. Towards the end of our meetings we shall have several plenary sessions, devoted to the tasks of surveying and understanding what we have done, determining the form of our contact with the public, defining our relations to other sciences and to the universities, finding and cultivating gifted subjects and likewise finding and cultivating research workers, and looking forward to questions regarding the future of parapsychology and its contribution to civilization.

I believe these last problems of our future are of the gravest possible importance. We need fuller understanding from the scientific public; fuller support for long and strenuous investigations; a much more effective way of finding the young

men and women who will be the parapsychologists of the decades ahead. In the English-speaking world, at least, a very fundamental problem is the decline in the number and power of the great sensitives whose work has taught us such a large part of what we know. If cultural circumstances make the spiritist medium of great powers harder to find, we shall have to face the responsibility of discovering, and of training, others to take their place, or to present us with gifts of some other type equally important in teaching us the realities of those paranormal powers which it is our hope to understand.

As scientists we shall neither attack nor indorse spiritualism as a religion, but we shall continue to pursue with energy and with personal gratitude the study of those whose special sensitivity has taught us so much. And while the problem of the survival of human personality is one which many of us believe is not capable of adequate solution by the methods and concepts which are now available to us, it seems to me, and I hope to you, that we must continue to give our eager attention to every fact which bears upon this problem, and look forward to an era when we shall have suitable methods and suitable facts to warrant cautious yet scientifically solid statements about the relations of human personality to that world which appears to transcend description in terms of the concepts of time and space now known to us.

Personally, I doubt whether parapsychology will be able to bring us this larger understanding of human nature by its own efforts alone. Rather, it seems to me that the scientific spirit working through the methods of history and the social sciences, through the insights of the physical sciences, the biological sciences, medicine, psychiatry, psychology, and catching the spirit of the Rembrandts, the Beethovens, the da Vincis who have described man not in sober prose alone, but in color, in tone, and in eternal principles of form, can lead us to an integrated conception of the nature of man more satisfying than that which we now possess. But in this integrative effort of all the modes of understanding man, parapsychology will, if our work be well done, play a vital role.

WORKING GROUP A

(Quantitative Studies)

Chairmen:

S. G. SOAL

ROBERT H. THOULESS

SUMMARY OF ACTIVITIES OF WORKING GROUP A

The papers read to working group A have been on the following topics; psychokinesis (McConnell and Forwald), experimental method (Thouless), dowsing (Tromp) and ESP (Mme. Vasse).

Papers read to other working groups or in plenary sessions which bear on the special interests of Group A were many. Particularly those of Dr. Humphrey and Mr. Fraser Nicol and of Dr. Schmeidler on extrasensory perception, that of Dr. Wassermann on general theory, and that of Mr. Spencer Brown on the theory underlying statistical method.

The group welcomed the work of Dr. McConnell and of Mr. Forwald as providing new evidence about PK. Some doubts were expressed as to the possibility of outside influences affecting Mr. Forwald's apparatus. But these objections were satisfactorily dealt with by Mr. Forwald.

Dr. Thouless made some criticisms of the facts of assessment and design sometimes found in quantitative parapsychological researches, but he made it clear that this was not a general criticism of current parapsychological experiments. In the discussion there was general acceptance of the criticisms but some doubt was expressed as to whether the defects mentioned were to be found in recent work.

Dr. Tromp described physical influences affecting the motor response of the dowser and gave reasons for considering that his successes were not due to ESP. In discussion it seemed that there was a general opinion that ESP might enter into at least some dowsing activities.

Mme. Vasse described experiments with her own daughter on PK and ESP which gave interesting results.

The Humphrey-Nicol and Schmeidler papers were both of

interest to this section as providing valuable evidence of ESP as well as of its personality correlates. Both provide important guides as to fruitful experimental methods. Dr. Wassermann's paper was of special interest as integrating parapsychology with other fields of research. The discussion was limited by the difficulty of comprehension at first reading of its difficult argument, but the general impression was that this held promise of being a fruitful line of inquiry.

Mr. Spencer Brown's paper raised fundamental problems as to the legitimacy of the statistical methods currently used in parapsychology. An opposing paper was presented by Dr. Soal, supported particularly by evidence from his own researches with Shackleton and Mrs. Stewart. The discussion was prolonged and did not lead to complete agreement. It was generally felt that while this paper led to realization of the necessity for vigilance in examining presuppositions underlying applications of statistical methods, it did not give ground for doubting the general validity of the results of quantitative researches evaluated by current methods.

In general, the working group finds some satisfaction in the variety and value of the researches reported in its field.

R. H. THOULESS, *Joint Chairman*

Summaries of papers delivered follow in alphabetical order.

PSYCHICAL RESEARCH AS A TEST OF PROBABILITY THEORY

G. SPENCER BROWN (*Great Britain*)

It is argued that much of the statistical data reported in psychical research experiments may be evidence, not for the forms of communication which the experiments were designed to discover—telepathy, clairvoyance, precognition, psychokinesis, etc.—but for something outside this field. The seemingly foolproof results in psychical research all rely upon statistical tests of significance; it may be, therefore, that some aspect of the statistical test, being common to all the experiments, would give us a clue to explaining their results.

It is important to consider this hypothesis because of the diversity of the results of psychical research experiments. The same experimental conditions can produce positive deviations, negative deviations, a decline from positive to negative deviations, or none of these effects. It is therefore difficult to arrive at a common factor unless we go more deeply into the logic of the experiments. What seems to be the only factor common to all these experiments, where a statistical test of significance has been applied, is the physical process of randomization.

It is assumed in the theory underlying statistical tests of significance that the concept of randomization is meaningful and precise. That it is so is not generally accepted by logicians and mathematicians. But if the concept is vague or ultimately meaningless, the statistical test of significance has no ultimate basis. At best it might be considered an approximate tool, but it could easily give results which would be misleading. What is more, the sort of results which would be produced by such

a set-up would be precisely the sort of results now appearing in psychical research.

But if the data of psychical research are a special instance of a discrepancy between the theoretical concept of randomness and the observable randomizing situation, this discrepancy should be seen outside the field of psychical research. It might appear, for example, in any field where the causal tendencies were not sufficient to swamp the item; for example, in zoological experiments and pure probability experiments such as the matching of columns of published random numbers.

It is not claimed that all psychical research experiments exemplify this discrepancy. It may well be that the psychical research results are evidence of several different processes, one of which may be a form of communication. But it is contended that the statistical calculations give no more weight to the communication hypothesis than do the results obtained by qualitative experiments. The statistical approach in psychical research may be wrong, but it is not fruitless. The observations made could be of great importance to science, in spite of the fact that they might allow of an interpretation outside the original experimenters' intention.

LEADING POINTS MADE ABOUT SPENCER BROWN'S REPORT

A. G. N. FLEW, C. W. K. MUNDLE, M. SCRIVEN

Unfortunately no recording could be made of the continuation discussion on August 1. We therefore ventured to offer this *on our own responsibility* and without having been able to consult all those who participated. It has been cast in the shape of a list of leading points made in the plenary, the continuation, and private discussions. We apologize for any distortions or omissions there may be.

1. It became clear that we can learn something valuable, both for future experiment and future theorizing, from the Spencer Brown material.

2. It was generally agreed that the outstanding work of Dr. Soal with Stewart and Shackleton, and perhaps now some other work, was not affected by (could not be explained away by) Spencer Brown's arguments or experiments. Because of:

- a) the enormous overall deviations, and, *most importantly*,
- b) the numerous and (with each subject) consistent variations in scores when conditions were separately varied; amply illustrated in Dr. Soal's paper (see p. 17, below).

But Spencer Brown was not alone in thinking that no degree of statistical significance *by itself* (see a) could be regarded as more than a *not necessarily infallible* guide as to where to look for "inductive correlations"; which may in the end not be found. By "inductive correlations" is here meant a consistent tendency for certain predictable things to happen in certain static conditions; and not to happen when and insofar as those conditions are varied in certain definite ways (see b).

3. Spencer Brown's experimental results—so far as the details are now known—show a quite unexpected property of standard random number tables; and suggest that the levels of significance often previously regarded as sufficient in scientific work are not in fact sufficient.

4. It is urgent that very many more experiments of this sort should be done both by him and by others, and the results reported as soon as possible.

5. Spencer Brown's argument that the PK claims were self-frustrating was variously challenged on logical grounds (Mundle, Flew, etc.).

6. A long discussion resulted from an ambiguity in the word "cross-check" as meaning scoring a set of guesses against a) any set of "targets" for which they were not intended by the experimenter, or b) a set of "targets" wholly distinct from the set with which the guesses to be scored were associated.

7. The implications of the rejection or "starring" by the constructors of standard random number tables, etc., of certain portions produced by their methods of construction should be examined for their effects on the applications of the calculus of probability.

a) It was suggested that this pruning may account for the results of Spencer Brown's experiments (Mundle, etc.).

b) It was also suggested that on the contrary this might help to account for our *success* in applying a calculus based on an infinite random series in cases where only a finite series is used (Flew and Scriven). Though this suggestion may well not be incompatible with that in a) above.

8. In connection with 6, above, Spencer Brown said that he was anxious to re-examine the Greenwood series of cross-checks for positions effect, displacements, and any other correspondences which have been discovered or suggested in quantitative experimentation.

RESEARCHES IN PSYCHOKINESIS BY MEANS OF PLACEMENT TECHNIQUE

HAAKON FORWALD (*Sweden*)

Placement PK is concerned with causing objects to come to rest in a designated area of a dice table. The apparatus used in the present research consists of an electrically controlled dice container, perched at the top of a sloping runway curving downward, and lengthened horizontally into a walled-in dice table. When the subject presses an electric button, at the end of a cord, a row of cubes is released, which roll down the incline and scatter over the table. In the first part of the experiments the table was divided longitudinally by a string into two halves, designated by A and B.

Attempts were made in five releases to hit the A-area, and in the following five releases to hit the B-area. The results were:

<i>Section</i>	<i>Number of Die-Throws</i>	<i>Deviation</i>	<i>CR</i>	<i>P</i>
1	40,000	+500	5.00	.000,000,6
2	27,000	+ 57	.69	.49
3	4,500	+134	4.00	.000,07
Total	71,500	+691	5.17	.000,000,3

The distribution of the deviation on the five successive throws for one area as target shows a marked U-curve, which with a probability of .000,4 represents a parabola. 11,000 control throws, without attempts to cause an effect on the cubes, gave a deviation of -91, which is at the chance level.

When continuing the experiments the two-area system was

abandoned. The table was provided with a coordinate system, in which the cube positions could be measured (the two-area system only allows for counting the hits in the target area). The new method has proven to be more sensitive than the previous one, i.e., significant results are arrived at in a smaller number of trials. It also permits a study of the energetics.

Student's t-test of the individual readings in the first two "scaled" series gave $t = 3.62$, or $P = .000,3$ against chance, for the observed difference between the centres of gravity of two aggregates, each comprising 630 wooden cubes. The difference was in the expected direction. For one of the aggregates a right-hand aberration of the movement was specified, and for the other one a left-hand aberration. The aberration was particularly marked in the first release of the experimental unit, and a dynamical calculation has shown that a side force of about 15 per cent of the cube weight is necessary to account for the observed aberration (9.41 cms. in 126 trials).

A study of the experimental results on a broader basis leads to some interesting suggestions. The general tendency is that success is obtained when making conscious efforts. In control series the total result is at chance level, but control series show position effects of the same kind as in placement series, although of an inverted structure (for instance inversion of the U-curve in the 5-throw unit). Obviously we are confronted with the following psychological mechanism:

During the repeated conscious efforts in placement series a psychological pattern (on the 5-throw basis) is established within the subject. In a following control series without conscious attempts to score, the PK forces are unconsciously controlled in accordance with this pattern. The inversion may be due to an effect of weariness, which causes a state of psychical opposition, due to the monotony in the placement experiments. Naturally this opposition must be assumed to act also in placement series, making it difficult for the subject to maintain positive scoring in an extended series (chronological decline).

DISCUSSION

S. G. Soal, H. Schaefer, D. Parsons, Mrs. L. A. Dale, S. W. Tromp and D. Wassermann took part in the discussion of Mr. Forwald's paper. The main point of objection was that the observed deviations from chance could have been caused by a normal physical influence, as vibrations or air streams produced by the experimenter. Author pointed out that vibrations of the arrangement could not occur, because it stood on a cement floor resting on a solid foundation. The influence of air streams was thoroughly investigated in the course of the experiments. It was found that even relatively strong air streams from the place where the experimenter was standing could not produce observable aberrations in the cube movements (wooden cubes were used).

SOME UNPUBLISHED EVIDENCE REGARDING THE OCCURRENCE OF PSYCHOKINESIS

R. A. McCONNELL (U.S.A.)

The primary purpose of the experiment condensed in this report was to give evidence for the occurrence of psychokinetic effects under conditions that would exclude, as far as practicable, all counterhypotheses. Concern was expressed regarding the fact that while telepathy is accepted as fully established, doubt about the reality of psychokinesis is felt in many quarters. But the underlying attitude for an *a priori* belief in telepathy, and doubt about PK, has nothing to do with experimental evidence. Because our ignorance in psychology is vast, it is easy to accept the possibility of a strange mind-to-mind phenomenon (telepathy). There are no pre-conceptions to be broken down, except the pre-conception that telepathy does not occur. Clairvoyance and PK on the other hand are a violation of common sense since they involve matter-to-mind and mind-to-matter relationships clearly related to the province of physics.

Since it is believed that the behavior of a falling solid object such as a die is understood, it is hard for most people to concede the possibility of a new kind of interaction. The author does not share this opinion. The fact of telepathy has been enough to destroy his pre-conceptions, and the firm establishment of clairvoyance rather leads him to expect PK as a converse effect. Even though there may be no reason to doubt the possibility of PK, there is every reason to ask for more rigorous proof of its occurrence. Hence the experiment about the behavior of dice presented in this report.

393 previously untested subjects threw 170,000 die faces,

two at a time, under the supervision of three experimenters. The first third of the throws was made by the subject from a cup and the last two-thirds tumbled within a motor-driven cage while being automatically photographed. The total score for all the throws was less than theoretical expectation by 91, an insignificant deviation from the chance level. The "quarter distribution analysis" method of statistics was used to determine the decline effect. In the manner anticipated from the literature, the average score declined over the data page at a rate that would be exceeded by chance alone on an average of once in 500 such experiments.

Four methods for calculating the chance probability of the observed quadrant difference were used. The first three assumed a binomial situation; the fourth applied the null hypothesis over all pages of the first-last run score difference on the page. These methods and various precautions such as X-raying and secretly marking the dice, and overlapping controls to ensure proper photographic timing were taken to exclude the following counter-hypotheses: recording and arithmetic errors, retroactive choice of target, optional stopping, selection or loss of data, selection of analysis, selection of experiment, dice bias, and "starting effect." Although no unqualified claim concerning the elimination of ESP as a counter-hypothesis was made, it was maintained that the significantly extra-chance results could not readily be explained by this means.

STATISTICAL CLUES TO THE PSYCHOLOGICAL DYNAMICS OF PSYCHOKINETIC DECLINES

R. A. McCONNELL (*U.S.A.*)

The observed distributions of run scores within a large body of PK data were found to be highly improbable if due to chance alone. A detailed examination of these distributions as a function of data-record positions suggest three tentative conclusions:

1. Subjects who seem to have little or no PK ability may actually be concealing or dissipating their ability in obscure ways.
2. Given a repetitive task with suitable rests, PK may tend to organize into recognizable decline patterns as the task is prolonged.
3. The factors which cause the organization of PK into a recognizable form may be closely related to the factors which cause the disappearance of PK altogether, or, to put the matter into simple, speculative terms, the experimenter's problem may be one of accustoming the subject to his task without destroying his interest.

SOME POSSIBILITIES AND PITFALLS OF QUANTITATIVE METHODS IN PSI RESEARCH

R. A. McCONNELL (*U.S.A.*)

Broadly, we have two objectives in using quantitative methods: to prove the occurrence of a phenomenon, and to extend our understanding of its nature. It has been pointed out that these two objectives are not entirely compatible.

In pursuing the second we sometimes encounter pitfalls such as the premature acceptance of experimental findings. For example, the influence of alcohol upon ESP scoring may be found in one experiment but may disappear when a repetition is attempted. Evidently, there were other variables not adequately controlled. Such disappointments sometimes lead the experimenter to engage in overanalysis, i.e., to attempt to deal with everything from the barometric pressure to the subject's breakfast menu.

The author offers two constructive suggestions. More rapid progress may result by paying primary attention to experimental structure rather than to specific hypotheses. Moreover, the use of research teams composed of specialists from several fields will prevent the pursuit of variables that are highly improbable in view of available overall scientific knowledge.

PARAPSYCHOLOGICAL CONCEPTS

WILLIAM G. ROLL (*Great Britain*)

The paper served to initiate a discussion of parapsychological concepts. In the case of each concept examined (extrasensory perception, telepathy, clairvoyance, precognition, psychokinesis) the definition found in the glossary of the *Journal of Parapsychology* provided a starting point. Most current psi concepts and their definitions have been formulated by Dr. Rhine and his colleagues, and may be found in the *Journal*.

First, the definition was considered from a terminological point of view. If it seemed ambiguous, or if the meaning was not very clear, an alternative formulation was suggested. Next it was considered whether the description which this definition gave of certain types of psi phenomena seemed empirically justified, or how it might be brought to experimental test.

The possibility of distinguishing between the various types of psi was examined. The author reconsidered the old issue whether it is possible to distinguish experimentally between telepathy and clairvoyance, and discussed the practical and theoretical difficulties in ascertaining whether the concept of precognition is required or whether the phenomena may be accommodated by ESP (telepathy and clairvoyance) and PK. On the other hand, we may distinguish, with relative ease, PK findings from other psi phenomena.

We distinguish psi phenomena according to different types of "targets." In telepathy the targets are mental events; in clairvoyance, objective states of affairs; in precognition, future events; and in PK the aim is to bring about a physical change. However, it is only from our ordinary, common sense point

of view that there are these differences. We must examine the possibility that, in fact, there is no difference in modus operandi between apparently different forms of psi. Or, again, there may be different types of psi but these differences may not be brought out by the classifications which we make.

The main purpose of the paper was to emphasize that theories and assumptions about psi are implied by our concepts and definitions. These definitions should only be accepted as working hypotheses and as such be brought to empirical test. If this is not done, there is perhaps some danger that the terms we have selected for a preliminary description of the phenomena will act as blinders in future research and hide the road towards the kind of understanding which will lead to effective prediction and control.

IS ESP A STATISTICAL ARTIFACT?

S. G. SOAL (*Great Britain*)

ESP experiments can no longer be attacked on methodological grounds. They cannot be dismissed as cases of normal perception in which sensory cues are not eliminated or be attributed to recording errors or to fraud. Further, the statistical methods employed are the same as those used in many other branches of science. Recently, however, Mr. G. Spencer Brown has suggested that the so-called random distributions of digits to be found in well-known tables of random sampling numbers do not behave in practice as we might expect on the theory of the binomial probability model.

Mr. Brown criticizes the notion of a random series of finite length and maintains that such a concept has no meaning. He points out that the idea of a finite random series has no very clear meaning and that, moreover, there is no complete scale of tests by which we could ascertain whether a given series is a random one.

