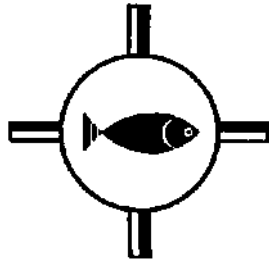


LIBERAL CATHOLIC INSTITUTE OF STUDIES



Unit 18

THE LIBERAL CATHOLIC CHURCH : LITURGY

Paper 1

PARAPSYCHOLOGY: A BRIEF REVIEW

by the Rev Richard W. Brooks

APPENDIX

by the Rev Dr Brian Harding



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UNIT 18

PSYCHOLOGY

by the Rev Richard W. Brooks

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FOREWORD

There are several reasons for the inclusion of a paper on parapsychology (or 'psychical research') in the LCIS course. First, it is an area of scientific research which is gaining increasing attention from the rest of the scientific community; some scientists even feel that findings in parapsychology will result in significant changes in the current scientific world view, sometimes called 'monistic materialism', opening the way for a revolution as dramatic as that of Darwin (evolution) or Einstein (relativity). If so, this would be of great importance to theologians. Liberal Catholics should be aware of this possible revolution and be prepared for it.

More importantly, an understanding of the findings of parapsychology will help us put the so-called 'miracles' of the Bible - healings, thought reading, foreknowledge - into a different perspective as not unique to Jesus or the Old Testament prophets or even to the Judeo-Christian tradition, but as phenomena occurring through all cultures and in all ages of which we have record, including our own. Such understanding may help us to more effectively integrate these phenomena into our lives should they happen to us, and to more wisely counsel others to whom such things come as distressing intrusions into their lives.

Finally, as a study of the history of the LCC indicates, psychic or parapsychological phenomena have played an important role in preparing the way for, and in shaping, the rituals of our Church. It is useful for us to put our Church's background into its broader, contemporary scientific context.

One must, however, exercise caution. This branch of science, like all others, is incomplete. Even from the psychic's point of view, there are many questions left unanswered. Also, the author of this paper is not a C W Leadbeater; he can only convey what he understands of the subject from his study of scientific and theosophic sources. There is bound to be considerable inadequacy of treatment and sizeable areas of ignorance. Therefore, I expect much of this paper to need revision in the years ahead.

Again, it is impossible to give here anything more than a superficial coverage of the enormous range of phenomena encompassed by parapsychology. The earnest student will have to supplement this paper with some reading of his own. Appropriate sources are given at the beginning of each chapter.

This leads to another problem. Selection of an adequate set of readings is difficult. It's bound to be out of date within a few years.

New, better, more up-to-date books are being published every year. Below are listed a few useful books of general interest. Others dealing with specific subjects will be noted at the appropriate places in the text. Especially recommended texts are indicated by an asterisk (*).

GENERAL BIBLIOGRAPHY

Bendit, Phoebe Payne and Bendit, L J (1943; rev 1958). The Psychic Sense. Adyar, TPH. Written by a noted psychic and her psychiatrist husband, both Theosophists.

Hodson, Geoffrey (1930; 1975). Man's Supersensory and Spiritual Powers. TPH. The author was a noted clairvoyant, Theosophist and priest of the LCC.

*Leadbeater, C W (1899; reprinted often). Clairvoyance. Adyar, TPH. This gives the perspective of one of our founding bishops.

*Mitchell, Edgar D and White, John (1974; paper 1976). Psychic Exploration: A Challenge for Science. New York, Putnam. Very large, but inexpensive, compilation of excellent articles by the most noted people in parapsychology. One or two chapters are poor (20, 28) and some are questionable (12, 18, 24, 25, 26) but many are excellent summaries of the state of research at the time of publication.

*Murphy, Gardner (1961; 1979). Challenge of Psychical Research: A Primer of Parapsychology. World Perspectives Series, Voi 26, NY, Harper. A readable survey by one of the three or four greats in the field, stressing spontaneous material, especially evidence for survival.

Randall, John L (1975). Parapsychology and the Nature of Life. London, Souvenir Press. A very readable history of developments in the field, emphasising parapsychology since 1930. It contains an excellent overview of the rise of materialistic science, the reaction to which led to psychical research.

Rogo, D Scott (1975; paper 1976). Parapsychology: A Century of Enquiry. NY, Taplinger. This book contains some factual errors, but it is still a generally useful historical overview.

Wolman, B B (1977). Handbook of Parapsychology. NY, van Nostrand. A large, but expensive, anthology preferred by parapsychologists to the Mitchell-White anthology. Many of the articles are by the same authors in both, but there are fewer questionable articles here - and it includes a contribution on reincarnation research

INTRODUCTION

RECOMMENDED READING

Mitchell, Edgar D and White, John (1974) Op. cit. pp. 17-50

What do we mean by 'parapsychology' and 'psychical research'? It is definitely not the study of all sorts of Odd Things. The prefix 'para-' suggests a study of things currently considered outside the range of contemporary psychology. But that is a very wide range! The inclusion of 'psychology' in the former term and 'psychical' in the latter indicates that the study is confined to those paranormal phenomena which involve human action or interaction in some way. This definition excludes purported 'character reading' techniques such as astrology, or investigation of unexplained objects or forces in nature such as UFOs or 'pyramid power'. These things may be important or interesting in their own right, but they are not properly a part of the usual meaning of 'parapsychology' or 'psychical research'.

'Psychical research' was the earlier term: recently, some scholars have shortened it to 'psychic research'. Whichever one uses, they are usually used quite interchangeably with 'parapsychology'. Sometimes, however, the term 'parapsychology' is used in a more restricted sense and the classification scheme given at the end of this Introduction indicates the phenomena covered by this more restricted usage. This classification, though derived from the literature of parapsychology, is essentially my own.

A similar scheme appears in the Introduction to the Mitchell and White anthology - I discovered it after developing mine.

This paper will cover some of the topics listed in the classification under 'survival research' and most of those listed under 'parapsychology'.

Terms such as 'paranormal' and 'supernormal' are self-explanatory.

They indicate that the phenomena concerned, as far as present day Western culture is concerned, fall outside our daily experience. But these phenomena are most emphatically not supernatural! The term 'supernatural' implies being outside the natural world altogether. Since the natural world is one of lawful regularities, the knowledge of which often enables us to control those natural phenomena, to say something is supernatural means that it is not lawful, not subject to control - and also not the proper subject for scientific enquiry. Science seeks to discover regularities and the laws underlying them; if there were no regularities, there would be no understanding of the phenomena in the usual sense of the term - and no science of those phenomena. Miracles have often been thought by theologians to be God's irregular, non-lawful interference with or intervention into the natural world. Hence miracles are called 'supernatural'. The science of parapsychology, therefore, amounts to an implicit denial that the phenomena it attempts to investigate are in any way 'supernatural' or 'miraculous'. Thus parapsychology is a direct challenge to any theologies which identify psychic phenomena as miracles.

A number of letter abbreviations are widely used in parapsychological writings. For example, 'ESP' is by now familiar to almost everybody; it's used to abbreviate 'extra-sensory perception', a term invented by J B Rhine, the acknowledged founder of modern parapsychology. It may be de-

defined as the ability to get information about the world without the use of normal sensory means and without inferences based on them. Thus, ESP, at least as it is presently conceived, is a paranormal perceptual or noetic (knowing) ability. It is sometimes termed 'paragnosis', especially by Russian and Eastern European scientists.

The corollary to ESP is 'psychokinesis' or 'PK'. This may be defined as a direct mental or psychic influence exerted upon physical objects or processes without any intervention of normal muscular or mechanical activity. Just as ESP is noetic (presumably analogous to normal sense perception), so PK is kinetic (presumably analogous to normal muscular activity). Some US researchers also use the term 'psychophysics' to indicate this overlap between psychology and physics ¹.