Actually, however, statistical method is concerned more with random *processes* than with random series and it is quite possible to define a random process. Any series produced by such a process—however improbable certain of its features may be—must be regarded as random. The use of tables of random numbers is not justified by logic but by the experience which shows that such tables work very well in practice on the whole.

In a card-guessing experiment all that is necessary is to secure that there is no systematic relation between the subject's guessing habits and the order of the target symbols, and the

use of "random" numbers certainly ensures that this will be the case. That in the absence of ESP, the comparison of a person's guesses with a list of random numbers leads to results which are close to chance expectation, has been abundantly confirmed by the numerous cross-checks in which the guesses of high-scoring subjects have been tallied against target-lists for which these guesses were not originally intended and which were independent of the original target-series.

Again, in many significant card-guessing series such as those of Tyrrell, Martin and Stribic, the Hutchinson-Macfarland series and, above all, in the work with B. Shackleton and G. Stewart, changes in the experimental conditions and in the personnel of the agents employed have resulted in consistent, and often meaningful changes in the fundamental character of the results. The fact that Shackleton and Mrs. Stewart succeeded only when an agent looked at the target cards strongly suggests that their ESP was, in fact, an unknown mode of *communication*. Statistical artifact can be no respecter of persons or of the conditions of an experiment, and such differential methods as were continually employed in the Shackleton and Stewart series furnish a proof of ESP which is independent of any probability model.

Further, the consistent high-scoring over periods of months or years of subjects like Hubert Pearce, C. Jencks, B. Shackleton and G. Stewart are easily distinguished from such accidental and modest deviations from chance expectation as those which Mr. Spencer Brown claims to have observed while comparing columns in random number tables.

Finally, Mr. Brown's experimental findings from tables have not been confirmed by anyone else. Mr. A. T. Oram's matching of all pairs of columns taken once and once only from the tables of Kendall and Babington Smith gave practically no support for Mr. Brown's hypothesis. (See *S.P.R. Journal* Nov.-December 1954, p. 369.)

A similar experiment not yet published has also produced only negative results.

If, indeed, Mr. Brown's hypothesis were true, ESP would still be confirmed by the differential method but, on the other hand, the whole basis of statistical method would be undermined. Fortunately, there is no reason to believe that the hypothesis is true.

EXPERIMENTAL DESIGN IN PARAPSYCHOLOGY

ROBERT H. THOULESS (*Great Britain*)

A well designed experiment is one that is: (1) *Valid*; it proves what it is claimed to prove; (2) *Economical*; maximum results are obtained with the minimum expenditure of time spent in experimenting and in subsequent working out; (3) *Fruitful*; the method of experimenting is such that positive results are to be expected if they are validly obtainable. Much published work in experimental parapsychology fails to some extent to satisfy these criteria, as does much work in experimental psychology and other sciences.

These defects are often due to experimenters, embarking on their work without sufficient consultation with others experienced in methods of experimenting. A set of experiments indicating a negative conclusion may, for example, be unfruitful because they were not done under conditions favorable to positive results. Fruitful experimentation depends on such factors as the mental attitudes of subject and experimenter, the length of experimental sessions, the time of day chosen for experiment, the health of the experimental subject, and his previous experience. Absence of a hostile atmosphere appears to be desirable; the ideal is that of adequate experimental precautions without fuss.

While the design of many modern parapsychological experiments seems to be satisfactory, certain defects are still too common. For example:

1. *Neglect of systematic randomization of conditions.*

If the purpose of an experiment is to discover whether a different condition of experiment produces a difference in scoring rate (e.g., whether it makes any difference whether the experimenter does or does not look at the target card),

this cannot validly be done by any arrangement of the experiment so that one of the two conditions may be differently influenced by chronological decline or any other cause operating differently at different times. It is necessary, therefore, to avoid such an arrangement as that of testing one condition in one set of experiments and the other in a later set of experiments. The comparison will be most economically made if the two conditions are suitably alternated or randomized within every experimental session.

2. *The use of an inappropriate method for assessing the significance of a difference between two groups of subjects.*

To solve a problem of the type: "Are colored or white people more successful in card-guessing experiments?" a method often adopted is to give each subject in both groups a number of runs through packs of ESP cards and to infer the superiority of one group if there is a significant difference between the total (or mean) scores of the two groups. This method is erroneous and its use explains much apparent contradiction between results obtained by different experimenters.

The error lies in the fact that each separate *guess* has been treated as the unit for the purpose of answering a question for which each separate *person* is the relevant unit. That the method is erroneous becomes apparent if we consider that by its use apparent evidence for a difference between the groups would be found if a large enough number of runs were made by each subject even if only one member of either group were scoring beyond mean chance expectation.

Two valid methods of dealing with such a problem are available. First, the experimenter can make a fourfold contingency table of the number of persons in each group scoring above and below the general mean of both groups. This table can then be tested for significance by the χ^2 method. Alternatively, he can calculate the mean score for each experimental subject and the standard error for each group from the observed deviation of each individual's score from the mean of his group. The significance of the difference between

the groups can then be determined by the use of these observed standard errors.

3. *The use of simple types of experimental design when dealing with problems for which more complicated designs would be superior in economy.*

Whether to prefer to carry out experiments by the use of simple designs or by more complex designs involving such statistical procedures as the analysis of variance is a matter of controversy amongst experimental psychologists as well as amongst parapsychologists. I suggest that the right answer is that we should use that method, whether simple or complex, which is most appropriate to the problem in hand. While the advantages of complex designs are often exaggerated, they may be really preferable in the fact that they may enable an experimenter to study simultaneously a number of variants instead of the two compared in more familiar experimental methods. They may thus effect a considerable economy in experimental time by enabling a single experiment to do the work of many. One may expect that the more complex experimental designs will be increasingly used in parapsychology.

It has not been my object in this paper to suggest that anything is radically wrong with most current parapsychological experimentation. But sometimes its methods could be improved. Experimental workers in our subject are so few that we cannot afford wasted effort.

RECENT EXPERIMENTS ON PHYSICAL ASPECTS OF THE MUSCLE-TONUS-REFLEX (DOWSING)

S. W. TROMP (*Netherlands*)

The many unscientific publications and statements of most dowsers frighten the conservative scientist. Therefore, and inasmuch as the dowsing reaction may be described physiologically as a kind of muscle-reflex, I have suggested the use of a more scientific and less provocative name for dowsing and radiesthetic phenomena: the *Muscle-Tonus-Reflex*, similar to the *Photodermatic Tonus-Reflex* of Ehrenwald.

Experiments have indicated that both the use of a pendulum (known as *pallomantic* or *radiesthetic* phenomena) and dowsing rod (*rhabdomantic* phenomena) are due to similar muscular reflexes which should be differentiated only physiologically in the *Pallomantic Muscle-Tonus-Reflex* and the *Rhabdomantic Muscle-Tonus-Reflex*.

I am convinced, as a result of many years of field experiments, that the dowsing reaction is a reality and not due to auto-suggestion, and that it is caused by an unknown super- (not extra-) sensoric sensitivity of the human body to certain external geophysical fields, probably comparable with the sensitivity for sudden changes in weather, long before the temperature, humidity or other meteorological indicators suggest such changes. The two main reasons for my belief that the *Muscle-Tonus-Reflex* is physical in nature are: (1) That none of the dowsers carefully tested showed either telepathic or clairvoyant ability in other paragnostical tests; (2) That none of these dowsers could indicate the location of a pipe, or cave, etc., unless he was standing or walking above it. It is

difficult to believe that a really telepathic or clairvoyant diagnosis could be so restricted as to be operative only when the human body is in position directly above the object.

Three main types of basic experiments were carried out:

1. Magnetic experiments. a) Using artificial magnetic fields (created by a ring-shaped tangent galvanometer); b) Using local disturbances in the earth's magnetic field (indicated by an ordinary compass or magnetometer).

2. Cardiographic experiments. a) Measuring electric skin potential variations in dowsing zones and above human beings with a string galvanometer of Einthoven; b) Indicating existence of dowsing zones coinciding with concentrated low-frequency, electromagnetic, alternating fields in modern buildings (as a result of buried conductors) with a cathode ray type of cardiograph (Elmqvist cardiograph).

3. Soil conductivity experiments, indicating a relationship between dowsing zones and sudden changes in the soil resistivity, in particular, zones of minimum soil resistivity, registered either with two- or four-electrode soil resistivity meters.

A full report on the experiments, mentioned sub. 2 a, consisting of over 500 experiments and recorded in 130 electrocardiograms, was given in 1949 in the author's publication "Psychical Physics" (pp. 310-330 and fig. 407-431—Elsevier Publ. Co., Amsterdam).

The experiments described sub. 3 will be published in the near future by the Foundation for the Study of Psychophysics under the title "Experiments on the possible relationship between soil resistivity and the muscle-tonus-reflex" (with 40 diagrams of which 6 were prepared by Dr. J. Wüst and Dr. Petschke during recent experiments in Germany, which confirmed the author's observations).

All these experiments tend to establish that the *Muscle-Tonus-Reflex* is a real physiological process resulting from stimulation by external geophysical fields. Once this observation is generally accepted one must consider seriously claims that dowsing zones could have harmful medical effects upon

persons resident in them for many years. Despite the fact that many statements as to such effects cannot be considered of high scientific standard, a vast amount of material suggesting a direct influence of dowsing zones is so impressive that it will be difficult to neglect this problem in future research.

PK AND ESP EXPERIMENTS WITH MARTIE VASSE

PAUL AND CHRISTIANE VASSE (*France*)

Experiments with Martie Vasse were first made when the child was one year old, and showed good ESP scores. PK experiments were not attempted at that time because of the child's age. (Cf. *Parapsychology Bulletin*.) Further experiments were begun when Martie was three and a half years of age with regard to both ESP and PK. They were conducted by Christiane Vasse, mother of the child. It seemed interesting to compare the PK and ESP scores in the same experiment on the same days, in order to see whether certain days were less favorable than others with regard to certain psi activities taken together, and if these faculties formed a whole, as previous experiments had appeared to indicate. (Our results again found relations between ESP and PK. When ESP was high, PK was high, too.)

Subsequently to the first experiments mentioned, another was made in cooperation with G. W. Fisk (cf. *S.P.R. Journal*, Sept.-Oct. 1951). When the cards were in England, the child's scores were slightly negative: -9 on 200 calls. When the cards were sent to France in sealed packets the scores were +8 on 200 calls. In the first experiments the deviation was +60 on 240 calls. The experiments were abandoned in view of the decline. Later it seemed interesting to inquire whether the child, more developed mentally and having learned to count, could repeat the initial success. Now we were dealing with a little girl actively and consciously participating in the experiment and who understood what was expected of her.

The cards from Duke University were shuffled and offered the child on a rug one by one. The mother did not know

the card: this was a clairvoyance test. The cards were not in envelopes. Results were generally noted after the child had gone off to play, and she had no chance of learning which symbol corresponded with any mark on the back of the card. A new pack was used.

In the PK experiments, the dice used were those supplied by Betty Humphrey when she passed through Amiens in 1950. The points were not carved out but were painted in three colors, with opposite sides the same color. No use was made of Latin squares in choosing the target sequence. We nearly always used the following order: 6-5-4-3-2-1. From April 7 to June 15 there were 39 pages of records, comprising 39 ESP runs and 78 PK runs. The child took greater interest in the active tests with dice, where she could see the results immediately. Consequently, early in the tests, the ESP experiments were done first, lest the child lose interest.

In ESP, Martie scored 264 hits in 39 runs, averaging 6.76. Chance would give 195 hits. Deviation +69, CR: 5.52. Divided into three equal parts in time, the first 13 runs show 61 hits, a deviation of -4. The 13 middle runs show 87 hits, a deviation of +22. The last 13 runs show 116 hits, a deviation of +51. If all the pages are divided into upper and lower halves to find whether there is a decline on the page, the following is noted: upper half of the pages, 115 hits, lower half of the pages, 135 hits.

In normal PK, Martie obtained 381 hits in 78 runs, an average of 4.88. Chance would be 312, so the deviation was +69. The first 26 runs show a deviation of +1, the 26 middle runs a deviation of +22, the last 26 runs a deviation of +46.

Significant results were obtained in ESP and normal PK, but there was less significance with reversed PK. This seems to confirm results obtained by Nigel Richmond in his experiments with paramecia, but does not agree with Fisk's recent experiments with clock cards and the PK tests arising therefrom. A salience at the end and a curve in the shape of U or V with a final rise has always been found in the chrono-

logical and page divisions. It is encouraging to see that the decline is not an absolutely general phenomenon and that a subject may produce positive results after a series of negative ones.

THE INFLUENCE OF SOME PHYSICAL AND CHEMICAL FACTORS ON PARAPSYCHOLOGICAL PHENOMENA

JOSEPH WÜST (*Germany*)

In ESP and PK experiments, physical and chemical influences may also play a far from negligible role as disturbing factors. Thus, for example, in changing weather with the approach of bad-weather and storm fronts, impulses of ultra-long electromagnetic waves—5-50 km. in wave-length—frequently make their appearance. They may be heard in radio reception as crackling, sizzling, or sputtering noises. Under their influence a human being's powers of attention and concentration and the speed of his reactions are lessened.

Frequently, too, strong moods of depression and sexual excitement set in (statistically borne out by the frequency of traffic accidents and of sex crimes in this type of weather). In places where the ground has a heightened degree of electrical conductivity, and where many dowsers have reacted with movements of their divining rods, these waves and the disturbances they cause appear with unusual intensity. Hence not only the state of the weather but also the geophysical nature of the terrain used for the experiment is important in determining what kind of disturbances may operate in ESP and PK experiments.

Ultra-short waves, now much in use in television and radio broadcasting, may with slight intensification exercise a calming, soothing, desensitizing, and even slightly hypnotic effect—as Weissenberg's experiments in Vienna have shown.

Similar effects can be achieved by an increase in the carbonic oxide, methane, or ethane content in the air or of

other short-lived hydrocarbons (benzine, benzene, etc.), as is often the case in the vicinity of gas works, oil refineries, and other motor-fuel plants. This can greatly affect an individual's clarity of consciousness and his powers of concentration—which in many ESP experiments is a disadvantage, but which in other cases may prove to be an advantage.

Instead of trying to influence rolling dice by means of PK experiments, attempts should be made to tip one of the balances of a very sensitive scale by means of PK forces. A. Hofmann, of Mehlem, successfully carried out just such an experiment thirty years ago on an analytical scale enclosed in a glass structure. The insertion of a wedge-like metal plate prevented the effect (cf. the radiometer effect of microwaves!).

In ghost visitations, the geophysical nature of the subsoil, especially its powers as a conductor of electricity, must be taken into account. Frequently, when fissures, cracks, or displacements occur underground, strong noises resound above the earth's surface—such as thundering, groaning, rustling, or moaning. Moreover, the radioactivity of the air in that spot increases. The air above the earth where deposits of oil and coal are contained often bears traces of self-igniting and combustible gases, which may also have a slightly narcotic effect.

Of particular importance is the study of the human aura—its physical and chemical bases and components. How does the aura of a mediumistic-inclined person differ from that of the usual run of persons? What is the relationship between levitations and materializations and the aura? Grünwald's experiments with ultra-red barriers should be pursued, so that we may observe the material in its nascent state.

One should not undertake to explain the parapsychological significance of a phenomenon until he has exhausted all possibilities of explaining it on the basis of known physical and chemical forces and processes. Modern atomic physics has shown us many new possibilities which men formerly dared not think of. These must be borne in mind in future experiments.

PHYSICAL MEASUREMENTS IN DOWSER-EXCITING ZONES

JOSEPH WÜST (*Germany*)

Since publication of Barrett and Besterman's *The Divining Rod*, British and American psychologists have held that performances of dowzers and pendulum operators are traceable primarily to paranormal ability. Physical causes, such as perception through exceptionally sensitive senses, or their indication through peculiar reflexes of the voluntary or involuntary nervous system, are thus dismissed. To determine the truth of the matter, experiments must be presented which show measurable changes in physical values in the reaction zones of dowzers, if such exist. Laboratory tests can establish whether such reaction to outward, artificially-induced influences is by myotonic reflexes: involuntary muscular tension-changes.

Certain surveys show that, in areas of dowser reaction, there are possibly present changes of magnetic horizontal intensity, electrical soil conductivity and radioactive influences. Therefore such physical causes should be taken into account, without, however, ignoring a possible parapsychological explanation.

Surveys of magnetic horizontal intensity were carried out in Bavaria and the Tyrol with Wüst's Local Variometer, tested for sensitivity and exactitude by comparison with a magnetic balance of the "Askania Werke" by the director of the Geophysical Institute, Prof. Reich, of Munich. Spots tested were always first established by the dowser, then checked instrumentally. In many cases, results coincided astonishingly. Spots with strong increase of magnetic field

seemed to affect the dowzers strongly. There were also areas of reaction in which no stronger magnetic field was indicated.

A second physical method tested the electrical conductivity of soil by a modified ground inductor. When exciting zones were measured there was found either a maximum of conductivity or a transition from a higher to a lower conductivity. In the case of fast-flowing underground water, the exciting zone was indicated by a geo-acoustic method by listening at the surface with a crystal microphone with a sound frequency of over 6000 hz. In clear windless weather, exciting zones in many cases are characterized by a heightened air potential.

Similar experiments were conducted by the French engineer Cody during surveys at Le Havre. His observations, which are still being checked and are not final, tend to indicate existence of infiltrating earth emanations, possibly a ray of slow neutrons brought into being by the influence of radium emanation on certain ground minerals—those containing beryl. The intensity of earth emission has a daily and a yearly course. There is a possible connection between his findings and the fact that there are many cases of cancer in the area.

These investigations all indicate that magnetic earth-electrical, seismic-acoustic, air-electrical and radio-active variations are measurable. Laboratory experiments by Haschek, Herzfeld, Tromp and Wüst show that dowzers also, under these artificial conditions, will react to such field variations and oscillations. Not all dowzers react in the same way. Many are particularly sensitive to one or another form; others adjust themselves to several forms, then react only to a particular one. Such action is comparable to concentration of attention on definite impressions received from a single sense—sight, for example.

Special Study Group: PHYSICAL AND PHYSIOLOGICAL STUDIES OF PARANORMAL PHENOMENA

General purpose of the special study. To study the possibility of speeding up the relative slow development of parapsychology and of the study of paranormal problems in general during the last fifty years, which slow development, at least partly, seems to be due to the insufficient application of instruments and methods used in Physics, Chemistry, Physiology, Meteorology and Geophysics.

Specific aims: Application of those instruments and methods in order to:

1. Discover more easily the presence of self-deception and fraud which often discredited parapsychology and prevented the necessary aid from scientists in academic research centres.
2. Study the fundamental physiological differences between normal and paranormal persons.
3. Obtain a greater knowledge of the physical and physiological processes which may be partly or completely responsible for paranormal phenomena both in man and animals.

Suggested program: Points 2 and 3 require a specific research program which could achieve results only if sufficient funds were available to start a number of research projects. The task of the members of this working group would consist mainly of the following activities:

1. To list a number of research projects which would assist in solving the problems mentioned under 2 and 3.
2. To submit this list to the Committee on Future Projects and the Executive Committee with the request to bring this list to the attention of the Board of Trustees of the Parapsychology Foundation.
3. To indicate, if possible, a certain priority in those listed

projects in order to facilitate a selection of projects in case the funds are insufficient for starting all projects at the same time.

4. To discuss the possibility of the publication of a small handbook for the study of physical and physiological aspects of paranormal phenomena, including the experiences of the various research workers in Europe and the U.S.A., describing in detail (with pictures and diagrams) the latest types of instruments to be used, methods of research and bibliographic references referring to those instruments and methods.

Dr. Joseph Wüst

Dr. S. W. Tromp

Proposal for research projects to be considered by special study group.

1. *Studies on the reaction speed of the different sense organs of paranormal persons:* under normal, hypnotic and trance conditions.

2. *Study of the physiological aspects of telepathy:* encephalographic and skin resistance studies, studies of mechanical body vibration (of Rohracher et al.) and other physiological studies in relation to the possible influence of drugs, Faradic cages, parabolic mirrors behind subject and sender, bodily connection with conducting wire, screens, etc., as related to statistical results during telepathy tests.

3. *Studies on the muscle-tonus-reflex (dowsing):*

a) Studies on the reality and mechanism of dowsing and pallomantic (radiesthesia) phenomena by means of research on the possible relationship between dowsing phenomena and geophysical fields, in other words the solid establishment of a new unknown parapsychological sense organ in the human body. (1) Studies on the possible relationship between dowsing zones and zones with specific electric properties of the atmosphere (potential gradient, conductivity, radioactivity, number of ions). (2) Studies on the possible relationship between dowsing zones and zones of high subsurface soil conductivity.

b) Studies on the physiology of the dowsing phenomenon.

(1) Influence of ultrashort waves on sensitivity and reaction-speed of dowzers and possible effects on hypophysis, epiphysis and other glands. (2) Influence of metal screening of human body on dowsing. (3) Encephalographic studies during pallomantic experiments. (4) Relationship between dowsing capacity and skin resistance.

c) Studies on the possible biological effects of dowsing zones. (1) Repetition of the mice experiments of Dr. Jenny, Wilhelmi and others. (2) Field studies in farms in agricultural areas and in houses in towns on the possible relationship between dowsing zones and diseases. (3) Statistical and field studies on the relationship of cancer to type of soil, frequency and intensity of dowsing zones. (4) Studies on the elimination of possible biological effects.

4. *Study of the physical properties of the human aura:* Continuation of the electronic studies of Schumann, Sauerbruch, et al.

5. a) *Studies on the effects of meteorological disturbances* (fluctuations of the potential gradient, infra-long waves, approach of depressions, etc.) on the mind in general and on parapsychological results in particular, on birth frequency, etc. b) Studies on the possible relationship between weather-types of man (K-, W-type, etc.) and paranormally gifted people.

6. *Studies on the influence of cosmic factors* (sun-spots, planetary positions and moon): the many scientific studies on the influence of these factors on the electric field of the atmosphere and on other factors influencing biological processes indicate the necessity for a renewed study of the possible relationship between these factors and certain astrological phenomena (psychological type of the newly born child, etc.).

7. *Studies on the reality and mechanism of the diagnostic methods of Abrams, Hart, Drown, Boyd et al.*

WORKING GROUP B

(Psychotherapeutic and Psychoanalytical Approach)

Chairmen:

JAN EHRENWALD
EMILIO SERVADIO

SUMMARY OF ACTIVITIES OF WORKING GROUP B

The majority of papers read to Working Group B focused on observations made in the psychotherapeutic situation. Prof. Servadio's Survey of the field was "displaced" to Group D. So was Doctor Meier's condensed report on Prof. Jung's theory of synchronicity.

Dr. Eisenbud discussed "Chronologically Extraordinary Psi Correspondences in the Psychoanalytic Setting." Several discussants agreed that the analytic approach to so-called precognition is a legitimate one and may throw light on philosophical aspects. Dr. Ehrenwald, in his paper on "Telepathy and Telepathic Tracer Effects in Interpersonal Relationships" stressed that analysis may unmask psi occurrences which would otherwise escape attention. They usually result from a complicated interpersonal relationship involving patient and therapist. Dr. Ullman's paper "The Dream, Schizophrenia and Psi Phenomena" was based on Pavlovian concepts correlating Psi with minus functions or the dominance of a "primary signalling system."

Prof. Urban reported on ESP tests in mental patients before and after shock treatment. He is also engaged in a research project on Psi factors in paranoid schizophrenia.

Dr. Daim's paper "Parapsychological Observations during Psychoanalytic Treatment," included some material not directly verified by the therapist in the analytic setting. Dr. Booth briefly summarized his paper on the "Parapsychological Dimensions in Medicine," which included a discussion of the dynamics of so-called coincidences.

The three sessions gave opportunity for lively discussions with, among others, Prof. Marcel, Dr. Palmer, Dr. Gillespie, Mr. Zorab, Prof. van Lennep and Dr. Musaph taking part.

Dr. Rose and Prof. Servadio and Dr. Daim spoke about the necessity of gathering more data and getting more psychiatrists interested in the field. Dr. Ehrenwald stressed the need to evaluate situational and dynamic factors involved in Psi occurrences in the psychotherapeutic situation. Dr. Ullman suggested publication of important papers in several periodicals in different countries.

Mrs. Goldney, Dr. Eisenbud, Dr. Kahn and Dr. Scrivner discussed the use of technical terms and stressed the need of a better mutual understanding between representatives of "quantitative" and "qualitative" approaches. Dr. Bruch asked for more material from psychoanalysts coming across Psi incidents. Dr. Rose recommended the introduction of the issue of parapsychology in the psychiatric and psychologic curriculum.

The discussion confirmed the part played by the personal involvement of the therapist in the occurrences and stressed the need for a constant analytic scrutiny of his "countertransference." There was general agreement that although the occurrence of psi may seem incompatible with our current notions of time, space and causality, the incidents are subject to the same laws of psychodynamics as apply to the dream, to the neurotic symptom, faulty actions and the like.

PARAPSYCHOLOGICAL DIMENSIONS IN MEDICINE

GOTTHARD BOOTH (*U.S.A.*)

A dramatic accumulation of psi experiences in the life of an analytical patient is presented. Detailed analysis of the personalities and events involved is used to illustrate the point that psi phenomena cannot be explained as causal relationships of some unknown character. The thesis is developed that they are the result of convergent developments of a non-physical nature and should be called coincidences. The term "coincidence" is used not, however, in the current negative sense, but as the expression of a meaningful relationship between physically unrelated persons and/or objects.

Concepts of modern physics are used to explain that psi phenomena do not fit into our conscious world of three-dimensional objects existing in a one-track dimension of time. Contrary to the popular belief that only the physical world of our sense data is real, physicists have demonstrated that the "solid" world, with its laws of cause and effect, is not an ultimate reality:

1. Even the most solid body is composed of electrons which move in an individually unpredictable manner separated by empty space.

2. The mathematical description of physical events like gravity requires ten dimensions. They are incommensurable with the space-time dimensions of our consciousness and do not provide any "fifth" or more dimension analogous to either space or time to harbor the "psi" function.

3. No causal effect is attributed to mass or matter.

The latter point was illustrated by Eddington through an image which appears significant beyond its apparent inten-

tion: "The conception of matter which we associate with these regions of unusual contortion of space is a monument erected by the mind to mark the scene of the conflict. When you visit the site of a battle, do you ever ask how the monument which commemorates it can have caused so much carnage?" Psi phenomena, too, involve matter as physical perception and action to *mark* an unusual convergence of psychologic tendencies which are taking place without using the physical mechanisms to which our sense organs or distant objects usually respond. It seems very likely that communications through coincidence of related psychological developments are more frequent than is usually observed. They violate the four-dimensional image of the world which is proper to Western man and are therefore generally repressed. Even when observed because of their particularly striking character, their meaning is generally not investigated very thoroughly.

Psi phenomena are the most short-lived materializations of the essentially immaterial dynamics of the world; the anorganic world exists on the strength of the most long-lived dynamic convergences. Living organisms occupy the realm between the two extremes. Szondi's work on the genetics of human fate in love, friendship and work provides impressive documentation for the working of psychic convergence in spite of material obstacles.

Physical events are not the cause, but the expressions of non-physical, presumably psychic, tendencies. It is inherent in the nature of this situation that, generally, psychological relatedness goes together with physical proximity and that therefore the convergence of personalities is not expressed in the form of psi phenomena. Cases in which the latter occur are always based on strong individual needs for communication in spite of physical distance. This is the reason why spontaneous cases, if carefully enough examined, provide more impressive examples for the existence of psi than laboratory experiments. In the latter the small deviations from chance illustrate that intellectual curiosity is very ineffectual in comparison to vital emotional needs. Also, the decline of phe-

nomena in these experiments indicates that psi is not a function like piano playing, to be practiced deliberately, but a reflection of the superficial coincidences which brought experimenter and subject together.

The acceptance of an acausal and unmaterialistic theory of psi is made difficult for Western man by his current concept of a god-less material universe in which he stands alone for himself. Causality has become his magic tool through which he hopes to master the world and his fate. The analysis of coincidences provides a critique of the materialistic viewpoint. Specifically in medicine the acausal approach provides an important rationale for true psychotherapy.

PARAPSYCHOLOGICAL OBSERVATIONS DURING PSYCHOANALYTICAL TREATMENT

WILFRIED DAIM (*Austria*)

Certain psychoanalytical case histories, with evidence of parapsychological manifestations, are set forth as instructive in gaining data concerning the psi function outside the experimental situation. It is ultimately hoped by the author that facts of this kind can be integrated into a textbook.

Case 1 deals with a young man with a mother fixation. At the time the patient begins to make vital progress in overcoming his attachment, he receives a letter from his mother warning him in an aggressive way against "false prophets" and unfavorable influences. Interpreting the mother's unconscious through this letter, it seems as though she has an instinctive feeling of the circumstances in which the fixation was being dissolved. This is significant from a parapsychological point of view, as there had been no contact or communication with the parents; the analysis was being carried on without their knowledge, and away from home. The reactions of the mother, it is concluded, can only be explained if a telepathic influence is assumed.

Another case concerns a teacher with a mother fixation who had been undergoing analysis without mother's knowledge. As he begins to solve the fixation, his mother tells him of a dream in which he was a disobedient baby, so she had to give him a sound hiding. She then remarks that a child, whatever its age, remains the child of his mother. Although a parapsychological explanation of this incident is indicated, it cannot be proved, since the patient sees his mother regularly.

A third case deals with a girl who, at a certain time, feels

that a man in whom she is interested is getting away from her influence. At that same time, it is learned that the man in question has had homosexual relations.

Still another case concerns a diplomat under treatment for certain obsessional compulsions. Excessive avarice was one of his symptoms and at a critical stage of the analysis he suddenly wakes up with a sensation of wishing to give. On his way to the office, he meets no less than six beggars, within three hundred yards of one another, to whom he gives relatively large amounts of money. The author discusses the extreme improbability of this occurrence at that locale and advances the explanation as psi activity, suggesting that the urge toward charity found a psychic response in the unconscious of the beggars in the vicinity. He uses this hypothesis in preference to Jung's synchronicity theory.

Four other cases, which lend themselves to the interpretation of being parapsychological phenomena, are discussed. These involve the reactions of animals and inanimate objects, as well as of humans. These events exerted significant influence on the course of the analyses. The author hopes that these cases will stimulate discussion and result in the collection of similar data by other analysts.

PSI, SCIENCE AND PSYCHOANALYSIS

JAN EHRENWALD (U.S.A.)

Parapsychology derives its data from a variety of sources, supplied by investigators in various fields of research. Early workers collected authenticated, factual reports of phenomena. Today's laboratory workers devise methods of repeatable ESP or PK tests and their statistical evaluation. The psychiatrist focuses on spontaneous events in clinic or consulting room. Only the proper evaluation of data obtained by all these methods of approach can pave the way for parapsychology attaining the status of a truly scientific discipline in its own right.

Each method has its own criteria: the laboratory method its statistical significance, the early work its authentication of evidence. Psi occurrences in the psychoanalytic situation offer four criteria. First, the elements or motifs which we assume to be reproduced in a telepathic way must be identifiable as distinct elements within the context reviewed. Second, the element thus defined may be of such a unique kind that its simultaneous appearance in the two presumably corresponding sets of mental events cannot reasonably be ascribed to chance. Third, as in modern biochemical experiments certain molecules are tagged with a radio-active tracer element, the presence of specific distinctive features in an otherwise ambiguous telepathic incident may be described as the psychological *tracer effect*, and the data concerned as telepathic *tracer elements*. Fourth, there is the criterion of psychological significance. A patient may relate a dream whose manifest content contains one or two characteristics which by themselves are suggestive of telepathy between analyst and patient.

At the same time their closer psychodynamic evaluation may show that unless the telepathic interpretation of these elements is admitted, their deeper meaning remains obscure. It is only through realizing the telepathic nature of the elements concerned that we can close a gap in our understanding of such a dream.

On the basis of its psychological significance, the telepathic interpretation gives a reasonable account of an otherwise unintelligible element in the dream content and helps toward a better understanding of the patient's neurotic problem and his behavior in the transference relationship with his psychoanalyst.

Not every case can be expected to do justice to all these criteria. Each case must be judged on its own merits. As a general statement it may be said that the advantage of the statistical method lies in the fact that it tells us a little about a lot, while the psychodynamic approach is able to tell us a lot about a little.

All available evidence indicates that telepathic incidents are subject to much the same laws of psychodynamics as apply to the dream, to the neurotic symptom, to faulty actions, and the like. I may remind you of Freud's picture of the unconscious—a picture of complete intellectual anarchy. On the id level the laws of contradiction are no longer valid; a statement may be both true and false; love and hatred may stand for each other; black may be white; the sacred may be wicked; temporal order and sequence have lost their meaning; so have spatial relationships; the notions of past, present and future are hopelessly jumbled. Psi phenomena have much in common with these characteristics of the id level of functioning. They too seem to defy the laws of cause and effect as well as those of spatial and temporal order and sequence.

Psi phenomena, however, are at bottom of an ambiguous nature: While derived from a level of functioning devoid of spatio-temporal characteristics, their appearance on the conscious level is contingent on the capacity of the ego to invest them with all the trimmings, including temporal and local

"signs," which are characteristic of the ego level of functioning. One could say that psi phenomena have a Janus face: one oriented toward a world which can be expressed by reference to weighable and measurable data, and one toward a world of psychic reality which has so far defied any attempt at a quantifiable approach.

This is not the first time that the student of the human mind finds himself at the crossroads leading in the direction of two or more divergent systems of thought. I cite the controversy between the mechanistic approach toward a better understanding of human affairs (with its concept of a world devoid of purpose) and the teleological approach (with its concept of a coherent system of thought capable of explaining the universe and particularly human behavior in terms of purpose and meaning). Both approaches have contributed to the progress of science and the two are not mutually exclusive.

The seemingly paradoxical, extra-temporal and extra-spatial nature of psi phenomena calls for a third, if you like, *meta-logical* frame of reference. This third conceptual scheme conceives of world events in terms of a metalogical series, apparently independent of the familiar laws of cause and effect but compatible with a revised and expanded system of psychodynamics based on the evaluation of meaningful relationships. This does not mean that we should henceforth ignore the respective merits of either the mechanistic or the teleological approach to psi phenomena and to human affairs in general. Our suggested third, metalogical, frame of reference, simply tries to make allowance for the fact that the psi aspect of human experience cannot easily be reconciled and integrated with one or the other of the traditional systems of thought. It may admittedly be confined to the comparatively narrow segment of human experience in which *verifiable* psi phenomena come to our notice. But it is nevertheless just as indispensable for their proper understanding as is the mechanistic conceptual scheme for the understanding of a mechanistic series of events, or a teleological conceptual scheme for the understanding of a teleological series.

TELEPATHY AND TELEPATHIC TRACER EFFECTS IN INTERPERSONAL RELATIONSHIPS

JAN EHRENWALD (*U.S.A.*)

In my paper "Psi, Science and Psychoanalysis," I tried to show that there are three principal criteria upon which assumption of telepathic incidents in the psychoanalytic situation can be based. They are (1) Uniqueness, (2) Telepathic tracer effects, and (3) Psychological significance.

Three brief case histories may illustrate my point. In the first case a patient, aged 53, produced a dream containing reference to a key with the number 117 stamped on it. The therapist happened to possess a similar key, bearing the imprint 1017. Statistically speaking, the telepathic or clairvoyant interpretation of such a dream is hardly justified. However, its psychoanalytic evaluation made such an interpretation "psychologically significant." It supported the hypothesis of its telepathic nature, otherwise based on the presence of a "tracer element."

In the next case both criteria can likewise easily be recognized. It is the case of Lottie, aged 40, who had throughout her life been closely attached to her mother. Separated from her during the war, her mother committed suicide in Europe. Lottie, at that time in the USA, was suddenly seized with a fit of anxiety. This happened within 24 hours following her mother's suicide. She felt that something terrible had happened to her mother—or mother-in-law. On the next day she went out of her way to redeem her guilt feelings toward her mother by carrying out an involved transaction with her family jewelry. It was weeks later that she learned that her mother's death was due to suicide.

Lottie's behavior showed that the telepathic "message" provoked three different reactions in herself as a percipient:

1. She tried to attach her anxiety to the fate of her mother-in-law, that is, she displaced the telepathic impression gained to another person.

2. She sought to deny its reality by the symbolic gesture of parcelling out her jewelry as if her mother were still alive.

3. In doing these things she allayed the guilt feelings connected with her mother's death.

A third observation refers to a neurotic mother and her son, suffering from bed-wetting. With the improvement of his mother's condition following the interpretation of a crucial dream, the son's condition too showed a dramatic improvement. In the absence of tracer elements the telepathic nature of this incident cannot, however, be taken for granted. It is one of the many observations which do not "oblige" by presenting us with unequivocal evidential material. Indeed, we find that the more "evidential" or the more "striking" an incident may appear, the lesser is its significance to the case's underlying dynamics. Conversely, it is just those observations which lack the requisite unequivocal criteria of telepathy that have the deepest emotional relevance so far as interpersonal relationships are concerned.

We should keep an open mind on all observations of the parent-child type. If confirmed by more clinical evidence they might suggest that telepathy is capable of affecting interpersonal relationships decisively. This could have an incalculable effect upon our therapeutic approach, fashioned as it is after the model of the parent-child relationship.

PSI AND THE PROBLEM OF THE DISCONNECTIONS IN SCIENCE

JULE EISENBUD (*U.S.A.*)

Parapsychology deals with correspondences between certain events. But the term "psi," which has come to supersede older terms in referring to these correspondences, has never been too clearly defined. It is often used as if it referred to a "force" of some kind, although all we can rightfully say is that "psi" is referable to a class of events where precisely those measurements in terms of which we customarily make our "force" assumptions in science are lacking. Psi represents a disconnection in our conventional picture of things as causally related.