The word 'telekinesis' is sometimes used synonymously with psychokinesis. Its literal meaning is merely 'action at a distance'. I have used it as a vague general term to cover a variety of PK phenomena (see classification)

Certain dramatic, paranormal movements of objects have in the past been called 'poltergeist' phenomena. As the German name suggests, they were attributed to a noisy (polter) spirit or ghost (geist). Recent investigations, while not ruling out altogether some discarnate influence, tend to focus upon an incarnate cause or contributory agency. The term 'recurrent spontaneous psychokinesis' was invented to apply to such cases; it is abbreviated to 'RSPK'.

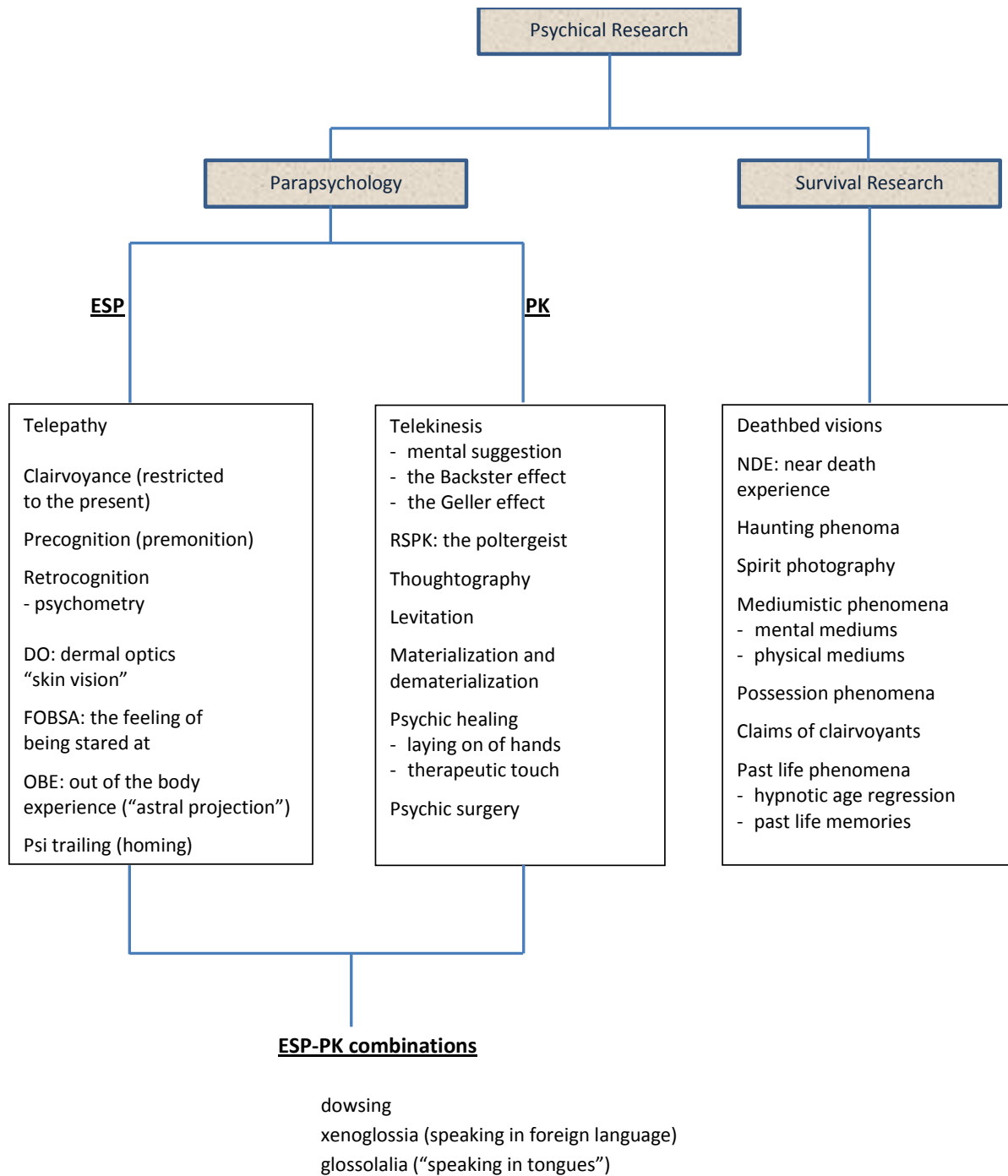
The Greek letter psi (ψ : pronounced 'psee', but usually Anglicized to 'sigh') is used as a general term to include both ESP and PK. It is defined technically as 'a person's extrasensorimotor communication with the environment' (Glossary, Journal of Parapsychology).

'Survival research', as the name implies, involves the investigation of purported evidence for life after (physical body) death, i.e. discarnate persistence of personality. The Greek letter theta (θ), the initial letter of the Greek word for death, thanatos, has recently been introduced to avoid using theologically loaded terms such as 'soul', or occult terms such as 'astral body', which might either mislead or prejudge the interpretation of the phenomena being investigated. Thus one man's 'soul' or 'astral body' becomes another man's 'theta object'. And the occultist's 'astral projection' or 'travelling clairvoyance' becomes an 'OBE' or 'out-of-the-body experience' (also sometimes termed 'ecsomatic experience' or 'bilocation').

The remaining terms listed in the classification are all well enough known as to require no further explanation here. Many of these phenomena are discussed in the following chapters. Not all of them are accepted as genuine phenomena by all researchers. Some, clearly, are far better authenticated by careful experimentation than others. Some may turn out not to be parapsychological phenomena at all. So, again, a warning; the student must consider the evidence and think everything through for himself.

¹ Edgar Mitchell, in his anthology, uses the term 'paraphysics' to denote PK but that term is not generally used by others.

CLASSIFICATION OF PHENOMENA



CHAPTER 1: PRELUDE AND BEGINNINGS

RECOMMENDED READING

Ebon, Martin (1974) A history of parapsychology- In: Mitchell & White, Op. cit. pp. 53-72.
 Reprinted in: Ebon, Martin (1978) The Signet Handbook of Parapsychology.
 New American Library; pp. 17-40

Rogo, D Scott (1975) Op. cit. Chapter 2

THE ANCIENT WORLD

What we now call psi phenomena are mentioned so frequently in the scriptures of the world's principal religions that it would be impossible to discuss them all in a survey such as this. A few comments must suffice.

In Hinduism, the practice of a certain type of advanced yogic meditation, termed samyama, is said to result in a host of psi abilities: telepathy, clairvoyance, clairaudience, precognition, retrocognition, memory of one's past lives, levitation, the ability to render oneself invisible, perfect health and happiness, and many others (see Patanjali's Yoga Sutras, 3:16 - 3:55, 1:40, 2:37 - 2:42). The Buddhist and Jain scriptures also mention many of these in connection with their saints or arhats (lit. worthies, adepts). Interestingly, however, the Buddha abjured his followers not to exhibit such abilities to the people. Note that the **possibility** of such abilities is not questioned but their ultimately value is !

Psi phenomena are a central feature of all so-called primitive religions, too, whether among the tribes of Central Asia (who gave us the term 'shaman', the title of their religious leaders), of Africa, of North and South America (misnamed 'Indians' by Columbus), Australian Aborigines, South Pacific Islanders, or even native Hawaiians (the Hunas). Early Chinese religion abounds with divinatory practices and references to such things as exorcism or 'flying upon the wind' which persist in popular Taoism to this day.