But there are other such disconnections in the overall map drawn by science—namely, in the area of traditionally viewed "mind-matter" relationships, in all statistical series covered by our theory of probability, in quantum mechanics, in our theories of gravitational phenomena, in biology and evolution, etc. In all these areas the gaps between the various types of events that constitute the data of our correspondences are just as wide and just as empty of the "stuff of causality" as the gap between any two events which we construe into a correspondence of the psi class. The disconnections in all these types of correspondences are just as "occult" as the disconnection which leads us to view psi phenomena as "paranormal."

No uniform convention has been agreed upon by scientists in other fields in regard to the disconnections encountered by them. One convention is to treat the problem as one without immediate relevance to the tasks in hand. Another is to deny not only the necessity for adopting a causality principle for

bare working purposes, but to deny even the meaningfulness of stating that there is anywhere at all in nature anything like causality. A third is to attempt to resolve the disconnections by appeal to a metaphysical God concept.

Parapsychologists would not be out of step with current trends in science if they chose to adopt any of these three approaches to the disconnection they are faced with in the psi correspondence. But science in general does not recognize the right of parapsychologists to approach their data in any of these ways. Inconsistently, it demands that psi data exhibit a demonstrable causal connection which it is prepared to overlook or dispense with in the case of other data.

The two major attempts to square psi data with the other data of science have been those of the physicist Jordan and the psychologist Jung. Each has resulted in a scheme which permits psi data to exist alongside the data of physics and other sciences, but neither has provided a framework for the mutual integration of these various data on a descriptive level. Jordan's "complementarity" and Jung's "synchronicity" preserve the traditional dualisms in our view of experience while admitting psi data into this divided universe simply as one more set of inexplicable correspondences.

A method is suggested for making more constructive use of psi correspondences in relation to the overall problem of the disconnections in our scientific picture. All we do in science, by way of arriving at our notions of "lawfulness," "causality," "force," etc., is to arrange and order sets of correspondences in ways that result in the maximum of meaning to us. By attempting to order all our sets of correspondences homologically, and by considering the correspondence of the psi class as the prototype of all correspondences, it may be possible to reduce to one the number of separately conceived disconnections with which science has to deal. It may then be possible to apply as an "explanatory" principle (of how events in general achieve regularity and lawfulness) what can be hypothesized from the study of human interrelationships. This model of the human macrocosm is arrived at through the pat-

ternization of events of the psi correspondence class along the lines of correspondences constructed in terms of psychological and psychoanalytic theory, and vice versa. All attempts to picture a universe from the ground up, by taking the microcosm as a model for the macrocosm, have failed. The reverse procedure—taking the (human) macrocosm as a model for the microcosm—is logically no less feasible while it results in a more consistent and more meaningful picture.

Such a procedure by no means solves all the problems of science; it still leaves us with a basic disconnection on our hands, and does little to narrow our choice of assumptions in regard to both causality and the God concept. However, we are somewhat further along toward a slightly more meaningful definition of both of these, as well as toward a resolution of some traditional dualisms.

By applying this procedure to the problem of so-called "precognition," it is possible to arrange the data of the correspondences in this area in such a way as to be meaningful and consistent in relation to the other data of science without making radical assumptions about time itself. Other assumptions are called for, but these can be shown to have far more empirical and theoretical support than any assumptions about "unseen dimensions" of time. Significantly, too, this approach dovetails with certain psychoanalytic and anthropological data to result in the resolution of a number of paradoxes, including some of those inherent in the very phenomenology of psi correspondences themselves. One can hypothesize an important link in all this to be found in the historical development of man's need to deny his latent aggressions and to project both these feelings and "causality" further and further away from himself. Evidence tending to confirm this hypothesis, independently arrived at through anthropological and historical research, is cited.

CHRONOLOGICALLY EXTRAORDINARY PSI CORRESPONDENCES IN THE PSYCHOANALYTIC SETTING

JULE EISENBUD (*U.S.A.*)

The psychoanalytic method has proved to be a valuable adjunct to the methods already in use for the study of so-called "precognitive" occurrences. Its value is chiefly two-fold:

1. It enables us to bring within this category many correspondences which would otherwise go totally unremarked or else regarded as insignificant chance coincidences. This "unmasking effect" is related to the recognition of latent but ordinarily unsuspected factors in a complex probability situation.

2. Due to the fact the participants in a psychoanalytic relationship are, ideally, under continuous observation, with major emphasis placed on the various factors determining behavior at any given time, it is possible to correlate the so-called "precognitive" event, when it occurs in such a setting, with other events in the past and current history of an individual.

Two presumptively "precognitive" dreams of a patient in analysis are presented. These may be regarded as examples of psi-conditioned behavioral correspondences to normally unpredictable future events. The emphasis on "behavior" in this designation appears warranted in view of the purposive, needful context from which both dreams apparently arose. Both were preceded by the same kind of premonitory events in the dreamer. Both are highly complex but condensed structures incorporating references to, and giving expression to needs in, both the patient and the analyst.

No theories about this type of event are offered, but it is indicated that alternatives to conventional hypotheses about "precognition" are not unwarranted when considered from the psychoanalytic point of view.

A PRELIMINARY REPORT ON A METHOD OF MEASURING PSI CORRESPONDENCES WITH IBM MACHINES

J. EISENBUD, R. HATFIELD, S. JACOBS, H. KEELEY, AND
R. V. RAINEY (U.S.A.)

A method is described for the use of IBM machines in both the performance and the checking of results of a statistical type of test for psi correspondences.

Target decks were made up of a specified number of cards, each card punched for one digit from 1 to 5 in a particular one of eighty available columns. The digit sequence of the deck was prepared from a random number table. (Subsequent target decks were generated from those initially so prepared by random shuffling done by an IBM collating machine. Tests for randomness in these decks were done by matching selected segments of the deck against each other in the same machine.) After the target deck had been digit-punched, a machine operation printed the punched digit on the back of each card. The deck was then ready to be "read" by an "agent."

A subject punched his guesses (1 to 5) directly onto a deck in a given column. The average time (when the machines were working without a hitch) for punching 1,000 cards against an agent working with the target deck was 1 hour. At the end of such a run the two decks were fed into the collating machine which automatically sorted out the correspondences (hits) at the rate of 12 minutes per 1,000 matchings. Pre-prepared decks of 100, with a known number of correspondences, were fed into the machine before each run to check for faulty machine functioning. (When the machine is in order, there is apparently no error in the matching pro-

cess, as determined from many tests with "known" decks). The decks were then resorted for further use at the rate of about 8 minutes per 1,000 cards. The monetary costs per time unit is given for all operations.

Comment: The use of this method was studied in view of (1) the anticipated time-saving factor where many matching tests had to be carried out; (2) the possibility of reducing recording and scoring error below that reported in standard statistical tests for psi; (3) the game-playing appeal this method might have for mechanically minded subjects; (4) the possibilities inherent in the fact that the "guessing" is done in motoric fashion. Punching can be done under a number of conditions of relative dissociation.

Results (mainly achieved after the Conference in Utrecht): So much irritating and time-consuming mechanical trouble with the machines was encountered that the experimenters finally agreed unanimously upon the superiority of the "horse and buggy" methods already in use for simple statistical tests of psi.

THE CONSCIOUS AND THE UNCONSCIOUS: A MISLEADING DILEMMA

JEAN GEBSER (*Switzerland*)

The dualistic view of "the conscious" opposed to "the unconscious" belongs today among the fundamental conceptions of psychology. As the same conceptions prevail in parapsychology, we must ask whether this terminology is accurate, since terminology affects the course of our thinking and can lead to erroneous conceptions and misleading conclusions. Marriage of the concepts "conscious—unconscious" leads to falsification of reality.

Historically, the expression "unconscious" appeared first in Scholastic philosophy, occupied an important place in the thought of Leibniz and his successors. Since Freud "the unconscious" dominates psychological terminology. I have sought to establish that both in human history and in individual lives one must admit existence of different grades of consciousness. I have divided the various structures of consciousness, of which three are most important:

1. The magical structure of consciousness: This corresponds to deep sleep, ignores time and space, and its realization occurs in a one-dimensional world. It is vegetative, instinctive and vitalistic by nature.

2. The mythical structure of consciousness: This corresponds to the dream; it knows time but not space, it corresponds to a two-dimensional world. It is of a psychical nature.

3. The mental structure of consciousness: This corresponds to the waking condition, living in time and space in a three-dimensional world. It is of essentially irrational nature.

One must add that the magical structure was preceded by

one which was archaic and non-dimensional, preceding, so to speak, consciousness of time and space. Today the mental structure seems to be in process of being superseded by a new structure tending toward a four-dimensional field.

Parapsychology deals with phenomena not belonging to the category of "the unconscious" but rather with those associated partly with the archaic structure and partly with the magic and mythical structures. The magical structure as herein defined may appear inconceivable to those unable to detach themselves from the rational world of causality and who thus cannot accept the pre-causal or anti-causal relationships defined in Jung's work on synchronicity.

It is of decisive importance in all our research to know and to be able to differentiate with precision the different realms of reality to which the phenomena investigated belong—not as we see them, but according to their own nature. The formula "conscious or unconscious" ignores the distinction between the waking state, dreams, deep sleep, etc. This confusion leads the researcher from false dilemmas to false conclusions and misinterpretations.

We can try to reduce somewhat these misinterpretations by admitting in our research Heisenberg's law of indeterminate relationships. This means that in every experiment in which we use methods connected with the factor of space, while dealing with a world in which time and space do not exist, results produced will be approximate and non-precise.

We must endeavor in our investigations of parapsychological phenomena to take into account the structure of the particular field to which they belong. Then only shall we approach reality and obtain results far superior to those obtained from the misleading hypothesis of the "conscious—unconscious" alternative.

WARNING AND INESCAPABLE PROPHECY

G. F. HARTLAUB (*Germany*)

There are rational and irrational prophecies. Everything in nature and human life that is subject to regular repetition and can be calculated causally permits anticipation with certainty or at least probability. Among irrational prophecies are (a) those based on the interpretation of signs, within a tradition of belief or superstition, (b) those based on intuition and divination and (c) those based on mixed methods combining (a) and (b). We are here exclusively concerned with intuitive-divinatory precognition, of which three groups may be listed:

1. *The still "normal" precognitions of historians and statesmen* (on the border between the rational and the irrational). Persons with great knowledge of human nature and experience in world history are able, by comparing a given situation with similar developments elsewhere in space or time, to anticipate what the future may bring within a certain area; these developments will qualify as probable or, if the observer tends toward optimism, still avoidable under certain circumstances.

2. *So-called Prophecy as Warning*. In such cases, there is present the paranormal factor of telepathy and probably also that of clairvoyance. Whenever one such telepathically gifted person expresses warnings of events on the basis of his paranormal experience, although such events are merely in preparation, he is able to do so not because of actual anticipation of the future, but merely because of clairvoyant or telepathic cognition of simultaneous (or even past) motivations and conditions. Such cognition is certainly already paranormal, i.e., scientifically inexplicable (if not even basically inexplica-

ble). Such phenomena do not represent as enormous a paradox as true precognition, in which case the future event is not developing but, in some manner, is "already there."

3. *Precognition of events placed in the future by normal cognition, but de facto already existing and, therefore, allegedly inescapable.* Such pre-knowledge would philosophically, morally and religiously present much greater difficulty than mere eventual pre-knowledge on the basis of spatial clairvoyance or spatial telepathy. This problem, as far as it is connected with human free will, is old and well known. If a prophet communicates the result of his pre-knowledge to a participant, one would imagine that such a person, by free will, would be capable of undoing the threat. In the case of an unchangeable prophecy, however, such a person would be incapable of undoing the disaster; thus, there would be no freedom of will whatsoever! Equally great is the philosophical paradox that something which should causally develop chronologically is, as far as the seer is concerned, already in existence.

Thus, such truly inescapable prophecy—even if it is not merely an interpretation of stellar constellations and other conditions such as the questioning of oracles—is easily interpreted in the sense of our second category merely as "warning." Lately, however, Rhine has described certain precognitive cases of extra-sensory perception which are difficult to fit into our second explanation. As Bender has reported, "the participants were able to provide information, in excess of accidental odds, regarding the position of cards in a game, which only at a later fixed time were subjected to a shuffling procedure." He continues, however: "In fixing this procedure, the danger had to be kept in mind that extra-sensory perception might have played a part even in the activity of card shuffling itself, and thus helped to place the cards into an order which fitted the pattern already made by the test person and noted in the protocol of predictions. Such shuffling effects were indeed proven, if only on a circumstantial basis. Shuffling by hand was replaced by shuffling through mechanical

action, but a further complication arose: because, meanwhile psychokinesis, the psychic influence on material events, had also been proven."

Doubts also remain with regard to the almost sensational so-called seat experiments of Tenhaeff and Bender, by which a clairvoyant (Croiset) gives information on persons who, at a much later time, occupy a certain chair in a concert hall. Was it really completely impossible, in every case, that there either took place "tele-active" influence of the will, or that the already existing intentions of a person, to sit down on such a chair, may have been noted telepathically?

Should the experiments of Rhine, Bender and Tenhaeff be quite inexplicable within the sense of our second category, we would find ourselves facing a metaphysical puzzle of the first order, the recognition of which would have unimaginable impact on philosophical and religious thinking.

PRECOGNITION IN THE THERAPEUTIC SETTING

JOOST A. M. MEERLOO (*U.S.A.*)

Thirty years ago I was myself stimulated by Felix Ortt, the great stimulator of psychic research in Holland. Through him I first learned of subjective time and its potential relationship to so-called objective time. Today we consider a special aspect of this relationship as experienced in the therapeutic setting—some phenomena of precognition.

A craving for timelessness and foreknowledge plays a role in every neurosis,—an unconscious wish for immortality and eternity. Professed foreknowledge is often a form of wishful thinking to this end. By it the pains and stresses of waiting and uncertain anticipations are evaded.

The organic conflict implied in "waiting" represents symbolically for most people the lifelong conflict of separation: from the nirvanic past, the matrix, the womb, the breast by weaning, the mother by walking, the home by maturity and marriage, from more organic life by awareness of God and his moral commandments. To them, precognition implies emotional security, return to a protected world without individual responsibility.

Yet less fictitious processes are involved. The therapist himself may have sudden foreknowledge and certainty of what course the patient will take, as if the unconscious future program in the patient's mind were communicated unconsciously. Prognosis as a science is based upon awareness that such clinical receptivity and foreknowledge exist. Patients with suicidal fantasies are especially obsessed with need for precognition—to enjoy beforehand the future effects of their demise upon others. This is also true about anticipated deaths of relatives, where tension between the guilt of the death-wish and love

may become so anxiety-provoking that a more archaic telepathic communication breaks through and their death is "fore-seen."

Parapsychological literature is full of impressive examples of such precognition. Mostly, they are of future dangers for beloved persons. Many well-controlled experiments have tried to verify such phenomena, but lack the usual physical and psychological frames of reference. In general, premonitions and precognitions as experienced in therapeutic relationships are related to simultaneous anticipation and telepathic transfer between patient and therapist, to a special danger-mindedness, and a special ego-pull toward mastering the future through pre-determined imaginings and schemes. Foreknowledge and precognition in a psychoanalytic sense constitute telepathic transfer of unconscious expectation, planning and determination.

Dunne has advanced an original theory of precognition: man is perceptually conscious only of a three-dimensional cross-section of a four-dimensional world. In the succession of moments he becomes aware of successive three-dimensional cross-sections, but in so doing he travels unknowingly along the fourth dimension of the manifold three-dimensional images. A three-dimensional world, enduring in time, is an illusion. Time is the continuous awareness of man's progress through the four-dimensional world. In order to explain this "time-needed" attention, Dunne postulates a fifth dimension and a second awareness travelling along it. But clinical experience does not require so complicated a hypothesis. In this world, everything is there. The problem of precognitive time is that of the higher placed telepathic observer traveling along the dimensions and viewing a determined reality from a vantage-point outside the special dimensions.

We can now study many precognitive phenomena clinically, with verification of facts. It is unconsciously mingled with our subjective concepts of time, the mystery of which is highlighted by the modern physical approach and the newer psychological and parapsychological evidence.

C. G. JUNG'S CONCEPT OF "SYNCHRONICITY"

C. A. MEIER (*Switzerland*)

Synchronicity is a new way of looking at things. It takes seriously phenomena inexplicable by ordinary scientific criteria. It is applied in cases in which causal connection between two facts cannot be explained or conceived, but where we cannot help connecting the facts: there must then be a "tertium comparationis." This is an emotional value, anything between "meaningfulness" and "luminosity," which strikes us.

Necessity for the concept can be seen in Rhine's card and dice experiments. Causality cannot explain target hits significantly above probability. When *distance in space* reveals itself ineffective, the role of space is reduced almost to zero. When above chance hits occur with regard to a *future* series, the role of time proves equally ineffective. Time is reversible or at least relative, just as is space. Where these two categories are limited if not eliminated, it makes no sense to apply the category of causality. "Precognition," "telepathy" or "PK" are therefore descriptions, not explanations.

Phenomena of the same nature sometimes occur spontaneously. These cases often are more improbable than experimental cases, and their emotional connotations correspondingly stronger. The emotional factor seems to bridge the gap left by lack of causal connection. However it is impossible to determine priority as between fact and emotion. What, then, is the common denominator of these a-causal phenomena where time and/or space are obviously out of joint, yet the connection between two or more facts "hits between the eyes?"

Jung, approaching from the psychological angle, finds in such cases: (1) Inadequacy of causality; (2) Emotional factor

involved; and (3) A formal factor, common to all the links in the set of comparable facts.

Where, Jung asks, do we meet in psychological experience the same set of conditions? Wherever, he says, *Archetypes* are involved. They play a part where high emotional tension exists. They have moreover the faculty of arranging or constellating psychic contents which shows they are a *formal factor*, which manifests itself in an archetypal *image*. Simultaneously we can often observe that a formally similar, possibly external, objective situation coincides with the purely inner archetypal image, though no causal connection can be established.

Jung cites many phenomena and says that they fall into three categories:

1. Coincidence of a psychic condition of the observer with an objective, outer event simultaneously observed and which corresponds to the content of the psychic condition. There is no causal connection in evidence; assuming the well established relativity of space and time, such is not even conceivable.

2. Coincidence of a psychic condition with a corresponding (more or less spontaneous) outer event outside the observer's field of perception, which can be verified only subsequently.

3. Coincidence of a psychic condition with a corresponding, not yet existent, future event that is distant in time, which also can only be verified subsequently.

In situations (2) and (3) events are not yet present to the observer. But since they correspond, though not necessarily in time, Jung calls such events *synchronistic*.

Rhine's experiments come under (2) and (3). Since it is impossible to guess sequences or to influence fall of dice by mere wishing, the impossible task induces hope for a miracle, however unconscious with emotional tension, and sets up an archetypal situation. Thus the results are the product of an auto-observation of the percipient's or agent's own psyche.

PARAPSYCHOLOGY, PSYCHO-HYGIENE, AND MEDICAL-PSYCHOLOGICAL INSTRUCTION

HEINRICH MENG (*Switzerland*)

From the standpoint of the psycho-hygienist, experience gave rise to the demand that the certified knowledge of parapsychology be made available to the student and the practicing physician. We believe this to be in the physician's interest and in that of the public, which looks to the doctor for the treatment and cure of illnesses and for enlightenment in matters of hygiene. The confidential patient-doctor relationship—the basis of creative medical and psychological thinking and work—presupposes a certainty of the doctor and the psychologist in questions of body and soul. The spiritual counselor must be capable of objective judgment.

This is all the more true in wartime, periods of disaster, and postwar periods when individual, collective, and global disturbances in the realm of religion, philosophy, and interpersonal relations occur within the individual's consciousness and that of the community. The rush to visit so-called clairvoyants, astrologers, lay hypnotists, etc., is a symptom of the spiritual uncertainty of our age.

Mental care, treatment, and therapy depend, among other things, on whether doctors and psychologists in the course of their training and development grow acquainted with an anthropology that corresponds to the knowledge and experience of our time. Among the elements forming the basis of this are: the findings of depth psychology (source: psychoanalysis and hypnotism), the theory of the unconscious, dreams, disturbed behavior, neuroses and psychoses, the meaning of the affective process, the strength of the ego and the

conscience in health and sickness; further, the knowledge of the origins of superstition, wish dreams, and anxiety; and finally, the problems of parapsychology.

False conceptions concerning so-called occult phenomena, the mental processes of induction, and provocation to anxiety are frequently the breeding ground for mental epidemics. Moreover, a critical evaluation of parapsychology is useful for the psycho-hygiene of the doctor himself. Being a physician or a psychologist does not prevent one from having superstitions or autistic fantasies, just as being intelligent does not guard against artificial stupidity or weakness of character.

The study of parapsychology and the integration of its certified data into anthropology may become one of the means of guarding against *hubris* (defiance of fate), delusions of grandeur, and despair. Anthropology, used properly and rooted in reality, may become a precondition for maturing respect and modesty—enabling us to cooperate in solving the soluble problems of science and of recognizing the insoluble ones as such. Anthropology that has incorporated depth psychology, psycho-hygiene, and parapsychology, may prove to be a notable contribution, enabling man to leave behind the kingdom of human prehistory and enter the still utopian land of humanity. Voltaire believed that the utopias of today could become the reality of tomorrow. On their own, they do not become so. We must help in making their ideas materialize.

DEPTH PSYCHOLOGY AND PARAPSYCHOLOGY

EMILIO SERVADIO (*Italy*)

Freud was the first to approach parapsychology from the angle of depth-psychology and psychoanalysis in his paper "Dream and Telepathy" in 1922. Other researchers, including Hollos, Ehrenwald, Eisenbud, Fodor and myself, followed with their own investigations along similar lines, exploring paranormal phenomena with the same methods which had been used to investigate customary psychological or psychopathological occurrences. In 1953, Dr. George Devereux collected and edited thirty-one essays in his *Psychoanalysis and the Occult*, dealing with data deriving either from the analysis of patients or from the essayists' own experience.

The basic legitimacy of envisaging psi phenomena from a psychoanalytic angle can be accepted only if one accepts the assumptions of modern dynamic psychology: the concept of a mind-structure involving unconscious processes and conflicts; the acknowledgment of an unconscious region of the mind and of its peculiar mechanisms, such as repression, displacement, condensation, regression, symbolism, etc.; recognition of primitive unconscious drives; and the knowledge that the unconscious can be explored through special techniques.

Devereux's anthology shows striking agreement among analysts on the significance of psi occurrences for a better theoretical understanding of mental functioning. Eisenbud, Ehrenwald, Gillespie and I have tried to show that the telepathy hypothesis may be an efficient tool in analytic work; that its negation or non-evaluation can lead either to under-interpretation or to futile mental acrobatics on the part of the analyst.

The highly irrational nature of unconscious emotions and conflicts is connected with the fact that they first occur at very primitive phylogenetic as well as ontogenetic developmental levels. We may take it as a well-founded hypothesis that extra-sensory perception could be a characteristic of low zoological species, which would then be, as some researchers have imagined, continuously involved in a sort of vague extra-sensory coalescence. This would be in contrast to the "individuation" trend which is a progressive biological achievement, found in more and more clear-cut form all along the ascending scale of biological evolution.

Independently of parapsychology, psychoanalysis has contended that the so-called "individual mind" is not really individualized. Jungian psychology stresses the trans-individual aspects of unconscious mental life, to the point of admitting a "collective unconscious." Ehrenwald compares personality to "the crest of a wave thrown up by the ocean for a split second of individual existence before it falls back into the sea." Conscious "singleness" would be therefore the superior, progressive aspect of a mental world which in itself is neither single nor conscious. In this latter world, therefore, psi phenomena—which seem to belong to a trans-individual unconscious—can and do occur.

This conception is the only one which can account for the biological "incongruity" of psi processes. Psi phenomena have little or no importance for the progress of our culture; they are less useful than normal channels of communication or learning. A telepathic event is less convenient or articulate than a telegram or a telephone call. The usefulness of our approach to psi phenomena lies in the fact that, as we hope, they may grant us a better understanding of the human mind as well as of psychic life in general, not because we may directly become indebted to them for scientific information. But this incongruity and uselessness is perfectly in accord with the conception of psi phenomena as belonging to a pre-individualized unconscious and primitive psycho-biological world.

THE DREAM, SCHIZOPHRENIA, AND PSI PHENOMENA

MONTAGUE ULLMAN (*U.S.A.*)

Pavlov depicted three possible levels of organization of responses of the organism to environment: reactions based on the unconditioned, inborn stimulus-response mechanism; these reactions modified by the formation of conditional stimuli; and lastly, reactions of an infinitely more complex and qualitatively different character based on the development of abstract thought and language. This last level, the exclusive possession of man, was termed by Pavlov the secondary signaling system as contrasted with the preceding level or primary signaling system.

Two inferences based on the work of Pavlov are (1) that dreams can be correlated with the activity of the higher nervous centers as the primary signaling system comes into dominance and (2), that dreams represent a phenomenon of the transitional state, the term transition being used to indicate any state between that of deep sleep and that of complete awakening.

Empirical observations have long attested to the close relationship between dissociated states and psi phenomena, and more specifically to the frequent occurrence of psi at the time of dreaming. The evidence points to the occasional direct representation in dreams of persons and events occurring at a distance. To correlate this with the formulation given above, one would have to assume that whereas under ordinary circumstances the conditioning stimuli during the transitional state arise from within the individual's own experience, under

special circumstances the conditioning stimuli may originate in an event which has never been experienced through ordinary sensory channels.

In turning our attention specifically to schizophrenia as a process characterized by the most profound disturbances in consciousness and behavior, we do so in an effort to learn more about the conditions under which a remarkable shift in orientation occurs from stimuli arising out of the actual experience of the individual to stimuli derived in extra-sensory fashion.

Schizophrenia is here regarded as an adaptive process which in a progressive manner involves greater and greater alienation from real experience and real people. There is an ever-increasing disparity between the actual behavior of the individual in relation to the outside world and the way in which the activity is reflected in his consciousness. The ability to engage in abstract thought diminishes as activity becomes more and more circumscribed. As the conceptualizing difficulty deepens, communication loses its effectiveness and finally deteriorates beyond recognition. The individual is unable to form his own conditioning stimuli and is forced into a relatedness to the environment mediated through the primary signaling system.

The picture drawn is that of an end-stage, but before this point is reached more or less stable forms of relatedness are established. This generally takes the form of a single significant relationship either in the form of a continuing parental relationship or a relationship created anew with a mate, a friend, or a therapist. The situation is actually one in which the schizophrenic is exploiting the conceptualizing ability of his partner. Once the struggle to maintain this tie is resolved unsuccessfully, once this last indirect but real contact with the world is severed, the individual is unmoored and it is at this stage that schizophrenic manifestations occur in overt form.

Clinical observations on patients experiencing the process

described sheds some light on psi functioning. In individuals undergoing therapy who have managed to stabilize themselves in a relationship as described, telepathic dreams tend to occur with frequency. In individuals who are in the throes of an overt disorder, telepathic manifestations are not common, but when they do occur they do so in much more sporadic fashion and are apt to occur during the waking state.

The author's experience with patients currently under treatment points to the fact that at the borderline level psi manifestations tend to occur in dreams and to take the form of borrowed experiences which are then employed in the dream as visually imagined conceptions. At the next or overtly schizophrenic level, a concept forming in another brain seems to be grasped and reacted to as if it had been verbalized.

The hypothesis which emerges on the basis of meager observations and broad speculations thus far would be along the following lines:

The development of the secondary signaling system in man provided the physiological conditions for the tremendous leap forward in his resourcefulness. This step, in spite of all its attendant advantages, was not without its hazards. Man alone in the animal kingdom developed, along with his specifically human brain capacity, the specifically human disadvantage of having an enormous neurotic potential in his own natural habitat. Under the circumstances of neurotic development, the secondary signaling system becomes entangled in dead-end activity, and the primary signaling system becomes the effective organizer of behavior.

The hypothesis offered does suggest certain ideas that might be tested experimentally aside from the need for further observation and validation along clinical lines. If psi be viewed as a conditioned effect most apt to occur during a period of dominance of the primary signaling system, it raises the hope that in working with subjects in various dissociated states a good result might be arrived at through the deliberate effort to establish a conditioned effect. This would

involve the use of the psi stimulus in connection with a successfully conditioned stimulus and would necessitate repeated trials. The emphasis would be shifted from the hope of obtaining a startling and convincing effect in the beginning, to one of little or no effect in the beginning and the gradual building up of an effect.

PARAPSYCHOLOGICAL RESEARCH AT A PSYCHIATRIC CLINIC

H. J. URBAN (*Austria*)

The number of psychiatrists who have examined the relationship between their field and parapsychology is surprisingly small. Yet such studies should be made, as "occult phenomena" are widespread and can just as well occur with the mentally ill. This situation resembles that of pre-Freudian psychology, at the turn of the century, relative to depth psychology and medical psychology. "Official" psychology ignored the subconscious for years, along with depth-psychological mechanisms in interpretation of psychosis and neurosis. When modern psychology entered these areas, results were interesting and fruitful. Now the study of parapsychology may have a similarly enlightening effect.

We have evidence that some facts in the psychopathology of brain diseases partially resemble parapsychological facts. In such cases, deficiency in sensory perceptions has been compensated by a talent in extrasensory perception. Also, in ESP card tests, changes in parapsychological faculties have become obvious after narco-analysis or electro-shock. Such similarities are not as yet fully understood and require further research.

The psi-factor may be of practical value to the physician when, without long interrogation of the patient, a telepath may be able to indicate the correct diagnosis and therapy. Here there is no question either of miracles or fraud, because we can deal with facts understandable to a cautious, parapsychologically trained physician. As natural scientists we desire an explanation or at least a working hypothesis of

so-called "occult" phenomena. We find it in the psychic, and believe that along with the conscious and the subconscious there is at least a third stratum, the superconscious. The psi-factor could be a function of the superconscious. Such states as the strange sensation of lucidity, of eternity, together with a profound feeling of happiness resemble descriptions by mystics of the "apex mentis," the "spark of the soul," the trance of mediums or even the "ecstasy" accompanying stigmata, in all of which extra- and super-natural phenomena may occur. These are similar and partially identical with some parapsychological phenomena, and their relationships offer a wide and productive field of study, especially for physicians. Parapsychology implies an extension of the physician's spiritual horizons, as did the field of depth-psychology. The theory here called "height psychology" (Frankl) is an important counterbalance to depth psychology. These disciplines should be taught in the universities.

The words of a song: "The physician is no Christian," may be slightly exaggerated but not surprising in view of today's university curricula. There will be little change until the rich, supersensory content of the Bible and other literature is taken seriously by physicians. This would imply teaching of an anthropology that includes the soul and spirit of man. According to a tradition thousands of years old, man is *corpus, anima* and *spiritus*. Any discipline claiming to be called "human medicine" must consider all three. If human medicine is to be more than veterinary medicine, consideration of the whole man is essential. In this consideration lies the connecting-link between parapsychology and psychiatry.

WORKING GROUP C

(Spontaneous Phenomena and Qualitative Research)

Chairmen:

W. H. SALTER

HANS BENDER

RENÉ WARCOLLIER

SUMMARY OF ACTIVITIES OF WORKING GROUP C

The first meeting of this Group took place on July 31, with Mr. Salter in the Chair. Dr. Hornell Hart opened the discussion on "Travelling ESP." In the discussion which followed M. Warcollier referred to numerous cases known to him and Dr. Dingwall stressed the need for distinguishing the different types of cases mentioned by Dr. Hart.

Mr. Sudre and Mrs. Goldney also spoke. Dr. Björkhem introduced his paper "Psychological Problems Concerning Hypnosis, Hysteria and the Hysterical Type of Reaction." Dr. Mackenzie spoke on "The Biological Roots of Parapsychology" and Dr. Booth described the case of a plant in his garden which appeared to have been influenced in its growth by the Psi-factor. In the evening, by the kind invitation of Professor Tenhaeff and Dr. Fischer, the Group attended a demonstration of clairvoyance by Croiset at the Ethnological Institute.

On August 1 Mr. Warcollier took the Chair at the morning session, the first speaker being M. Sudre on "Parapsychology and Biological Phenomena." Professor Tenhaeff then briefly introduced a discussion referring to a paper of his on "Psychoscopic Experiments on behalf of the Police" which had been circulated. He introduced Dr. Bender's paper on "Precognition and Qualitative Experiments," a parallel investigation of Croiset whom Professor Tenhaeff had investigated for a long period.

This subject was continued at the evening session with Mr. Salter in the Chair. On the morning of the 3rd August, Dr. Bender in the Chair, M. Warcollier opened the discussion on "Antagonism in Mental Images and the Problem of Psi-Missing."

Several members of the Group spoke. At Dr. Bender's suggestion Mr. Salter described the past work of the SPR in investigating spontaneous cases, mostly apparitions, and Mrs. Goldney spoke of the Society's present work in connection with poltergeists.

In the evening session M. Kherumian advocated a return to the crypaesthetic hypothesis of Richet, and Dr. Canavesio described his work with the electroencephalograph.

PRECOGNITION IN THE QUALITATIVE EXPERIMENT

HANS BENDER (*Germany*)

The qualitative experiment is necessary for the inquiry into the individual nature of more complex parapsychological phenomena. It supplements quantitative-statistical methods. The gift of many a sensitive expresses itself only in a field that is alive, charged with emotional currents. Such conditions do not prevail during the use of Zener cards. Rather, such conditions have to be established during experiments where, for instance, a person becomes the target, or the audience a factor of affective tension.

To this type of Experiment belong the "seat experiments" which Prof. W. H. C. Tenhaeff and I have undertaken with the Dutch sensitive Gerard Croiset. Croiset seeks to anticipate who, during a future demonstration, will sit in a certain seat. He describes the outward appearance of such "target persons" and lists small, mostly emotionally charged experiences from the past of such a person. Tenhaeff has undertaken some two hundred and fifty such demonstrations, during which the participants (usually more than one hundred persons) freely chose their numbered chairs. Later, chairs were chosen by lottery but the results did not show a change. This procedure has to deal with the problem of determining whether Croiset's assertions are specific for the person sitting in a given chair.

The findings of these "seat experiments" are relevant to the structure and the biography of the sensitive. Croiset's unusual tenseness and perturbability seem to be influential factors, for he is paranormally excited predominantly by dis-

turbing affective experiences of the test persons. Experiences of the test person seem to be especially clearly described if they stood in an associative connection to Croiset's own affective experiences. When Croiset was allowed the choice of the chair, such an associative relationship appeared frequently as a determining factor in the preference for a certain chair, i.e., a certain person. Irradiations of the assertions to holders of neighboring chairs seemed also to be due to affective links. A depth-psychological analysis of the results is frequently necessary to find out this important affective reciprocity.

The "seat experiments" suggest that Croiset could come into actual telepathic contact with a person by a "precognitive shift," i.e., by precognition of the future behavior of that person (choice of seat at the demonstration or choice of a lot).

At future experiments Croiset's introspective ability should be stressed more strongly. A phenomenological analysis of his impressions is necessary to exclude combinations and to examine if there are any criteria for distinguishing paranormally induced images from mere products of phantasy.

This experiment is currently undertaken in a different manner, which permits quantitative evaluation: Croiset tries to anticipate three or four persons, fixing for every one a lottery number from one to twenty. Each prognosis is given a weight figure from zero to three, which indicates the richness of personality detail that Croiset has been able to furnish. At some other locality, third persons without knowledge of the prognosis then invite some twenty persons to participate in an experiment. Selection takes place only after Croiset's prognosis and without the knowledge of the participants. The participants then receive detailed personality descriptions provided by Croiset and they are asked to note those they consider applicable to themselves.

Inquiry is then made into the various participants. Their confirmation of details earlier provided by Croiset is evaluated and multiplied by the weight figures. It is then attempted to establish three or four target persons. In the presence of wit-

nesses, the twenty names of the participants are assigned to twenty numbers. The likelihood that the possible target persons might accidentally receive the lottery numbers given by Croiset is easy to calculate. Croiset now believes that he can get along without the chairs. Preliminary experiments suggest that, under this new method, precognition applies to the actual drawing of the numbers. However, the most important feature of a positive and constructive field situation remains intact: people with emotional experiences as target objects.

THE FUTURE OF PARAPSYCHOLOGICAL RESEARCH

JOHN BJÖRKHEM (*Sweden*)

It is a matter of common knowledge that scientists in the most widely different fields are interested in parapsychology. In their own sciences they are sometimes confronted with problems which, it seems to them, can only be solved in the light of deeper research into parapsychic phenomena. Because of traditional attitudes, however, it is impossible for them to obtain grants for such investigations. If sufficient grants were forthcoming, generously distributed by a more or less international organization, a far more intensive parapsychological research than that now being carried on would undoubtedly result. With the splitting of the atom, science has reached a decisive epoch regarding the material world. The psychic world is still largely uninvestigated and unknown. It is becoming clear to all scientists with deeper insight that the riddles of parapsychic phenomena must be resolved.

Many researchers in different countries and branches of science, who in spite of difficulties carry on parapsychological research, doubtless know others who, with economic assistance, could carry on such investigations under scientific auspices. Parapsychological research can be intensified by such economic help, extended generously to researchers in different countries for the performance of varied tasks. It should not be incumbent upon the researcher to render a detailed statement of accounts, as by its very nature parapsychology may require years of research yielding little positive result. The same may be said of medical research—and ours is a young science.

With such economic support, parapsychology would soon become a respected science. The interest of researchers in other scientific fields would be stimulated in the problems of parapsychology. Methods applied would be increasingly refined and adapted to their ends, as in all other sciences.

In my opinion it should be an urgent aim of the Congress thus to stimulate interest in parapsychology and to study ways of practical realization of this proposal.

A list could be drawn up of mediums known to researchers in various countries. This would include those whose phenomena are of interest, and who would be willing to cooperate. It is also desirable that the Congress should commend a new viewpoint concerning mediums. To be a medium implies possession of a talent, and an often difficult destiny. Mediums who place themselves at the researcher's disposal should be generously paid, nor is this truly compromising to the medium. Solution of parapsychological problems is so important that the matter of a medium's earnings is now comparatively inconsequential. There are now such reliable tests that a fraudulent medium may be quickly exposed.