Primitive people obviously accepted and marvelled at these things. But they didn't seek to explain them. That requires a notion of 'natural law' which came much later in Western culture. Even the Greeks, for the most part, didn't attempt an explanation. There are occasional mentions in ancient Greece of tests performed to establish the authenticity of psychics, but no experiments designed to explain the psychics' ability. Classical scholars such as Aristotle (384-322 BCE) and Cicero (106-43 BCE) spoke strongly against oracles and other diviners. They deplored what they considered to be irrational behavior. It was not that Aristotle dismissed the possibility of foreknowledge, but he attributed it to subconscious, reasoned prediction. Thus he consigns all precognitive dreams, for example, either to self-fulfilling prophecies or coincidence (Aristotle: 'On Prophesying by Dreams'). He obviously didn't do a very careful job of observation or he wouldn't have been able to dismiss precognitive dreams so easily. We now recognize the dream state to be especially psi conducive; more spontaneous psi experiences occur in dreams, for the ordinary person, than in any other state of consciousness.

PSI AND CHRISTIANITY

Many references in the Bible to psi phenomena have been discussed by the author at length in a series of articles in the Liberal Catholic (48, 1979; 49, 1980) to which the student is

now referred. Despite all these references, however, both Jews and Christians have been, until recently, loath to undertake an objective investigation of them. There are three reasons for this. First, it would seem to call into question the revelatory character of scripture and the special status of the Old Testament prophets as well as the unique divinity of Jesus. Secondly, both Old and New Testament proscriptions against 'false prophets' (and mediums, necromancers, etc.) fostered a bias that made any dispassionate study difficult. And thirdly, the consignment of all strange, unexpected or paranormal occurrences to the 'supernatural' inhibited objectivity.

Yet the writings of and about early and medieval Catholic saints occasionally contain mention of psi phenomena. Saint Augustine (354-430) observed, in the case of an hysteric who could only be calmed by a certain priest who visited him irregularly, that the man would have paranormal foreknowledge of when the priest was coming. St Thomas Aquinas (1225- 1274) claimed to have seen the apparition of Romanus, a teacher at the University of Paris. St Angela reported in 1540 seeing an apparition of her deceased sister. St Theresa of Avila (1515-1582) was witnessed producing automatic writing during her trances, some of which lasted for several hours; she was also purported to levitate at such times. In 1774, Alfonso di Ligouri (1696-1787) of Arezzo, a week's travel from Rome in those days, claimed that after an arduous fast he 'attended' (presumably by 'travelling clairvoyance') the bedside of the dying Pope Clement XIV in Rome; his description of the deathbed scene was later confirmed as accurate. Probably the most dramatic - and well authenticated - phenomena during this period were the levitations of St Joseph of Copertino (1603-1663), often while he was celebrating the Mass!

Fr. Joseph was canonized in 1667, only four years after his death, following formal procedures developed by Pope Urban VIII in 1634, requiring that the candidate have demonstrable evidence of 'miracles' performed, as well as proof of a holy life. All evidence was carefully examined by a 'Devil's Advocate' to guard against spurious or fraudulent claims.

It was in this context (the attempt to validate miracles) that the Roman Catholic Church became the first organized body of psychical investigators of which we have record. Probably the most important of these early investigators was Prospero Lambertini (1675-1758) who was to become - in 1740 - Pope Benedict XIV and another formulator of canonization legislation. Lambertini was the Vatican's chief investigator of 'miracles' or psychic phenomena. His treatise, De Canonizatione, was for all practical purposes a concise analysis of some of the characteristics of the phenomena he had investigated. Among his observations were the following:

1. Telepathy, clairvoyance, precognition and retrocognition are not an indication of sanctity, for 'fools, idiots, melancholy persons and brute beasts' can have 'knowledge of things to come, things past, present events distant in space and the secret places of the heart'. This accords with Aristotle's view and also that of contemporary research.
2. Apparitions of both the living and the dead occur, but without any relation to either sanctity or demonic entities.
3. Prophecy occurs more often in sleep than in waking (which Aristotle too had observed).
4. Prophets cannot always distinguish between their own thoughts, and 'divine' or extra-sensory messages (a fact well known to modern researchers working with gifted subjects).
5. Predictions often come in symbolic form.

Thus Lambertini had discovered by the early 18th century certain principles about psi which have recently been re-confirmed by contemporary research.

In England a century earlier, the Cambridge Platonist Henry More (1614— 1687) had listed in his Antidote Against Atheism a number of reported phenomena which he thought were free of fraud or delusion, including cases of apparitions, poltergeists and possession. More's disciple, Joseph Glanville (1636-1680), developed a questionnaire which he sent out to those reporting psi phenomena so that he could document and, hopefully, validate their reports. He requested information about the time, place and nature of the event and about the character and 'disinterestedness*' of the witnesses (cf. Glanville, Saducismus Triumphatus, ed. 1966 with intro, by Coleman O. Parsons). Glanville's technique has since been used by psi researchers down to modern times.

All these investigations, however inadequate and sporadic they may have been, must be viewed within the context of Christianity's general attitude towards the paranormal at this time. Persons whom now we would characterize as 'psychic' then were charged with practising 'witchcraft' as the Church attempted to spread its beliefs and influence into previously pagan areas of Europe.

Religious persecution of so-called witches began early in the 14th century and lasted well into the 18th, reaching its peak in the 16th and 17th centuries. Under the Spanish Inquisition, sometimes as many as 100 persons a day were burned at the stake. This was justified by the Biblical injunction: 'Thou shalt not suffer a witch to live' (Ex 22:18; cf. Lev 20:27 and Deut 18:10-11). But accusations of witchcraft were also made merely to get rid of one's enemy or to confiscate a wealthy man's estate.

In the 13th century, the French Inquisition wiped out the Cathars (or Albigensians), a sect descended from Gnosticism and Manichaeism which believed in reincarnation (cf. Arthur Guirdham, The Cathars and Reincarnation). Both Protestants and Catholics shared in this sorry chapter in Christian history, and when the Calvinistically inclined Puritans left England for North America they carried this bigotry with them. It climaxed in the infamous burning of 20 persons as witches at Salem, Massachusetts, in 1692.

The attitude persisted, especially among the less educated people of America, until well into the 19th century. Occasionally one still finds it in the tracts of fundamentalist sects to this day.

Finally, some mention must be made in this section of the remarkable Swedish visionary Emanuel Swedenborg (1688-1772). He is best known for his unorthodox interpretation of Christianity in such works as Arcana Celestia, which still attracts a small but dedicated international following. In addition to his mystic and psychic tendencies, Swedenborg was a man of the world - a scientist and highly respected authority on metallurgy, an occasional lobbyist for political causes, research worker and lecturer on economics. One of the best known and best authenticated of his psychic experiences - his clairvoyant perception of a fire in Stockholm while he was in Göteborg 400 km away - so impressed the German philosopher Immanuel Kant (1724-1804) that he wrote up the account in Dreams of a Spirit Seer and planned a trip to visit Swedenborg for a personal investigation (a plan he later dropped).

MESMERISM

Kant might better have investigated someone considerably closer to home, such as his younger contemporary, the controversial healer, Franz Anton Mesmer (1734-1815). Mesmer, who began practising in Vienna, seems to have derived his ideas from occult and alchemical sources, especially those of Paracelsus (1493-1541), who claimed that the magnet has an occult, curative power in addition to its better known properties. Mesmer treated his patients both with steel mag-

nets and with what were called 'magnetic passes', stroking motions of his hands on or above the patient's skin.

He believed that his cures were effected through the medium of a universal fluid which regulates health and disease.

The medical faculty at Vienna objected to Mesmer's theory and interfered with his practice, so he moved to Paris in 1778. There, the 'magnetic healing' movement got its real start with the publication of his Animal Magnetism the following year. He attracted a vast clientele, so large that he began to treat his patients en masse with a great deal of what can only be called showmanship. In fact, his flamboyant manner makes objective evaluation, especially at this distance in time, difficult.

His technique and the atmosphere he generated occasionally resulted in altered states of consciousness among his patients, termed 'magnetic sleep', though it seems often to have been more hysteric and spasmic than what we now call 'hypnotic'. A feature of this 'magnetic sleep' was that it sometimes evoked psi phenomena - telepathy, clairvoyance, precognition and retro-cognition. Mesmer himself wrote: 'Sometimes, thanks to his inner sense, the somnambulist can distinctly see the past as well as the future' (quoted without source in Ryzl: Parapsychology, A Scientific Approach, p 28; probably from Memolre sur la Decouverte du Magnetism).

Mesmer also stirred up considerable controversy among the scientists and medical profession of his day. In 1784, the report of a French government Commission appointed to investigate him stated that, while there were indeed some paranormal phenomena, most of Mesmer's work was charlatanism. Whatever successful cures did occur were due merely to 'suggestion'; some patients even had adverse reactions. Finally, controlled experiments performed by the Commissioners showed no evidence whatever for any so-called 'magnetic fluid'. Nevertheless, Mesmer continued his successful practice in Paris until it was disrupted by the French Revolution, whereupon he retired to spend the last years of his life near his birthplace near Weil, Austria (now in the Federal Republic of Germany)

Mesmer's many followers carried on his work and spread it to other countries, shifting the emphasis from 'magnetic passes' to 'magnetic sleep'; the latter comes down to us as hypnosis (Gk. Hupnos, sleep). The name change was introduced by the English doctor James Braid (1795-1860) to dissociate the new approach from the theories of Mesmer. In America, Mesmerism gave birth to the Spiritualist movement.

SPIRITUALISM

The phenomena of trance and various trance automatism, now associated with Spiritualism, actually have an extremely long history. So they are not particularly novel. What is significant is that out of the investigation of them grew the science of parapsychology.

It is difficult to trace the complex history of the Spiritualist - or, as I would prefer to call it, Spiritist - movement, and there isn't space here to do so anyway. Just a few relevant events and personages can be mentioned. The first of these would be Andrew Jackson Davis (1826-1910). He was among the people attracted to Mesmerism when it spread to America.

In 1843, when a teenager in Poughkeepsie, New York, he was put into a trance by a local tailor. In this trance, young Davis seemed to acquire both clairvoyance (including clairvoyant medical diagnosis) and an astonishing knowledge of subjects with which he could have had no prior acquaintance. Indeed, up to that time, he had had a total of about five months' school-

ing at different periods of a few weeks each, giving him only a rudimentary literacy. Davis thereafter became a trance lecturer and healer, attracting considerable attention. He also claimed communication with the discarnate, including Swedenborg, whose ideas considerably influenced his own. Unlike later trance mediums, however, he never claimed to speak under the influence of 'controls'.

Davis, through his books, including The Great Harmonia (5 vols, 1880 - 85) and his autobiography The Magic Staff (1885) and its sequel Beyond the Valley (1887), gave Spiritualism a philosophical foundation, which actually preceded the later proliferation of phenomena:

The doctrine, in a word, was that the world beyond is as natural as this world of ours; that it is neither the heaven nor hell of official Christianity; that it is simply this world spiritualised, and that men and women in their psychic bodies are as men and women here in the flesh, but with better opportunities of progress and a far better environment, (from The Harmonial Philosophy by 'a Doctor of Hermetic science', ca. 1920).

Like Mesmer, Davis believed there to be a universal 'fluid' running through all nature, which his anonymous compiler identifies with the 'astral light' of later occultism and which Davis claims to be involved both in psychic perception and the healthy functioning of the physical body (cf. Leadbeater, The Chakras).

Davis' notoriety in his day has long since been eclipsed by those who came after him. The year following the publication of his first book, the Spiritualist movement received its biggest impetus (some say its actual beginning) from the phenomena surrounding three sisters - Leah, Margaretta and Catherine Fox. In March, 1848, three months after the Fox family moved to a tiny wooden house (reputedly haunted) in the village of Hydesville, New York, they began to be disturbed by inexplicable knocks during the night, coming from their one common bedroom. One evening, about two weeks after the onset of the knocking, young Kate, then 12, tried to imitate the sound by snapping her fingers, whereupon the knocks mimicked her tempo. Maggie, then 14, according to her mother's deposition, spoke aloud in sport, 'Now do this just as I do', counting out a series of knocks with her hand.²

These were followed in number by the paranormal raps. Mrs Fox then asked questions aloud, establishing a code, and received knocks as if from an intelligent source, which claimed to be an itinerant salesman who had been murdered by a previous occupant of the house (a charge that was never substantiated).

Word of this rapping spread and launched the careers of the Fox sisters as mediums. The Fox phenomena also established those later commonly associated with the Spiritualist movement: raps, table tilting, materialization of 'spirit faces' or 'spirit hands and arms' and paranormal playing of musical instruments. While most of the Fox sisters' seances were held in the dark, many phenomena were observed under good illumination by several investigating committees composed of reputable and often severely sceptical people. No sign of fraud was detected.

The sisters, not surprisingly, attracted publicity, crowds and imitators. They also attracted the famous, including President and Mrs Abraham Lincoln, and showman P T Barnum who induced them to give exhibitions at his hotel and museum in New York in the spring of 1850. The Spiritualist

² Some modern accounts claim she said, 'Here, Mr Splitfoot, do as I do', but that does not accord with the mother's testimony.

movement was well and truly under way. It spread quickly to England where it first attracted the educated class who were soon inviting their friends over for 'tea and table-tipping'. In France, the most noted medium was Allan Kardec (pseudonym for Hippolite L. D. Rivail) whose books Le Livre des Esprits and Le Livre des Mediums remain popular to this day.

G. K. Nelson in Spiritualism and Society (1969) claims that the movement considerably died down in the US during and after the Civil War, but the evidence does not support his claim. Not only did the Fox sisters continue to perform, but other noted mediums followed in their footsteps, including in particular D. D. Home and the Eddy family.

D. D. HOME

Daniel Dunglas Home (1833-1886) - pronounced 'Hume' - was born in Currie, Scotland, but after the death of his mother, he was sent to the US to be raised by an aunt in Connecticut. It was then that physical disturbances began to occur in his presence: raps and other noises sounded, furniture moved. Investigations were conducted by reputable witnesses who could find no fraud. Then other phenomena began to occur, including levitation, materializations and communication with the discarnate. In the summer of 1855, when Home was but 22, he visited England, producing a variety of phenomena for distinguished people there. A protracted, scientific examination of him was done when Home returned to England in 1856 and resided there for extended periods during the 1860s. Lord Adare, who travelled and lived with Home from 1867 to 1869 made careful notes of all the phenomena he witnessed, publishing them in Experiences in Spiritualism (privately printed in 1870; reprinted as a Proceedings of the SPR in 1926).

On one occasion Home levitated, floated out of a third floor window and into a window of a separate room, and then floated back again!

Between May 1871 and April 1872, Sir William Crookes, already renowned as a physicist, held eleven sittings with Home, thinking that he would thereby expose Spiritualism once and for all as fraudulent. In fact, quite the opposite happened. Home willingly participated in carefully controlled laboratory experiments, some of which were quite similar to recent PK experiments on static objects. Crookes' objective and favorable report (1874) in the Quarterly Journal of Science raised a storm of outrage from his colleagues. Some even tried to expell him from the Royal Society.