With such a list it will be easy to obtain a profitable survey of what now constitute the most urgent problems of parapsychology. It would also allow an approximate estimate of how far such a program of research might be carried out.

THE TWENTY-YEAR EXPERIMENTS AT UPPSALA AND LUND

JOHN BJÖRKHEM (*Sweden*)

From 1930 to 1950 experiments with parapsychological implications were conducted at Uppsala and Lund, mainly among students, but including all trades and professions. About 30,000 experiments were observed, with 3,000 individual subjects.

The primary objective was to throw light on religious-psychological phenomena, such as are associated with ancient mysteriosophy, shamanism, Indian magic, primitive medicine-men, modern spiritism and mystics such as Therese Neumann. Could such phenomena be produced experimentally? They were, often in marked and convincing forms, susceptible of analysis and interpretation.

Students make ideal subjects. Most experiments took place under hypnosis. This was favorable for emergence of the psi-factor. But subjects were not selected for such aptitude, and the objects of the experiments were not suggested to them. It was found best to induce all phenomena at a stage less than deep sleep, with consciousness as little changed as possible. Appearance of the phenomenon is practically always *compulsorily* conditioned. The sensations assert themselves irresistibly, whatever the subject's own thoughts or feelings, and are of the character of pseudo-hallucinations. In certain cases an influence from the experimenter seems to condition emergence of the psi-factor. Some subjects are best suited for telepathic, others for clairvoyant and still others for psychometric experiment.

While others present may exert an influence, the most sig-

nificant factors in the emergence of phenomena lie in the subject's own personality. Observation of other experiments promotes appearance of phenomena. In simultaneous experiments with clairvoyance and telepathy, failure of one subject may affect the results obtained by the other. Subjects who react with somnambulistic sleep for one experimenter may remain practically unaffected by another good experimenter. Why certain types of personality, as organisms, more easily evoke the psi-factor than others is one of the most important problems within the whole field of parapsychology.

To educate and train subjects, one must make a pronouncedly "psychological" contact, not teaching schemes and systems, but apprehending their personalities from within. With such contact, subjects' psyches can be shaped in almost any way. Persons from 16 to 30 years make the best subjects; only rarely can an experimenter over 50 establish the necessary profound contact with this younger group. But if contact is so made, the subject enters the state of mind necessary for the psi-factor. It is a matter of extremely subtle conditions. White or dark wallpaper, the pitch of the experimenter's voice, an unknown visible object that arouses fear or wonder, can influence the nature of the phenomenon.

For many subjects in induced somnambulistic sleep, the psi-factor seems to be a *state*; they cannot experience anything otherwise than in this state. Some subjects can by direct instruction or suggestion learn to distinguish impulses with a psi-character from those deriving from feeling, fantasy or logical influence. Suggestions should be the simplest possible, not suggesting a specific outcome. Also, some subjects in the psi-factor condition may wander into strange borderline experiences akin to spiritism. It is important that subjects learn to recognize the psi-factor as an endowment or gift, not as a pathological defect. Often it can be traced through generations within the same family.

AN OBSERVATION ON PSI FUNCTION IN PLANTS

GOTTHARD BOOTH (U.S.A.)

A wisteria plant is described which had been planted as part of decorative shrubbery, without any close objects to serve its normal character of being a climbing vine. Following an accidental permanent increase in water supply it was found that the plant had sent out surface runners which went in straight lines to the most promising climbing objects in the neighborhood, although they were far more distant than some lower trees and shrubs. The psi character of this behavior was expressed in the following indications that physical means of direction-finding were not involved.

1. The first and strongest runner went to the most distant object, which happened to be the most advantageous target: a house, although it stood sixty-three feet away from the plant. Subsequently, other runners went out toward four trees in order of size, regardless of the relative distance, which varied between thirty and fifty-four feet.

2. Attraction by mass gravitation or contact can be excluded, because some runners actually touched lower plants on their way, without using them for climbing.

3. Attraction by light or shade (positive or negative phototropism) can be excluded because:

- a) the same runners grew across an alternation of open lawn and ground covered by thick hedges, shrubbery and bittersweet vines,

- b) the runners went out in different directions of the compass: north, northwest, south and southeast.

4. The *chemistry* of the ground or the targets can be excluded as influence:

a) the objects and ground included lawn, naked ground, flagstones, concrete and painted wood,

b) vines stretch through the air in vertical direction from the ground, or from lower plants, to reach for higher horizontal branches of trees above, to a height of up to two and one half feet.

5. Lower objects bypassed originally proved to be acceptable under one of the following conditions:

a) after the distant tall objects had been reached by the original direct runner,

b) after a long-distance runner had been cut.

In these two eventualities secondary vines or runners branched off toward lesser objects.

6. The direction of the runners appeared to be influenced by changing "motivations" of the plant sending out the runners: two of them headed first straight for a nearby lower plant (a Japanese cherry tree and a forsythia bush, respectively) but, having gone halfway in that direction, they turned away in a flat curve to join an older runner in the direction of a taller, but more distant object. It seems likely that such "changes of mind" reflected variations in the nurture of the "base plant."

All these observations add up to the impression that the wisteria plant has means, other than those known from physics and chemistry, through which it orientates itself toward its biological objects. The guiding principle is a *Gestalt* quality: tallness, which corresponds to the plant's need for climbing. This need appears to be proportionate to the nurture and vitality of the individual plant, as demonstrated by comparison with another wisteria plant growing on dryer ground and in spite of being separated from taller trees by less distance than the plant described first. The term "hypso-tropism" is suggested for this behavior. It appears closely related to the observations on the migrations of certain birds and fish for breeding purposes, and the homing of carrier pigeons and dogs. The guiding principle is apparently an acausal, functional subject-object relationship analogous to

the *Gestaltkreis* (circle of form genesis) described by Von Weizsaecker.

In addition to "telepathic" qualities the wisteria also seems to possess telekinetic powers: without direct physical contact, in two different instances, weaker vines (a bittersweet and a convolvulus plant, respectively) withered away without physical contact. This phenomenon seems related to the observation of Cipriani on the use of poisonous organisms by birds and to the experiments of Mme. Vasse with germinating seeds.

The observations on this plant indicate that even plants are capable of overcoming physical obstacles by means which transcend space and time.

TRAVELING ESP

HORNELL HART (U.S.A.)

The terms *Traveling ESP* and *ESP projection* describe any type of experience in which an observer observes from a point in space outside his own physical body. That one is thus projected becomes evident, if and when one sees his own physical body from an outside viewpoint.

Returns from a questionnaire filled out by a representative sample of 155 Duke University students indicated that such projection of viewpoint is fairly widespread. Of these students 30 per cent reported they had seen their physical body from a viewpoint outside that body. Two other groups, similarly questioned, gave somewhat smaller percentages, but it seems safe to conclude that at least 20 per cent of college-level young people believe that they have had experiences of this sort.

Securing evidence that such projections have taken place is much more difficult. Several types of evidence should be collected in order to confirm veridicality. In ESP travel, such objects should be observed as books and pictures, arrangement of furniture, the appearance of rooms and buildings, etc. The ESP-traveler should have no previous knowledge of these things from sensory observation, and a detailed report should be written concerning such objects before there is opportunity for sensory check-ups. Confirmation of the ESP-traveler's observations should be made by independent observers, and a written record of these confirmations should be made and attested before the two accounts are compared. In addition, the ESP-traveler should note appearance, costume, utterances of the people in the scene to which he makes

his ESP excursion; and a detailed written description of this setting and events should be secured from each person before he is informed of the ESP-traveler's observations. If the ESP-traveler appears as an apparition during his projection, a detailed description of his actions should be written and attested before any sensory information about these details reaches the percipient.

Of nine examples of ESP projection in which such evidence was present, two cases were spontaneous, two were deliberate self-projections, and five were cases of ESP excursions induced by hypnotism. These cases have all been previously recorded in my own correspondence, in the *Proceedings* of the Society for Psychical Research, or in other published and documented volumes. One may be reported here as an example of the types of cases and supporting evidence given.

On April 22, 1850, in Peterhead, Scotland, John Park, a clairvoyant, was projected by hypnotism to the whaling vessels "Ross" and "Eclipse." Park reported the second mate of the Ross had lost some of his fingers and his hand was dressed by the captain and surgeon of the ship. Park also reported that the captain of the "Ross," in consultation with the "Eclipse" skipper, said the former vessel would return first of the fleet of eleven whalers, and would carry "upwards of 100 tons of oil." On May 3, the "Ross" returned, first of the fleet to do so, carrying 159 tons of oil. The ship's second mate had indeed shot away portions of his fingers while fishing. The captain of the "Ross" confirmed that he conferred with the captain of the "Eclipse" on the date reported by Park. William Boyd, a Peterhead lawyer, heard the statements of the clairvoyant Park several days before the "Ross" arrived, and personally witnessed the arrival of the ship and the confirmation of Park's statements.

The cases presented (which range in time from 1850 up through 1938), plus 29 other cases summarized in a longer paper, would appear to establish a *prima facie* case for the reality of ESP travel. But the hypothesis cannot be regarded as conclusively proved.

There also exists a "parallelism" between apparitions of the dead and apparitions of the living. One of the most promising approaches to the problem of possible survival of human personalities beyond death would seem to be the systematic and rigorous investigation of spontaneous and experimental ESP projections. It is therefore proposed that a research project be established to test ESP projection, utilizing hypnosis as the most immediately promising method. It should be possible to select and train a large sample of college students capable of deep hypnosis; reliable tests of the veridicality of their observations in ESP projection could be made, and it is only a question of devoting an amount of time and money which would be moderate in comparison with many current research projects.

The hypothesis of ESP traveling seems to be supported, by reports of spontaneous and experimental cases, with such evidential strength that the likelihood of its actual occurrence seems fairly high. The major significance of the hypothesis is so great, with respect to philosophy, religion, and the whole orientation of life, that the need for rigorous and comprehensive research in the field seems imperative.

[Dr. Hart presented two supplements to his basic report: *Hypnosis As an Aid in Experimental ESP Projection*, and *The Evidential Status of ESP Projection*.]

REAPPRAISING THE LITERATURE OF PSYCHICAL RESEARCH

C. J. DUCASSE (*U.S.A.*)

The literature of psychical research contains a vast collection of reports of paranormal occurrences. Many, together with the circumstances under which they occurred, are inadequately described; often, even the assertion that the phenomena actually occurred is inadequately supported. In the great majority of cases some normal explanation is imaginable, and not definitely excluded by any of the precautions or circumstances mentioned.

If, however, one is to argue that paranormal phenomena show that there are forces in the universe—or human capacities—of kinds radically different from those now recognized by the natural sciences, and therefore that the conception of the universe and of man which these sciences today entertain is after all parochial, then the paranormality of the phenomena one offers as instances needs to be unassailable. That is, they and their attending circumstances need to be described in such precise detail, and the testimony that the occurrence and its circumstances *were* as described so clear, that the evidence is incontrovertible.

A few reports of paranormal phenomena meet these requirements. What is much needed is a carefully sifted collection of such reports (covering each of the chief types of phenomena represented), and their publication with all details and relevant information. These reports should be so well-attested that rejection of them would patently amount to intellectual irresponsibility.

In the literature of yoga, of theosophy, of anthroposophy

and of other "occultisms" there are occasional hints or statements as to methods by which such development allegedly can be brought about. Collating and comparing this material might result in the emergence of a definite and clearly describable method. I believe that little scientific progress will be made in parapsychology, or in exploration of such dimensions of nature as may be accessible only to parapsychological faculties, until persons trained in scientific modes of thinking develop in themselves these parapsychological faculties. They would then exercise these faculties in a systematically scientific manner, instead of in the more or less haphazard manner in which they manifest themselves in persons in whom they are native and function spontaneously.

Unfortunately, the persons who claim that those faculties can be developed and made to function consciously at will (and who claim that they themselves have so developed them and are exercising them) seem never to be willing to submit themselves to the elementary tests which would prove that they really do possess such faculties. One who had so developed them and in addition possessed scientific habits of mind would of course see that submission to such tests is indispensable. It would be the first step in conferring scientific status upon the assertion that these faculties exist and can be made voluntary.

THE NEED OF "A MEDICAL VERIFICATION CENTER"

W. KAT (*Netherlands*)

In every country there exists, besides the official medical "clan," a group (mostly of ungraduated and unlicensed persons) claiming to have at their disposal healing powers able to cure in cases where official medicine is powerless. Some "healers" work secretly, some openly; some have large practices, others work in slums. There are magnetists, clairvoyants, prayer-healers, dowsers, etc. A high proportion of these unlicensed "healers" are unmistakably swindlers and impostors, whose practice endangers public health. Yet there are some of high moral standing, persons who devote their lives to the service of mankind.

It must be acknowledged that irrational methods do occasionally achieve mysterious, but real, results. Repeatedly, the press reports healing meetings of religious groups or legal proceedings against unlicensed practitioners. Authorities cannot ignore this problem; they must deal firmly with swindlers and quacks, while not overlooking the possibility that there *are* unknown powers of healing employable for the public good. The juridical aspect of the problem suggests that a plan be devised to enable paranormal healers, acting in good faith, to work legally. Physicians and physiologists will be interested to know what happens, biologically. Psychologists, parapsychologists, sociologists and theologians, all with an interest at stake, will ask a common question: "Are there true paranormal healings?"

This basic problem is full of difficulties. There is no present way of checking on these supposed healings. Only rarely is

an all-around medical examination possible. Unassailably documented cases are extremely rare. It would be of utmost interest to have an institute designed to make careful and scientific investigation of paranormal healings.

Such a "medical verification center" should have a governing board of four medical men (including a psychiatrist and a public health officer) and one or two psychologists. Main research work would be carried out by a full time salaried physician, parapsychologically trained and familiar with scientific investigation. He should be assisted by a woman social worker. Extensive publicity should be given, and contact made with groups professing ability for paranormal healing. The staff attitude should be strictly neutral. Results should be a matter of public record and qualified medical men should be encouraged to join in the center's activities.

Publication of valid, conclusive evidence would (1) Show whether paranormal healings are real and whether a psi-factor is present; (2) Show that the "occult" tinge often found is a hindrance to a sound scientific approach; (3) Demonstrate what is valuable or fraudulent in paranormal healing and thus stimulate development of psycho-hygiene; (4) Facilitate public health legislation by providing data concerning paranormal, ungraduated healers; (5) Stimulate interest in parapsychology and its investigations; (6) Influence the negative attitude of official medicine toward parapsychology and the possibility of paranormal healing; and (7) Contribute to better insight by mankind into life itself by exploring an area of human behavior so deeply connected with the basic problems of ethics, theology and anthropology.

IS THERE A SIXTH SENSE?

RAPHAEL KHERUMIAN (*France*)

There are not many hypotheses capable of guiding research into the nature of telepathic and precognitive perceptions.

Charles Richet's concept of the sixth sense or cryptesthesia has become unpopular as a result of objections that have no real basis. The independence of these perceptions from time and space has never been proved. And to say that one sense can't perceive what doesn't yet exist for the others is to forget that all our senses are reciprocally precognitive.

Furthermore the research of Bykov who carried on Pavlov's work on the conditioned reflexes seems to support the theory of a sixth sense. Bykov has proved that there are anatomical structures in the viscera which have a sensitivity comparable to that of the sense organs. He calls these structures interoceptors. Unconscious impulses from these interoceptors can—according to the pattern of the conditioned reflexes—set in motion other organic reactions. The circulatory system participates closely in the work of the interoceptors.

Great possibilities for further study are apparent here. Since the trance state is accompanied by an increase in blood pressure, the question arises whether external factors may not act upon the organism for instance through the blood stream.

An attempt might be made to influence telepathically certain isolated organs, unstable colloids, the encephalographic or electrocardiographic tracings of a percipient, his blood formula or blood chemistry, etc. The problem of "telepathic agreement" must be examined from the same biological viewpoint. A parapsychological study would complete the anthropological, medical and psychological observations of agents

and percipients so that we may compare their organic likenesses with their telepathic agreement.

A reflexological analysis of our data would be most desirable. The inability of the great clairvoyants to see into their own future—in contrast to the perceptions of less gifted individuals which almost always relate to emotional experiences, accidents to relatives, etc.—seems to arise from the paradoxical inversion of reflexologists. That is to say that the stimulation of the nerve cells reaches a limit beyond which excitation produces the opposite effect—inhibition.

Far from contradicting spiritualist concepts, the theory of a sixth sense brings us closer to the doctrines of the Hindus. According to M. Eliade, the Hindus hold that “the states of consciousness are refined forms of the same substance which created the physical and biological world. Between psychic states and inanimate objects or living beings there are only differences of degree. But between psychic states and the spirit there is an ontological difference. They belong to two distinct types of being.”

The influence of a nervous mechanism which curbs or facilitates parapsychological perceptions shows to what an extent our cognitive powers depend on our earlier attitudes. A moral effort can free the scientist from his insensibility or mental confusion and render accessible to him the rational relationships hidden behind an apparent incoherence. To discover the truth, one must open oneself to it. Hence, morality appears as a method of acquiring knowledge.

It would be impossible to overestimate the importance of parapsychological research. The troubles of our times can only be cured when science integrates the sixth sense and its evidence into its view of the world. Only by filling in this tremendous gap will it be able to retrieve its mistakes—mistakes which are different from but symmetrical with those of so-called “primitive” civilizations.

BIOLOGICAL ROOTS OF PARAPSYCHOLOGY

WILLIAM MACKENZIE (*Italy*)

The achievements of Dr. J. B. Rhine and his school have demonstrated, by admirably devised statistical experiments, that parapsychological phenomena are not limited to a few paranormally gifted subjects. Paranormal faculties, variously developed, are potentially an integral part of the psychic structure of every human being. From now on, parapsychology can rejoin psycho-biological research and be integrated into a general Science of Nature. Subconscious psychical phenomena thus establish a link between all living organisms inhabiting our planet. Paranormal phenomena will be recognized, sooner or later, as fundamental and essential characteristics of life itself.

The time has passed when scientists advancing the theory that psychical phenomena have roots deep in biological realities, risk academic ostracism. Even at the end of the last century, when materialistic biology was dominant, Ernst Haeckel spoke of the "soul of an organic cell." Since that time many scholars in many countries have caused a tremendous evolution in biological thinking, away from Haeckel's materialistic monism, toward acceptance of the fact that psychical realities are an essential characteristic of every living being.

Psychical phenomena always contain important elements of a parapsychological nature. This may be observed by considering (1) The world of insects, and (2) The world of birds.

1. Without constant and active extra-sensory perception, construction and maintenance of huge termite colonies would be inconceivable. The shape of a termite colony, adapted to

a particular species of termites, requires cooperation by thousands of individual insects, which are blind and operate in total darkness, but which are functionally related to each other. The contribution of each individual is a submicroscopic apport of soil, mixed with saliva, which makes it harden. The place where each grain is deposited changes each time for each individual, since the work of all has been progressing. This coordination results in a rationally built edifice, with lodgings for the Queen, nurseries, food depots, aeration tunnels, etc. The whole, when complete, has a specific form. In all this it is impossible to deny the constant presence of paranormal knowledge. When a metallic separator is introduced, dividing the colony into two parts, the paranormal knowledge and its resulting coordination are not affected. Work continues as before; workers on one side continue to be as well-informed of what happens on the other side. This contains not only implications regarding extra-sensory knowledge of the workers considered as individuals; it has also implications concerning the "poly-psychism" of the group, an essential question for psycho-biology.