Home, unlike most mediums, never accepted any money for his performances. He retired from public life in 1872 and died in Paris after a long illness.

THE EDDY FAMILY

Mysterious voices and other sounds were heard around the cradle of the first-born child of Zephaniah and Julia Eddy who lived on a farm near Chittenden, in the Green Mountains of central Vermont. Mrs Eddy was naturally psychic, but she had concealed this gift from her narrow-minded husband, who shared his neighbors' extreme religious bigotry. He believed such things to be the work of the Devil. However, when he heard of the fame of the Fox sisters, he decided to take financial advantage of his family. He hired the children to showmen for a tour of all the major US cities and a brief visit to London. They suffered not only ridicule, but frequent physical abuse at the hands of committees of sceptics, who often bound them so tightly and unnaturally that they suffered permanent disfigurement. They were beaten, stoned, stabbed and shot at. No fraud was ever detected, however.

After the death of their parents and three of the children, the remaining members of the family, now grown, returned to the farm and beginning in 1874 held daily public seances there, attracting large numbers of people. It was in this context that Henry Steel Olcott (1832-1907), then a successful New York lawyer, went to investigate the phenomena having read about them in a Spiritualist newspaper, the Banner of Light. The results of his careful, often ingeniously contrived, investigation were published in People from the Other World (1875). He reported an amazing range of phenomena, most dramatic of all being 'the production of materialized phantom forms that become visible, tangible and often audible to all persons present' under conditions that seemed to preclude any possibility of fraud. Olcott identified altogether around 400 different 'materialized' figures of varying size, race and costume, who spoke eight different languages, three of which Olcott understood (the Eddys knew only English and spoke it with a distinct 'Vermont provincial' accent).

Olcott was at the farm on the evening of October 14, 1874, when Madame H P Blavatsky (1831-1891) arrived. The two formed a bond of friendship which lasted the rest of their lives and resulted, in 1875, in the formation of the Theosophical Society.

THE FOUNDING OF THE THEOSOPHICAL SOCIETY

After his return to New York, Olcott renewed his contact with Madame Blavatsky. Together they undertook the investigation (and occasional exposure) of other mediums. It also became apparent to Olcott that HPB, as she preferred to be called, was capable of producing remarkable phenomena of her own. But, more importantly, she was interested in the rationale behind these phenomena and the broader philosophical implications they held.

In May, 1875, Olcott attempted to form a 'miracle club' for serious scientific investigation of mediums, but it soon died. Informal discussions about Spiritualist phenomena and their possible explanation, as well as other 'occult' subjects, continued, however, often at Madame Blavatsky's apartment.

At one of these (Sept 7, 1875), Olcott suggested the formation of 'a Society to pursue and promote such occult research'. It met with the approval of those present and Olcott delivered his inaugural address as the elected President on November 17, usually considered to be the foundation day.

Olcott was then 43, Blavatsky 44.

Olcott lectured and Blavatsky wrote considerably during the next three years - Isis Unveiled was published in September, 1877 - attracting new members to the movement. Branches were formed in Bombay and London in 1878. The two co-founders travelled extensively in India and Ceylon for the next five years and it was during these travels (in 1882) that they founded the Society's permanent headquarters at Adyar, a suburb of Madras. The worldwide Society is still active today (see Josephine Ransom: A Short History of the Theosophical Society, 1875-1937, London, TPII).

C W LEADBEATER

The Spiritualist movement was strong in England at this time - as it was elsewhere around the world. Newspaper reports of D D Home's 'seance' with Napoleon III (1808-1873) attracted the attention of a young man named Charles Webster Leadbeater and he determined to experiment with table-tipping himself.³ For this, he enlisted the aid of his mother and 'a small boy of twelve who, as we afterwards discovered, was a powerful physical medium'. The results were startlingly successful, involving not only raps in response to questions and table-tipping, but levitation and gyration of the table around the room so violently that the 'sitters' couldn't keep their hands on it. Other furniture moved, on one occasion so violently that they had to retreat from the room into the hall; lights of at least three different types 'frequently appeared', once leaving a scorch mark on a potted plant. The phenomena seemed to Leadbeater to be animated by an intelligence, but not one of great patience or moral character (see Leadbeater: Spiritualism and Theosophy, 1928; and the Other Side of Death, 1903 and 1928).

Earlier, Leadbeater had personally investigated reports of hauntings and 'second sight'; in fact, as a child he had met the famous occultist Bulwer-Lytton (1803-1873), who visited the fam-

³ It is difficult to date this precisely; Leadbeater's books are notably lacking in dates! It was likely to have been late 1870 or early 1871.

ily home and produced phenomena there. Afterwards, he investigated a number of mediums, often inviting them to his home where he could more easily prevent fraud.

Leadbeater did not lose this interest in Spiritualism and five years after his ordination as an Anglican priest (1878), he was attracted to Theosophical writings. He joined the Society in 1883 (see Leadbeater: How Theosophy Came to Me, 1930). In 1884, he accompanied HPB to India. Then during his residence at Adyar - probably between early June and late August, 1885 - he undertook the yogic training that culminated in his own clairvoyance.

In 1893, Leadbeater began his 'clairvoyant investigations' and he was joined in this work by Mrs Annie Besant in 1895. Many valuable books resulted. He also made lengthy lecture tours of Europe, America, Australia and New Zealand from 1896 to 1906. From mid-1906 to 1908, Leadbeater lived on the Continent - In Brittany, Germany and Sicily - continuing his clairvoyant investigations into occult chemistry and 'nature spirits'. It was during this time, while he was in Sicily, that he first observed the inner or occult effect of the celebration of the Holy Eucharist in a small village church. He later described it in an article published in the Theosophist of September, 1910. This article probably did as much to rekindle the interest of Theosophists in Christianity, particularly in its ceremonial form, as any other single thing. As such, it is an important event in the formation of the Liberal Catholic Church.

CLAIRVOYANCE AND SCIENCE

When one reads the scientific - that is, the reliable, non-sensationalist accounts of psychical research, it is always of investigations of psychics and psi ability. Rarely, if ever, is any credence given to investigations by psychics using psi ability. Yet it is the latter type of investigation - which Leadbeater considered to be quite as scientific as careful, physical sense observation - which is of more direct concern to members of the LCC.

One has only to compare Leadbeater's reports of clairvoyant investigations with the claims of other psychics to realise that he is in a class apart, considerably ahead of his time. Like Andrew Jackson Davis and other Spiritualists, he attempted to shed a completely different light on hitherto purely theological speculations about such things as the nature of man, the Divine, life after death, and the continuing growth of consciousness. But his writings have a depth and objectivity that even the best of the others lack. This may be one reason why his works are still read with profit today. This literature offers quite a different perspective from that of the parapsychologists, limited to inferences made from laboratory data. Yet Leadbeater's ideas must also be placed in the context of this more mundane research to be adequately evaluated. It is to the development of that scientific approach that we must now turn.

CHAPTER 2: THE EARLY HISTORY OF PSYCHICAL RESEARCH

RECOMMENDED READING

Ebon, Martin (1974) - as for Chapter 1

Gauld, Alan (1968) The Founders of Psychical Research. NY, Schocken.

Heywood, Rosalind (1974) Beyond the Reach of Sense. NY, Dutton (originally published in England as the Sixth Sense)

Rogo, D Scott (1975) Op. cit. Chapter 3

Thouless, Robert H (1972) From Anecdote to Experiment in Psychical Research. London, Routledge & Kegan - Chapters 1, 2

THE RISE OF MATERIALISTIC SCIENCE

The 19th century is less remembered now for the Spiritualist Movement than it is for the rise of materialistic science (see Randall, op. cit. Part 1). Science had long challenged the theological notion of 'miracles' as irrational. Darwin's theory of evolution (1858) further challenged the theologians. As the British physicist John Tyndall stated in a widely reported talk given in Belfast to the British Association for the Advancement of Science (1874).

...there grew with the growth of scientific notions, a desire and determination to sweep from the field of theory this mob of gods and demons, and to place natural phenomena on a basis more congruent with themselves.

Attempts had been made in the 18th century to explain all phenomena as merely the result of interactions of particles of matter. This materialism was wedded in the British Isles to a philosophy known as Empiricism, which claimed that we have no legitimate sources of knowledge other than sense perceptions and inferences based on them. In the 19th century, W B Carpenter, Thomas Huxley and W K Clifford all sought to account for biological and psychological processes on the basis of the interaction of inanimate, insentient matter alone.

This explanatory process is now known as 'micro-reductionism'. It is the dominant approach in science today. To accomplish this 'reduction' in psychology, for example, so-called 'mental' events (thoughts, desires, hopes, beliefs, intentions) are characterised as different forms of behavior (i.e. physical body events); behavior is then explained in terms of neural stimulus and response; studies in neurology show that nerve impulses are accompanied (and neurologists generally believe caused) by certain chemical processes; and these in turn can be explained by means of the quantum theory of modern physics. Thought, on this hypothesis, is 'reduced' to the action and interaction of matter. Thus religion, for example, with its belief in non-material entities such as gods and souls will be characterized as a kind of aberrant behavior, incompatible with the truth about the world - even though it may have a certain social utility or 'survival value'. This does, indeed, 'sweep from the field of theory this mob of gods'!

The most convincing refutation of such an hypothesis would be evidence for the existence of phenomena that could not be explained in this micro-reductive, materialistic way, that pointed to the existence of other nonphysical aspects of nature. That is what attracted Colonel Olcott and Madame Blavatsky to the Spiritualist phenomena. That is also what led to the formation of the Society for Psychical Research.

THE SOCIETY FOR PSYCHICAL RESEARCH

The Society for Psychical Research (SPR) was founded on February 20, 1882, by a group of remarkable Englishmen, many of whom were associated with Cambridge University (see Heywood, Chapter 5). The roll of its early members reads like a Who's Who of late 19th century British science and scholarship. Foremost among them were: Professor Henry Sidgwick (1838-1900), a classical scholar and noted moral philosopher who agreed to become the SPR's first President; his wife, Mrs Eleanor Sidgwick (1845-1936), née Balfour, a scholar in her own right whose brother Arthur Balfour (1848-1930) - also an SPR member - later became Prime Minister; F W H Myers (1843-1901), an outstanding classical scholar and student of the natural sciences, psychology, and philosophy who was an avid investigator and author of some of the early classics of psychical research; Edmund Gurney (1847-1888), another classical scholar and brilliant debater, who came to devote himself full-time to investigative and editing work for the SPR; Lord Rayleigh (1842-1919), Cambridge Professor of Experimental Physics; Sir William Crookes (1832-1919), mentioned earlier for his investigation of D D Home; Sir Oliver Lodge (1851-1940), another noted physicist; Frank Podmore (1856-1910), educated in the classics and natural sciences who, despite being an active investigator, remained an arch-sceptic all his life; and Richard Hodgson (1855-1905), an Australian with a doctorate in law from Melbourne University who went to Cambridge in 1878 to study with Sidgwick and became one of the SPR's principal investigators.

From the beginning of 1837, the 'Sidgwick Group' (Henry and Eleanor Sidgwick, Arthur Balfour, Frederic Myers, Edmund Gurney, Lord and Lady Rayleigh, and a few others) dominated the new movement and gave it the cautious scientific character which it retains to this day. These people were drawn together not only because they were all from the same intellectual and social circle - wealthy aristocracy and Fellows of Trinity College, Cambridge - but because, in one way or another, their religious backgrounds and inclinations had been severely challenged both by the findings of materialistic science and by 19th century trends in Bible scholarship. These last took the form of the so-called 'higher criticism' which gradually filtered out of Germany. If Darwin's theory of evolution implied that there had been no 'Fall' (and if no Fall, what was the point of an Atonement?), Biblical criticism cast doubt on the divine inspiration of the Bible.

Darwin, in the Descent of Man (1871), further argued that man's moral sense did not derive from nor depend on religion, but existed simply because of its survival value; had man evolved under different circumstances, he would have had different moral values — so morality is relative, not absolute.

To Sidgwick, a professor of moral philosophy, such a claim was profoundly disturbing. He was too well educated to dismiss the claims of science, yet too good a philosopher and too concerned about morality to accept relativism. He saw in Spiritualism possible support for religion and morality. In his undergraduate days, he had joined the University Ghost Club. The publication of Crookes' experiments with D D Home reawakened his interest in these phenomena. But it was his contact with Frederic Myers that acted as the main impetus and drew Sidgwick into active involvement in psychical research.

Myers also was a deeply religious man and much more emotional than Sidgwick. He too became disillusioned by his scientific studies. He too turned to the phenomena of Spiritualism for support for his intense religious passions - support which would yet be scientifically verifiable.

Many of the early investigations seemed initially evidential only to result in exposure of fraud upon more careful checking. The result of these lengthy - and usually disappointing - experiences was a healthy scepticism about the bone fides of most (if not all) mediums, a familiarity with all the multifarious methods of deception, an acute sensitivity to the psychological processes of misperception and self-deception and a gradual awakening to alternative explanations (to those involving survival) for any genuine phenomena.

The SPR made a useful distinction between 'physical mediums' and 'mental mediums'. The former, such as D D Home, produced what we would now call gross PK effects (table-tipping etc.). The latter purported to act, vocally or in writing, as mediums for communications from the discarnate, usually under the control of some special 'guide' while they were in trance. Only the latter seemed to offer any real hope of proving survival after death. This evidence consisted of two parts: statements relating to a deceased person which could not be normally known by the medium, and actual personation by the medium of speech and behavioral characteristics recognized to be like those of the deceased.

The latter are surely the most convincing aspects of seances with mental mediums. Yet this personation is usually so fragmentary - and often inconsistent - that it led many researchers to wonder whether it really offers any evidence for survival at all. And however evidential (i.e. non-trivial and non-fraudulent) the information content of seances might be, it could usually be explained as 'thought transference' (Myers coined the term 'telepathy' in 1882) or clairvoyance. Increasingly, the SPR turned its attention to experiments on telepathy, although the investigation of certain 'star' mediums continued.

THE HODGSON REPORT

One of the less fortunate affairs in the annals of the SPR was the investigation of Madame Blavatsky and the letters which she asserted were materializations from members of an adept Brotherhood, most especially those known as 'K.H.' (Koot Hoomi or Kutliumi) and 'M' (Morya), later published as the Mahatma Letters to A P Sinnett. It is a complex story which can only be sketched here.

During their visit to England in 1884, HPB, Olcott and other Theosophists had several meetings with members of the SPR. The SPR formed a Committee composed of Myers, Gurney, Podmore and J Herbert Stack to investigate the phenomena which Olcott told them about, especially the letters from the Masters. Initially, reactions were favorable. Then, at an SPR meeting on June 30th, 1884, Olcott seems to have made, unsolicited, a gratuitously intemperate speech which left an unfavorable impression on everyone, particularly some of the Indian Theosophists who considered certain matters too sacred for public discussion.

Meanwhile, as the result of a quarrel with their employer, Madame Blavatsky's housekeepers at Adyar, Alexis and Emma Coulomb, sent certain letters to the Madras Christian College Magazine which were then cabled to the London Times.