2. In the case of certain birds, observed under controlled laboratory conditions, parent birds deliberately poison their offspring when the latter are unable to leave the nest as soon as they can fly. They deliberately select poisonous seeds, grains or insects for the feedings. How does the parent know, unless it has a precise paranormal knowledge of such poisons, how to select them—substances unusual and strange to the normal needs and habits of the species?

Also in primitive peoples, with such phenomena as "lactatio serotina," artificially stimulated by witchcraft in elderly women, the same question arises. Even in organisms situated at the very foot of the biological ladder, parapsychological phenomena are a condition of life. Where life exists, there is constant necessity for choice between conditions and environments, to maintain survival. At every stage of biological reality is disclosed two distinct forms of intelligence. One is peculiar to the individual; the other goes farther and is inde-

pendent of the biological condition of the organism. By it, through extra-sensory means, the individual maintains constant relations with other organisms, with the Bios and the Cosmos, in order to maintain conservation of the species.

DIFFERENT TYPES OF SPACE-TIME AND PARAPSYCHOLOGICAL PHENOMENA

M. MARTINY (*France*)

To us, the first reality seems to be motion. Starting from zero dimensional space, it creates the line by a displacement of the point in time. Time, irreversibly rigid, appears as a sliding vector, thus forming the first linear dimension. This two-dimensional space can be either curved or infinite. In this flat world, the second time forms a second dimension, this being distinct from a third time (dimension), in which the flat surface, moving in its turn, generates volume. It is divorced from the fourth time, that of chronometers, which is the fourth dimension.

Our three-dimensional space is also curved and infinite. But our mental structure inhibits our conceiving volume as an extended surface of an imaginary sphere; yet it exists. Certain properties of the real (three-dimensional) sphere have been discovered by study of the imaginary sphere. Thus the real is not contrary to, but is a part or dimension of the imaginary. This concept is of paramount importance for parapsychology.

Thus in a two-dimensional world the body of a sphere (a superior element) traversing a plane gives a circle which, from a tiny point, proceeds as it grows in time, to a maximum diameter, then decreases and disappears. This passage creates temporarily (for inhabitants of such a world) a group of incomprehensible but strictly natural phenomena of energy. In *our* world, vegetable and animal phenotypes, like human biotypes, belong to the three-dimensional soma which possesses space in which the individual is born, lives and dies. Only in that portion of time called the present can the

phenomena of segmented space be apprehended. The section of the four-dimensional world by the three-dimensional world produces the somatic individual in the present; that part of the four-dimensional body which has already passed through is in the past; that which is yet to pass is in the future.

The scientific study of parapsychological phenomena requires strictly controlled statistical and experimental data, but their terms of reference and process must be located in a cosmogenetic frame. In the study of different spaces we should recall Hornell Hart's thesis that a determined space must be the result of the crossing of two spaces involving an extra dimension. We must consider life and thought in themselves as realized only in a world of four dimensions. In a fifth time, the four-dimensional world appears to be due to the crossing of two five-dimensional worlds.

We must regard parapsychological phenomena as being realized in a five-dimensional world, with psychological phenomena not opposed to, but as a part of, parapsychological phenomena.

Hart suggests that intersections of four-dimensional objects within five-dimensional continuums provide a starting point for understanding of psychical phenomena. He has, for example, studied many apparitions, both of the living and of the dead. There are instances of unstable intersections, with different contacts in different cases. The apparition may be as real as the actual presence, apparently solid but transcending bodily limitations. It passes through closed doors, walls and floors.

Possibly, apparitions and all parapsychological phenomena may be contacts rather than intersections of four-dimensional entities in a fifth dimension.

Hart shows that the sensory-motor world is only a particular example of spatio-temporal structure within the five-dimensional continuum. We agree that the "beyond" of death would be but a beyond of the laws of this world, yet real while remaining natural. In these perspectives the old dilemma: *the material versus the spiritual* ceases to have any meaning.

PARAPSYCHOLOGY IN NATURE

RENÉ SUDRE (*France*)

Parapsychological phenomena are usually considered as being *human*, related to subjects acting spontaneously or under accepted suggestion.

Experience reveals, however, that paranormal phenomena can be associated with superior animals. For thirty years I have thought that they are associated with the whole of nature.

Contrary to Myers' doctrine I maintain that what is wrongly called the "sixth sense" is a remote survival from geological times when the nervous system had not yet acquired the fine specialization now found in the human brain. I was anxious to know whether paranormal phenomena have counterparts in the established sciences, particularly the natural sciences.

The most significant results came from three sciences: biology, psychology and sociology (physics being excluded, since it is but a mathematical picture).

In biology, there has been a revolution. Clear-sighted biologists re-read Claude Bernard and no longer believe that the "directing idea," "the legislative force" of life-phenomena can be pushed aside. The greatest French biologist, the late Lucien Cuenot, rehabilitated the principle of finality, exposed the insufficiencies and even absurdities of mechanistic interpretations. Genetics has felt the impact of new observations. The doctrine of evolution becomes impregnated with finality and our great Lamarck is back in honor again.

Obscure points in Lamarck become clear when parapsychological facts are admitted. How, otherwise, can mimicry, pollination of flowers or the sense of orientation of animals, etc.

be explained? How else explain the "convergence" which causes similar organic implements to appear in completely different species, so that, without proceeding from each other, they suggest renewed attempts by nature to realize an identical result in periods divided by hundreds of millions of years? The simple instincts of animals and plants suggest an original "psychism" solidified into an automatism leaving a fringe of intelligence necessary to individual behavior.

Psychology is frankly oriented toward parapsychology, since research in the depths of the mind will soon reveal the paranormal. Among so many disclosures of the unconscious what I have called "prosopopeia" (personification), the generator of spiritual phenomena, is re-established in importance.

Finally, modern sociology against its will has done a service to parapsychology by laying stress on the objective character of certain social phenomena which cannot be considered a mere total of individual phenomena. For Durkheim there is a social reality existing by laws which cannot be changed by individual will. A society is a new being which is more than an "arithmetical product"—a completely novel, unforeseeable combination.

Similarity to parapsychological phenomena is particularly striking. When persons gather for a seance, a "symbiosis" appears. Revelations made by the subject in the unconscious or semiconscious state always borrow something from the conscious or unconscious of those present. Sociology and biology both confirm undeniable parapsychological characteristics. There is a soul of the hive or the termitary. A new entity emerges from association of individuals and rules their behavior.

Such, very briefly sketched, are the trends of modern science of the living and its approaches toward parapsychology. More effort here and there, and the junction will have been made—provided we remain on firm scientific ground.

PSYCHOSCOPIC EXPERIMENTS ON BEHALF OF THE POLICE

W. H. C. TENHAEFF (*The Netherlands*)

Since ancient times, "sensitives" have been consulted by those who have lost property and by agents of the law in search of solutions to crime. Reports indicate that results were sometimes strikingly favorable.

In the Netherlands the police, under certain circumstances, call on sensitives for help. The aid of a sensitive, Mr. Croiset, has often been asked since 1946. I have numerous reports of these experiments upon behalf of the law, since a majority of the sittings took place under my guidance. Instances in which Mr. Croiset has been successful include:

1. *Tracing of missing objects.* For example, in the District Court at Leeuwarden a portfolio of documents was unaccountably missing. Mr. Croiset, upon being asked for help, told the Court's President exactly where the papers would be found two floors above, and described both the papers and the spot.

2. *Tracing missing persons still alive.* Mr. Croiset is a man of feeling and those who ask about a missing child or adult seldom appeal in vain. There have been many striking successes. Often he gets "impressions" during the first queries over the phone, when there are no extraneous influences.

3. *Information about lost persons who are dead.* Even where missing persons are, unknown to the inquirers, already dead, Mr. Croiset often obtains "impressions" including events related to the death. He has described places and conditions surrounding the bodies, all confirmed by later evidence.

Sometimes, however, one or two details extraneous to the scene will be included in his "impressions"—which can be traced to possible ideas in the minds of those who have first called on him to help and are thus a part of the parapsychologic *res gestae*.

4. *Information given about crimes.* For example, on Nov. 10, 1952, I showed Mr. Croiset a photo of a man. I did not tell him the man was suspected of fraud and coffee-smuggling. He stated ten separate, definite facts about this man, mentioning two associates in two other cities. He identified coffee smuggling and indicated other smuggling not at the time known to me or the police, but later verified. He identified a photo of one accomplice, and told where he lived. The only statement not subsequently confirmed, but not disproved, was a description of a certain hiding-place of the smugglers which he described minutely but could not locate.

There have also been numerous cases in which Mr. Croiset has not been successful so far as the police are concerned, yet in which his impressions are of intense interest to the parapsychologist. In such cases, some of the sensitive's impressions can be traced to their sources and verified as truly received from other minds thinking about the same problem, but themselves in error as to the facts. So that what is a failure so far as the police are concerned may be a parapsychologic success. In other cases, Mr. Croiset has "seen" in a fragmentary vision certain happenings which, while true in themselves, and later verified, have led him to erroneous conclusions as to their meaning or results.

Yet in such cases demonstration of retrocognition is clear. Sometimes existence of extraneous influences has clouded the pictures he receives. Sometimes fatigue interferes. Sometimes positive declarations by those presumed to be in a position to know that this or that could not be true breaks off reception of his impressions. Sometimes his own emotional unwillingness to believe that tragedy has struck blocks his willingness to receive such distasteful impressions.

Yet it is clear that Mr. Croiset has been of immense assistance to the law. And even in cases where the police have not been aided, there have been verifiable evidences of the existence of parapsychological phenomena.

ANTAGONISM IN MENTAL IMAGES AND THE PROBLEM OF PSI-MISSING

RENÉ WARCOLLIER (*France*)

This report discusses the problem raised by Dr. Rhine as to whether Psi-missing is a normal and conscious function of inversion. The author begins by presenting instances of Psi-missing through his own introspective observations of hypnagogic states, to determine to what extent he can influence these images by his conscious will. His conclusion is that the more his state of consciousness approaches the ordinary waking state, the more his will can influence these images in the direction he desires.

Conversely, the more his mental state approaches sleep, the more ineffective his will is. This inhibition often amounts to what seems to be a definite trend of opposition and intentional resistance, which may lead to a double or split personality, providing the images of inanimate objects with independent activity not subject to willful manipulation.

Similar observations by others, cited in this paper, offer evidence confirming these conclusions. It is maintained that since conscious activity is essentially concerned with memories and visual images, it cannot master the tactile and muscular that encroach upon these. There is agreement with Mrs. Upton Sinclair that the state favorable to ESP is one that is slightly different from, but very close to, the waking state. Inversely, the effort of concentrating the attention on the visual centers removes one slightly from the waking state.

Examples, resumé, and some experimentation dealing with phenomena of inhibition and the transition to inversion in dreams, inversion in hypnagogic images, quoted from Have-

lock Ellis, George Russel and others, are presented. Certain experimentation in influencing dreams, published by Hervey St. Denis, are summarized; persons who have succeeded in influencing their dreams are considered very rare. A distinction is made between memories and mental images in the waking state: memory images are vague and subject to conscious will; mental images can have a semi-hallucinatory character and are subject to will only in rare instances.

Theories related to the above data are discussed. Analogies to the phenomenon of inversion and inhibition in mental states in the field of physics and physiology are noted as significant. In the psychological field, the striking fact of the two poles of psychological life is discussed, e.g., affectivity and thinking, emotion and conscious awareness; the conscious and the unconscious.

Examples of inversion in art, psychiatry, mediumship and parapsychology are mentioned briefly. The data of this report confirm Dr. Rhine's suggestion that Psi-missing is not a specifically parapsychological phenomena, since it also seems to have psychological, physiological and even physical components. Havelock Ellis once remarked that dream processes might give a clue to the metaphysical and even physical problems of our thoughts in a waking state. This suggests why, in ESP phenomena, subjects do well in certain mental states and badly in others.

A NEW TEST FOR STUDYING THE PSI-MISSING PROBLEM IN ESP

RENÉ WARCOLLIER (*France*)

Psi-missing appears to be not an exclusively parapsychological phenomenon, but seems also psychological, physiological and even physical. Low scores often reached with Zener cards may often result from preferences or aversions felt by the subjects toward one or more of the figures. If such preferences are of a subconscious nature, observations made in BM tests can also be made in OM, DT or STM tests.

To eliminate emotional content from images, we have created a test constituted of a series of similar but slightly varying figures.* All are visible to the subject constantly, in heterogeneous sequence. He does not realize exactly which of them he crosses out, so that the process remains unconscious. One stimulus is used, as compared with five in the Zener cards. This test was intended to determine whether ESP is an accumulative process: whether repetition of the same stimulus in eight lines manifests itself by an accumulation of hits at the end of the test. The subjects are told only that they will be submitted to a psychological test, with no mention of telepathy.

The stimuli of this "crossing" test, although apparently similar, are evidently not so for the unconscious or subconscious, which is affected by the rest of the figure. Use of a single symbol seems to exclude pre- and post-cognition, since there is no accumulation of hits at the beginning or ending of the test, but quite the contrary. Not informing the subjects

* "A Proposed Constellation Test for Group Experiments" (*The Journal of the American Society for Psychological Research*, vol. XLIII, no. 9, 1949).

that they are being examined for ESP is unfavorable, since directing the subject's thoughts toward the stimulus or the agent is an indispensable condition. And the ease with which group trials can be made rapidly fails to demonstrate "poly-psychism."

Consciousness can undoubtedly prevent the working of subconscious activities, including the supernormal. Gardner Murphy has rightly observed that it is in dreams, hypnosis and automatism that the paranormal appears because normal inhibitive functions have disappeared. But what is true in deep sleep is not true for intermediate states. In certain states the subconscious opposes conscious activities, and may oppose the supernormal. Yet in certain passive moods the separation between the conscious and unconscious states is not clear-cut. This may lead to a mingling of introspective effort and imaginative projection. Subtle fluctuations in states of consciousness between waking and waking-sleep are sufficient to influence ESP favorably or unfavorably. We think that differences in card-results, according to elapsed time between presentation of the stimulus and the answer, are related to these states of passivity. Extroverts are more aware than introverts and "well adjusted goats" are better than ill-adjusted ones. If the latter show negative deviations it is due to conscious desire, just as the "well adjusted sheep" show positive deviations.

There is on the one hand a complex of antitheses in our unconscious, and on the other hand a parallelism between mental states and physiological conditions of the brain. We hope the latter may be measured by the electroencephalograph. We agree with what Dr. Rhine said in 1934: that there is a relation between negative tendencies and relaxation.

A PLEA FOR THE INTRODUCTION OF EDMUND
HUSSERL'S PHENOMENOLOGICAL METHODS
INTO PARAPSYCHOLOGY

GERDA WALTHER (*Germany*)

This method was developed by the eminent German (born Austrian) philosopher Edmund Husserl (1859-1938) in his *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie* (1913). It is essentially a gnoseological method, characterized by two fundamental steps: (1) the so-called eidetic reduction; (2) the phenomenological reduction properly speaking.

1. By the eidetic reduction everything is reduced to its essential, irreducible content, quite independent of its genesis in the outer world, its existence, etc. E.g., Tyrrell's classical analysis of apparitions, H. H. Price's investigation of the "Idea of Another World" would be such an eidetic investigation. According to Husserl, by this method we can establish many kinds of so-called regional ontologies, containing the fundamentals of all kinds of sciences.

2. In the phenomenological reduction every "object" in the widest sense of the word is reduced to a mere phenomenon, given-ness for consciousness. According to Husserl, each kind of object essentially demands a special kind of consciousness in which it presents itself in the most adequate and original manner. It is one of the aims of phenomenology to find this optimal kind of experience for each object according to the regional ontology to which it belongs. (Such objects are not only outer, sensual objects; they may be anything whatever: mathematical objects, sociological-psychological, parapsychological objects, etc.)

Also, consciousness for Husserl is not a specific human con-

sciousness, but consciousness as such, "pure" consciousness; its laws accordingly must be valid for any consciousness as far as the same object is concerned. Consciousness is characterized by what Husserl calls intentionality, the way in which any givenness is meant by, represented to, known by consciousness. (Husserl thinks it is fundamentally wrong to say anything is "imaged" by consciousness.) We have to distinguish in this intentionality the objective and the mental side of experience of any kind. The mental side Husserl calls *noesis* (e.g., the vivacity, sharpness, emotional value of an experience), the objective side *noema* (the same object e.g., may be given in original self-representation, as memory, merely meaning it in an "empty conception without fulfilment," etc.). In a reflexive perception (being an immanent internal perception) the *noesis* of the different kinds of experience of all sorts of objects must be investigated. (This is as important for the mental side of consciousness as is the development of regional ontologies for the constitution of the fundamentals of all sciences.) It is of paramount importance to establish the best way of original self-presentation for any kind of object.

This also is of the greatest importance for parapsychology and its phenomena. As an example a phenomenological analysis of telepathy was attempted. It was shown that telepathy is the most adequate and original experience of the "other mind," "giving" it as adequately as "own" experiences of the subject. This is important, as in gnoseology empathy was regarded as the only way of attaining cognition of the other mind. Telepathy is the original experience of the other subject, its moods, emotions, thoughts, etc. It must not be limited to the cognition of the contents of the sender's consciousness (i.e., to mere thought-transference). In telepathy the "atmosphere" of the sender permeates the experience transferred; that is how the "receiver" can know from whom it comes. This is an essential feature of telepathy. Such analyses must be carried on and also applied to other psychic phenomena. Combined with the other methods employed, it may prove very fertile in future parapsychological investigation.

WORKING GROUP D
(Personality of the Sensitive)

Chairmen:

W. H. C. TENHAEFF
JOHN BJÖRKHEM
WILLIAM MACKENZIE

METHODICAL SENSUALISM AND PARAPSYCHOLOGY

SVEN KROHN (*Finland*)

Gabriel Marcel reports that what we consider proof of an empirical theory depends partly on a convention. The same view is expressed by the Finnish philosopher Erik Ahlman. Likewise I have shown that methodical sensualism, which empirical science assumes, actually incorporates a conventional moment, and that the method of parapsychology accepts this. Parapsychology, however, differs in that though it accepts proof through so-called "common" sense modalities, it also regards parapsychic facts in their cognitive aspect as objectively self-validating. The premises of methodical sensualism lie "embedded" in the maxim: *Nihil est in intellectu quod non antea fuerit in sensu*. If by *in sensu* sense-modalities are understood, then this thesis becomes negated by the fact of ESP. The proved fact is that there exists, outside the sense-modalities, genuine knowledge of individual facts beyond the limits of these modalities, such as a telepathic connection between two friends which did not cease with the death of one.

To decide whether a perception can claim validity, independent of the senses, we recall analyses of ESP situations proving that phenomenological criteria exist, enabling percipients to distinguish sources of genuine perception from other products of the mind.