HPB was accused of producing her phenomena fraudulently as a cover for her activities as a Russian spy. She wrote letters in defense exposing the Coulomb letters as forgeries and the spy charge as ridiculous. Nevertheless, the SPR decided it would have to make further investigations. Of the ad hoc Committee members, only Gurney, free from professional responsibilities, was a full time researcher, but he was immersed in other important work at the time. So the SPR had to turn outside the Committee to the only other person available - Richard Hodgson, then 29 and at that time quite inexperienced in this sort of work.⁴

Hodgson was an interesting character. Like others, he had been attracted to psychical research as a result of disillusionment with orthodox Christianity. But, as an Australian, he was something of a misfit in the genteel company of the Sidgwick group. Furthermore, although he had a natural kindness and generosity, especially towards children and the bereaved, he was extremely dogmatic and opinionated.

Hodgson arrived in Madras on December 18, 1884, three days before Olcott and HPB. Upon his arrival, Olcott tried to be as helpful as he could, while also making preparations for the Annual Convention to begin in three days. Hodgson stayed on the Adyar estate during twelve busy days, interviewing various Society members most of whom were preoccupied with other concerns.

He then spent the next eleven weeks in Madras to get the Coulombs' side of the story. Before being asked to leave the estate, the Coulombs had produced further material, which Theosophists alleged was also concocted. Whatever the truth of the matter, Hodgson was convinced by this. After his return to England, the SPR discussed his conclusions and published a 200-page report as a Proceedings (1885) 'exposing' Madame Blavatsky as 'a Russian spy', a 'consummate fraud', and 'a woman capable of every and any crime'.

The whole affair is rather tragic. It is obvious that Olcott blundered in being open about sacred things, which those coming from an utterly different background simply could not appreciate. But it can also be argued that the SPR blundered in sending Hodgson to conduct the investigation and then accepting his conclusions without further enquiry. His character was well known and his assessments of other investigations were constantly challenged, especially by Myers. In this case however, Myers accepted Hodgson's assessment completely ⁵

The Hodgson Report continues to poison relations between psychical researchers and the Theosophical Society to this day.

Nevertheless, the SPR investigations of HPB must be seen within the context of its other work. From 1882 to 1892, Myers calculated, SPR researchers travelled some 20,000 miles interviewing witnesses in the UK, France, Germany, Sweden, India and the US. By the end of the century, it had published some 14,000 pages of material. This early work can be divided for convenience into five main headings: investigation of hypnosis and mesmeric trance, paranormal perception (mainly telepathy), physical mediums, mental mediums and apparitions. We will now look briefly at some of these studies.

4 A point is sometimes made in Theosophical literature, unfairly it seems to me, about Hodgson's youth. At this time, Crookes was 52, Sidgwick 46, Lord Rayleigh 42, Myers 41, Mrs Sidgwick 39, Gurney 37 and Podmore 28. Clearly, the two arch-sceptics, Hodgson and Podmore, were quite a bit younger than the others, but they were hardly callow youths.

5 This could indicate, of course, that on this occasion the meticulous Myers was indeed satisfied with the Report - Editor

APPARITIONS

The first major work the SPR undertook, according to G N M Tyrrell (1879- 1952) who later wrote a classic analysis of it, was a 'Census of Hallucinations'. The impetus for this was criticism of Phantasms of the Living (1886), the joint work of Gurney, Myers and Podmore, a psychical research classic giving an account of three years of investigations of reported cases of spontaneous ESP. To undertake the census, a committee was formed in 1889 consisting of Frederic Myers and his brother, Dr A T Myers, Frank Podmore, and Mrs Sidgwick and her secretary, Miss Alice Johnson. The aim was to determine whether the earlier collection of cases was representative and whether the claimed apparitions could be accounted for by chance.

The committee worked for five years, collecting 17,000 replies to a single question: 'Have you ever, when believing yourself to be completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice; which impression, as far as you could discover, was not due to any external physical cause?' They received 15,316 'No' answers and 1684 'Yes'. If the sample was representative, it would mean that almost 10% of the population of England had witnessed an apparition.

The next step was to determine how many of the apparitions coincided with an objective distant event and then calculate whether this correspondence exceeded what would be expected by chance. To do this, the committee selected only those apparitional experiences - termed 'crisis apparitions' - which coincided with the death of the person hallucinated. The proportion of these among the total apparition group was 14.3% (241). The committee then calculated, on the basis of the annual death rate for England and Wales between 1881 and 1890, that the probability that any one person selected at random would die on a given day was about 1 in 19,000. Yet the Census of Hallucinations indicated that apparitions actually occurred in about 270 cases in 19,000.⁶

It certainly appears that the chance hypothesis is at best strained. But an even stronger argument against chance can be given. What had struck Gurney and Myers in their earlier work was that the cases had certain common factors which would be difficult to explain if each case had been separately invented, or if they could all be explained away as merely due to occasional coincidence (see Tyrrell, *op.cit.*).

Do these apparitions offer evidence for survival? On the surface they seem to, but problems arise with that view. Why are apparitions clothed? The most reasonable hypothesis would seem to be that people appear as they envisage themselves. In other words, there is a psychological as well as a spatial component to apparitions. We normally think of ourselves as clothed when appearing before others, so we appear that way even in an OBE or when discarnate. But there are more serious problems. Sometimes the apparition will appear with children or servants, with objects in hand, even riding in a horse-drawn carriage. Those things seem to percipients just as external and substantial as the real objects in the apparition's environment. But surely they are not really discarnate counterparts of objects? And these apparitions often make noises appropriate to their setting (footsteps on stairs, crunch of gravel on the

⁶ This is based on my own calculation, using the percentages given in Heywood, *Beyond the Reach of Sense* (1974). Tyrrell, *Apparitions*,(1953) gives this as 440 in 19,000. In either case, it is considerably beyond chance.

driveway, etc.), yet they leave no traces that should accompany such sounds (footprints, etc.). Doors apparently open, yet when the percipient reaches out towards them, he finds them still shut. And why are apparitions seen by more than one person of a group in only 1/3 of the cases? It would seem that the percipient must play a psychological role in the hallucination as well. And the more one pushes the latter explanation, the more one wonders whether there is **any** discarnate agency behind apparitions at all. Perhaps they are entirely 'telepathic', as Gurney and Tyrrell believed.

Myers felt that there were yet characteristics of these strange hallucinations which precluded an entirely psychological explanation. His theory was that there is a kind of 'meta-etherial' world, non-physical though extended in space, within which the discarnate lives and from which at least **part** of the agency of the apparition comes. Most Liberal Catholics will recognize this as similar to the Theosophical 'astral' world. Myers' extensive, though incomplete, analysis of this question was published posthumously (1903) as Human Personality and its Survival of Bodily Death, another classic in psychical research.

PHYSICAL MEDIUMS

Perhaps the most noted and controversial physical medium investigated by members of the SPR was an ignorant, vulgar, somewhat earthy Italian woman named Eusapia Palladino (1854-1918). Reports from Naples of her dramatic phenomena eventually reached Charles Richet, a French physiologist and later Nobel Laureate. In late 1892, he and some other scientists held a series of sittings with her in Milan, which intrigued him enough for him to arrange for further investigations of her in 1894 on an island he owned off the southern coast of France (Île Roubaud, near Hyères) and later at his chateau at Carqueiranne near Toulon. The sittings at the chateau were not as impressive as the earlier ones had been, yet all investigators were convinced of the genuine paranormality of the phenomena, which were observed under apparently well controlled conditions.