Concurrently, it must be observed that investigation employing these perceptions as criteria for determining the objectivity of their results is no longer parapsychology. For parapsychology is still bound by the requirements of methodical sensualism, while their absolute validity is thus negated.

Parapsychology, because of this basic negation, has deviated from the epistemological approach. This deviation I call "Copernican." Now parapsychology implies a "Copernican" revolution, and steals from the system of the world of sensory perception the position of center of our empirical knowledge. Parapsychology, therefore, will become a paradox of the most difficult kind for those who see the methodical sensualistic approach not as a mere working hypothesis of relative value, but who consider it absolutely essential to every cognition—a paradox which should not exist in the first place!

Marcel and Professor Shaefer indicated further that there is a methodical demand for scientific evaluation of research results still stronger than the demands of methodical sensualism. This consists in repeatable verification required by the natural sciences. Their claim, when it is raised to the rank of an epistemological hypothesis, will meet quantitative parapsychology half-way, and most certainly herald a new epoch in the parapsychological field. Yet to the representatives of natural science and its classical method the paradoxical element in parapsychology will be increased rather than diminished.

THE EXPLORATION OF ESP AND HUMAN PERSONALITY

J. FRASER NICOL AND BETTY M. HUMPHREY (*U.S.A.*)

The purpose of the research abridged in this report was to explore the connection between the functioning of ESP and a wide range of personality factors. Questionnaires devised by Guilford, by Guilford and Martin, by R. B. Cattell and by Cason were used for the personality assessment. For the ESP side of the study, two types of clairvoyance tests were used for each subject: (1) "Unknown" Runs in which the subject was informed of his success or failure only at the end of each test, and (2) "Known" Runs, in which the subject was shown the actual target card after each guess.

Taken as a whole, the pooled results showed no evidence of ESP. However, when ESP was correlated to personality characteristics, there was evidence that ESP ability was significantly related to at least 8 factors. The most striking of these was Guilford and Martin's Factor I, Self-Confidence. The confident subjects tended to score at a higher level in the ESP tests than the non-confident. The non-confident people began almost as successfully as the confident ones, but their success was short-lived and these subjects declined in their scores.

A second factor was Cattell's factor of Emotional Stability. It was also significantly correlated with the total ESP scores. In general, the more stable a subject's emotions, the higher his ESP score tended to be.

The two factors of Self-Confidence and Emotional Stability were also treated in conjunction with each other, using the technique of multiple correlation. It was found that the group of subjects who were both confident and stable gave higher

ESP averages than those given by either the stable or confident groups alone. Similarly, those subjects who were both unconfident and "unstable" gave a lower ESP average than that of either the unconfident or "unstable" groups alone.

These results add evidence to previous research that the mere absence of a high or low total score does not permit the conclusion that ESP is not functioning. In fact, the authors believe in the likelihood that ESP is always present.

The remainder of the paper discussed the advantages of further experimentation along the lines of this research. It was pointed out that short experimental sessions with few ESP runs are of little use, that better results come from working with subjects singly rather than in groups and that the present type of experimentation has great promise.

PERSONALITY TESTS AND ESP SCORES WITH COLLEGE CLASSES

GERTRUDE R. SCHMEIDLER (*U.S.A.*)

Defining as "sheep" those who believe in the possibility of paranormal processes, and as "goats" those who do not, we find that sheep tend to higher ESP scores than goats. There are many individual exceptions. These two facts conjointly lead to two broad hypotheses about ESP functioning: (1) Attitude toward the experiment helps determine ESP success; (2) Attitudes other than the sheep-goat dichotomy are operative. Further research was directed toward testing these hypotheses, and determining some of the other operative attitudes.

The first to be studied was general social adjustment. After preliminary research and observation, we stated that subjects whose social adjustment was good were more likely to be concerned with their instructions. Thus they would be more likely to score as predicted: the sheep above chance expectation, and the goats at or below chance expectation. This was confirmed in later tests, using the Rorschach as the measure of adjustment. Results with over one thousand subjects were highly significant.

For subjects with poor adjustment, we stated that their reactions to the experiment were more likely to be idiosyncratic. Three corollaries are: (1) If the idiosyncracies of certain poorly adjusted subjects are known, their ESP scores can be predicted. (2) The group as a whole will be highly variable. (3) Positive and negative tendencies are likely to cancel out, so that *average* scores will be near chance expectation. The second of these predictions was confirmed by Nicol and

Humphrey, using our data, who found the variance between subjects in the poorly adjusted group to be significantly high. The third prediction was confirmed by our results, where group averages of poorly adjusted sheep or goats were near mean chance expectation. The first has been explored in only a few cases, which so far seem consistent with it.

Preliminary tests indicated that extrapunitive (aggressive) subjects tended to have ESP scores below chance expectation, while subjects who were impunitive (tolerant, easy-going, glad to make the best of a bad situation) tended to score above chance expectation. Later tests showed these tendencies to be statistically significant, and to be particularly pertinent for those subjects who were moderately annoyed by the experimental situation.

On ESP runs where subjects reported that they had been relaxed while making their responses, the mean ESP scores were significantly high. Further investigation of the sheep-goat dichotomy, which is based on intellectual attitude toward the ESP task, showed that it was particularly relevant for the subjects who valued being consistent on intellectual questions, but that it had little relevance for other subjects.

Thus our general conclusion is that, if you study your subjects so carefully that you know how they feel about the ESP responses they are making, and if you then separate out the ESP responses made while the subjects were interested, cooperative and relaxed, you will probably find the average score to be above chance expectation. If you separate out the ESP responses made while the subjects were feeling aggressive and hostile to the ESP situation, you will probably find those responses below average chance expectation.

PSYCHODIAGNOSTIC EXAMINATION OF SENSITIVES

W. D. RASCH (*Germany*)

The Freiburg Institute for Borderline Areas of Psychology and Mental Hygiene conducts qualitative research on paranormal gifts and achievements, concentrating mainly on two groups of persons:

- a) Persons with spontaneous parapsychical experiences, and
- b) Genuine sensitives, who have become publicly known as a result of their giftedness.

To study the relationship between personality structure and paranormal giftedness, psychodiagnostic examinations of both groups of persons were made:

Thirty-nine handwritings of persons with spontaneous parapsychical experiences were analyzed, and in addition the handwritings of eight sensitive subjects. Along empirical lines, these broke down into the following groups:

1. Unstable-Dissociative Personality Structures (with a tendency to extroversion or consolidation).
2. Emotionally impressionable, lively personality structures.
3. Sensitive-tense personality structures (introverted-stabilized or heightened susceptibility to stimuli and disturbing influences from the outside).

The thirty-nine handwritings whose authors had spontaneous parapsychical experiences were fairly evenly distributed among these three groups—in other words, the distribution here lies within the domain of the accidental. The handwriting specimens of the eight sensitive subjects, however, showed an affinity with the extreme types of the unstable-extroverted personality structures, and in two cases with the highly susceptible and easily disturbed types as well. Of these eight sensitive

subjects, six could be examined by means of the Rorschach or Zulliger Tests.

The so-called experience type (*Erlebnistyp*) and the form- or form-plus percentage gave particularly striking results. The experience types showed as a rule a strong predominance of color values in contrast to the number of the movement responses—that is, a strong extrovert tendency. In connection with the generally low form- or form-plus percentage, the sensitive subjects proved to be predominantly lively, outgoing, reproductive, and emotionally unstable personalities. These Rorschach Test results were similarly confirmed also in the four other sensitive subjects mentioned above.

A comparison with Dr. Gertrude Schmeidler's researches corroborated her finding that strongly repressed and hemmed-in personalities apparently cannot point to any good paranormal achievements. Dull, unresponsive natures, impoverished in their inner and outer life, were not found either in the Rorschach tests or in the handwriting examination. The type of the "dilated-ambiequal subject" (easily moved and highly adaptable), which Dr. Schmeidler in her Rorschach tests considers to be predominant among persons with good ESP results, has not been found to be noticeably numerous in the Freiburg data—which is still of course highly limited in scope. We might be able to relate these differing results to the different groups of subjects and the varying social fields in which they have brought their paranormal ability to fruition.

In Schmeidler's research, it is a question of a group that turned out to be paranormally gifted under quantitative-experimental conditions. Our work involves persons with spontaneous parapsychical experiences and sensitive subjects proper. Both lines of inquiry ought to be pursued further and the results compared.

Qualitative psychological analysis seems to us of great value in examining individual parapsychical gifts and achievements. It offers insights into the manner in which paranormal powers function and their integration in the total personality.

ELECTRO-ENCEPHALOGRAPHY OF METAPSYCHICAL STATES (TRANCE)

ORLANDO CANAVESIO (*Argentina*)

The Electro-Encephalogram (EEG) represents the recording of the electric activity of the human brain, and especially of the cortex. Early work in the measuring of such activity with regard to persons in a metapsychical state (trance) were undertaken in 1939 by Dr. H. L. Franke, neuropsychiatrist (Haarlem, Holland) and Engineer J. L. Koopman (Amsterdam). Their findings were reported in the *Revue Metapsychique* under the title "The Functioning of the Human Brain during Metapsychical Phenomena."

The two subjects under study went into a sleep of somnambulistic type through auto-hypnosis. One of them revealed artistic gifts: he painted pictures during this state, something which he never did when awake (artistic pseudometagnosis). The other person went into a state of deep trance, but positive metagnostic results were not recorded. The characteristics of these experiments were slow rhythm and high voltage.

At the outset of their article, the authors explained that they had no intention of considering whether metapsychic phenomena exist or not, which may be regarded as a fundamental error in plan, since they proposed to study phenomena of this kind. Secondly, they did not record the electric activity of the brain during the metapsychical state, since they recorded only secondary stages of somnambulistic types from which it is impossible to obtain positive results of extra-sensory perception.

We carried out our first electro-encephalographic recording on Nov. 11, 1942, in Santa Lucia Hospital in Buenos Aires,

on the person of the sensitive Mr. Eric Courtenay N. Luck. The experiment was witnessed by Dr. Ramon Carrillo, Argentine Minister of Public Health.

The sensitive was seated or lying down, resting, eyes closed, muscles relaxed, mind calm, etc. The experimenter then told him to go into his usual metapsychic state, which varies in each subject as to duration, quality and depth. The sensitive lifted his finger to indicate the moment when he believed his trance state had ended, and described his reactions.

One cannot always specify this point exactly for three main reasons: 1) because a sensitive sometimes comes out of the trance state into semi-consciousness; 2) because the images do not take shape rapidly; 3) because these stages are not always sharply defined. The results obtained from each experiment were almost entirely positive. This was important, as it suggested that the metapsychic faculty's action set up an electric activity with sharply individualized characteristics.

RESOLUTIONS

Adopted by the First International Conference of
Parapsychological Studies

I. Resolution of Thanks

The members of this Conference share a tremendous burden of gratitude, which no formal resolution can adequately relieve. Collectively we have attended many hundreds of Conferences, but the occasion is rare, indeed, when we encounter either such hospitality, or such efficiency, or such generosity, or such a combination of achievement with enjoyment. On this occasion, these have all been united in the most remarkable and felicitous way and it has troubled us all throughout the period of this Conference that there is no obvious means by which we can repay these outstanding contributions. Perhaps we may hope that those to whom we now offer our thanks will feel best repaid in the knowledge of a joint achievement, and our individual determination that we shall in the future seek to justify the faith in us, which is implied by our presence here.

We therefore resolve that our thanks be placed on record, first to Mrs. Garrett, the Honorable Mrs. Bolton and the Parapsychology Foundation, to whose inspiration and extraordinary generosity the whole of this farsighted enterprise is entirely due; secondly, to the Director of the Foundation, Dr. Michel Pobers, whose unlimited energy and diplomacy have been our universal envy; to Mr. Zorab, who has worked extremely hard in the most unassuming and unselfish way to help us, and finally the Dutch Reception Committee, headed most efficiently by Dr. Fischer, who has made us all so welcome here in this beautiful country, and in the town whose

University has set a courageous example, which it will be our aim to make the general rule.

II. *Five Year Plan*

The International Advisory Committee on Future Projects met three times and discussed both immediate and long range problems in the field of parapsychology. It also heard brief reports about parapsychology and parapsychological research in the different countries. The most inspiring meeting of the group took place on Sunday morning August 2nd, when all the members were deeply moved and impressed by a statement of Mrs. Eileen Garrett, the President of the Parapsychology Foundation. She developed the prospects of a five year plan of continuous support and interest in parapsychological research by the Parapsychology Foundation.

Dr. Fischer reported Mrs. Garrett's moving address to the joint meeting of the Executive Committee and the International Advisory Committee at lunch on Monday August 3rd. It was the unanimous view of all the members of both Committees that Mrs. Garrett's vision and willingness to help in terms of a five year program will make of this Conference in Utrecht an event of great historical importance. The members of both Committees are also deeply grateful to Mrs. Garrett for her statement that Dr. Pobers, to whom this Conference owes so much, will be available for several months each year to coordinate the work in the different countries as liaison-officer for the Foundation in Europe. It is hoped that a permanent European headquarters of the Foundation will be possible and it is the feeling of both Committees that Utrecht in the light of its great importance in history and in the field of scholarship, would be the ideal location for such headquarters.

III. *Publications*

It is recommended that Utrecht should remain a center for the publication of the reports of the Conference. It is further

recommended that, if possible, Utrecht become the world headquarters for the publication of works in the field of parapsychology.

Finally it is suggested that the question of publication of the reports and proceedings of the Conference should be referred to a three-man committee consisting of Dr. Osborn, Mr. Zorab and Dr. Pobers. If possible, such Committee should meet in London in the later part of September 1953 and work out a complete plan for submission to the Chairman of the Conference, Dr. Gardner Murphy.

IV. *Follow Up Committee*

It is recommended that there should be organized a Follow Up Committee to consist of Mrs. Garrett, Dr. Murphy, Dr. Fischer and Dr. Pobers and such other persons as they may coopt and that this Follow Up Committee shall remain in existence as a governing body after the conclusion of the Conference and until such time as a further general International Conference is convened.

It is recommended that a Second International Conference of Parapsychological Studies should take place four years from now, also under the auspices of a university, and that in between a few specialized Conferences or symposia should be arranged, notably the following:

a) A Conference on Relations between Parapsychology and other Scientific Disciplines (perhaps to be held at the University of Heidelberg). This should be attended by a small number of leading scientists of different countries in the different branches of the so-called natural and exact sciences, in order to discuss the most promising methods and types of research in future parapsychological studies, with the view of obtaining support for further research.

The calling of this Conference is to be left to the discretion of the Follow Up Committee which will not call the Conference unless it has first established an adequate Planning Committee of distinguished scientists from the fields of the natural and exact sciences.

b) A Conference on Philosophical Interpretations (perhaps to be held in Switzerland under the leadership of Dr. Marcel, Dr. Price and Mr. Gebser).

c) An International Conference on the Investigation and Reporting of Spontaneous Cases, perhaps to be held in London under the leadership of Mr. Salter and his associates of the British Society for Psychical Research, who, it is hoped, will prepare an outline of the subject matter to be considered at that Conference.

It is believed that a number of scholarships and research grants will be indispensable and that an International Scientific Advisory Board should be organized to select and recommend to the Parapsychology Foundation and other interested groups and individuals the beneficiaries of such scholarships and research grants.

It is recommended that there should be appointed a Bibliography Committee to consist of Mr. Scriven and Mr. Zorab, with the assistance of Dr. Frei and Dr. Dingwall.

It is recommended that an International Medical Verification Center with branches in the different countries be set up for the investigation of cases of so-called "unorthodox healings" and that a Committee be appointed to study the ways and means of setting up such a Center. Such Committee should include among others Mrs. Garrett, Dr. Kat, Dr. Urban and Dr. Rose.

It is recommended that a Committee should be appointed to further specific studies in the ethnographical and ethnological aspects of parapsychology. Such a Committee should include among others Dr. Martiny, Prof. Fischer and Mr. Roll.

This Conference notes with interest that a Committee of Psychoanalysts and Psychotherapists will prepare a questionnaire to collect and collate and evaluate observations relating to telepathic incidents, observed in the therapeutic situation. This Committee shall include among others Drs. Ehrenwald, Gillespie and Servadio.

An important purpose of this Conference is to promote

international cooperation by correspondence between those interested in specific problems of psychical research. It is the sense of the Conference that the Follow Up Committee should encourage, facilitate and support individuals and groups of members, who wish to engage in such correspondence in order to share data, to formulate joint standards and to engage in cooperative projects of international research insofar as such projects commend themselves to the judgment of the Follow Up Committee.

STATEMENT REGARDING THE INTERNATIONAL CONGRESSES HELD BETWEEN THE TWO WORLD WARS

At the Utrecht Conference of 1953, so ably organized by the Parapsychology Foundation of New York, we were invited, as three of the persons taking part in that Conference who had also been associated with the series of International Congresses held between the two World Wars, to draw up a statement for publication as to the important part played by these Congresses in laying the foundation for international co-operation in the study of paranormal phenomena. The first of these Congresses was held in Copenhagen in 1921 on the initiative of Mr. Carl Vett. Subsequent Congresses were held at Warsaw in 1923, Paris 1927, Athens 1930, and Oslo 1935.

A considerable number of men and women distinguished in many branches of science and scholarship attended the Congresses and contributed papers to them. Discussion ranged over all the many branches of psychical research. A permanent Committee was set up consisting of Sir Oliver Lodge, Professor Charles Richet, Dr. F. von Schrenck-Notzing, and after the latter's death, Professor Hans Driesch, with Mr. Carl Vett as Organizing Secretary. National Committees were formed in a great number of countries for the purpose of scrutinizing papers originating in those countries that it was proposed to read at the next Congress: the object of this was, so far as was practicable, to keep discussion on a high intellectual level.

Now that, owing to the initiative and generosity of the Parapsychology Foundation, a successful start has been made in reviving international co-operation in this important field of study, after the interruption caused by the second World War, we should like to place on record the debt which we

are sure parapsychologists all over the world would wish to acknowledge to Mr. Carl Vett, of whose continued activity in this subject we are delighted to learn, and to the Societies in Denmark, Poland, France, Greece and Norway for their charming hospitality.

WILLIAM MACKENZIE
(President of Warsaw Congress)

W. H. SALTER
(Copenhagen, Paris, Athens)

Th. WEREIDE.
(Copenhagen, Warsaw, Paris, Athens, Oslo)

FOLLOW-UP CONFERENCES IN FRANCE AND ENGLAND

In accordance with the resolutions of the Utrecht Conference, the Parapsychology Foundation in 1954 organized two International Conferences of Parapsychological Studies at Saint Paul de Vence, Alpes Maritimes, France. The first meeting, "Philosophy and Parapsychology: An International Symposium," lasted from April 20 to 26; the second conference, a "Study Group on Unorthodox Healings," lasted from April 27 to May 1.

Also in accordance with the Utrecht resolutions, the Parapsychology Foundation supported a Conference on Spontaneous Phenomena, organized by the Society for Psychical Research, London, which took place from July 11 to 17, 1955, at Newnham College, Cambridge, England.

The *Proceedings* of these three conferences will be published subsequently; inquiries may be addressed to the Parapsychology Foundation, Inc., 500 Fifth Avenue, New York 36, N. Y.