A further examination of Eusapia was then arranged at Cambridge during the summer of 1895 with the Sidgwicks, Myers and his wife, Lodge, Richet, Lord Rayleigh, J J Thomson, Francis Darwin (son of Charles) and others in attendance during some or all of 20 sittings. Again, these sessions were less impressive than either of the previous series, yet one especially interesting observation was made: curious protuberances were noted projecting from Palladino's body during the seance. Both Myers and Miss Johnson had felt paranormal touches. The medium was undressed with Mrs Myers' help but no machinery was found. The seemingly living protuberances, also seen by others, were thus of apparently paranormal origin. Richet coined the word 'ectoplasm' to describe this apparent extrusion of something from the medium.

Hodgson, who was in America at the time of these investigations, was unconvinced. In an attempt to allay his doubts, Sidgwick and Myers cabled him money so that he could join them. He arrived on August 29, 1895, and took part in the 13th to 20th sittings. But in an effort to assist detection of fraud, he made the controls of Palladino as lax as possible. Under these circumstances, the medium cheated: all sitters were able to observe her fraud in action, and came to the conclusion that all the Cambridge series must have involved fraud and imperfect observation. They were then inclined to extend the charge to the previous two sessions in France as well. Richet and Lodge took strong exception and an objective analysis seems to support them. Yet Sidgwick refused further investigation, remarking, 'I cannot see any reason for departing from our deliberate decision to have nothing further to do with any medium whom we might find guilty of intentional and systematic fraud' (quoted in Gauld, *op. cit.* pp. 240-41).

Later sittings were held in Naples in 1909 after the death of Sidgwick, Myers and Hodgson, but during the following year, Eusapia Palladino's powers faded completely.

Two other noted physical mediums investigated in the early years of the 20th century were the German brothers Willi and Rudi Schneider. Their discoverer was the psychiatrist Baron von Schrenk-Notzing, who devised several advances in fraud detection. Willi, who started holding sittings in his early teens, had ectoplasmic (or as Schrenk-Notzing termed it 'teleplasmic') phenomena witnessed by almost 100 scientists under strict conditions in 1921— 1922. Not only were his hands and legs held, but luminous bracelets and pins were used to detect any possible movement in the darkened seance room.

After Willi started university studies his phenomena began to fade and attention turned to Rudi, who had had his first trance phenomena at the age of 11. Schrenk-Notzing devised a chair with a system of electrical contacts to give a more objective record of normal movements, making fraud all but impossible, he felt. However, as a psychiatrist who had studied somnambulism and

cases of multiple and trance personalities, he shied away from a spiritistic explanation of mediumship and rejected altogether any discarnate involvement in mediumistic phenomena.

After Schrenk-Notzing's death, Harry Price (1881-1948) of the British SPR brought Rudi Schneider to London for successful tests (1929-30, 1933) using the Baron's electrical chair. In 1930, Eugene Osty held 90 sittings with Rudi at the Institut Metapsychique in Paris, in which he used infrared photography. The ectoplasm appears in some of these photographs; neither screens, wire mesh, nor electrically charged plates interrupted it, though an increase in the red light level did. By 1932, Rudi's powers were waning and Price claimed to have a photograph in which Rudi's arm is shown free when it was supposedly being held. Although many noted witnesses vigorously protested Price's claim of fraud, current psychical researchers remain ambivalent about the Schneiders as they are about most other physical mediums.

MENTAL MEDIUMS

Mrs Leonora E Piper (1859-1950) was a Boston housewife; her husband was employed in a large store. In sharp contrast to Eusapia Pailadino, she was an undoubted lady and a person of integrity. Her career as a medium began in 1884. Her chief 'control' was a purported French doctor named Phinuit, who spoke in a gruff male voice with a curious mixture of Yankee slang, Frenchisms, Negro patois and vulgarity. Rumours of her phenomena reached William James, who investigated her during 1885-86. Later, the SPR sent Richard Hodgson to continue the work, hoping thereby to expose her.

Hodgson began his investigations as an anonymous sitter in 1887; it seemed completely improbable that Mrs Piper could have obtained any personal information about this unknown newcomer to America by normal means, yet his very first sitting produced striking information about him and his family. This continued for the next 2½ years. It was during this time that Hodgson's attitude gradually underwent conversion. He came to believe in life after death and to accept Spiritualist teachings.

To see whether she could perform as well in a totally unfamiliar environment, Mrs Piper was invited to England in 1889, accompanied by her two children. All potentially helpful information about possible sitters (family Bibles, photo albums, etc.) was kept from her; her mail and baggage were searched. Yet despite these precautions, she achieved some striking successes. However, 'Dr Phinuit' did not emerge as a plausible personality and there was no evidence that he was anything other than a secondary personality of Mrs Piper. Furthermore, although Mrs Piper seemed to have impressive, though irregular, psychic ability, her information didn't unquestionably support the survival hypothesis.

On March 22, 1892, a new control, identifying himself as 'G.P.' or George Pellew, appeared. Pellew came from a well known Washington, D.C., family and had been killed in a riding accident a few weeks earlier. One of 'G.P.'s' more impressive feats was to pick out, over a period of time, from 150 strangers presented at sittings, only those 30 who had been George Pellew's personal friends. It was this feat which broke down Hodgson's scepticism completely.

After Hodgson's death, he purported to act as Mrs Piper's control, as did other early members of the SPR, most notably Myers. In fact, the 'Myers' material, better known as the 'Cross Correspondences', offers perhaps the most convincing of all such mediumistic evidence for survival.

CROSS CORRESPONDENCES

In 1898, a medium, Mrs Edmond (Rosina) Thompson, comparable to Mrs Piper, was found in England. Her chief 'control' purported to be her deceased daughter Nelly. Investigators, including Myers who had upwards of 150 sittings with her, were impressed with the quality and quantity of information she produced. One of these was Mrs Margaret Verrall (1859-1916), a lecturer in classics at Hewnham College during the time when Mrs Sidgwick was its Principal. Her husband, Arthur W Verrall (1851-1912), was also a classical scholar and a friend of Myers. Mrs Verrall herself attempted to develop automatic writing after Myers' death in an effort to enable him to demonstrate survival through her. After three months, she began to get some automatic scripts signed 'Myers', written mostly in Latin and Greek. But they were so oddly worded that it appeared their meaning was being intentionally concealed.

A year later, allusions to subjects occurring in the Verrall scripts began to appear in America through Mrs Piper. Another year or so later, Mrs Verrall's daughter Helen developed automatic writing with similar results. Then Mrs Alice Fleming, sister of Rudyard Kipling, similarly developed automatic writing in India, after reading Myers' book Human Personality ... In fact, her 'Myers' even directed her to send the material to Mrs Verrall at 5, Selwyn Gardens, Cambridge (the correct address, which Mrs Fleming did not know). However, she sent it to the SPR instead under the pseudonym 'Mrs Holland' where Alice Johnson filed it - until 1905, when she suddenly realised its relevance to the Verrall-Piper material.

Then, in 1908, a Mrs Winifred Coome-Tennant (1874-1956), using the pseudonym 'Mrs Willett', produced further fragments of script which fitted with the others. Dame Edith Lyttleton did the same starting in 1913 and a Mrs Stuart Wilson in 1915. Ultimately over a dozen automatic writers became involved in an elaborate series of cross references or 'cross correspondences' - scripts that purported to come from Myers, Gurney, Henry Sidgwick, Arthur Verrall and others over a 30 year period. The final number of scripts amounted to over 3000 (i.e. nearly one every 3-2 days), and produced an often elaborate classical jigsaw puzzle with the different pieces supplied by different automatists, some of whom were completely unfamiliar with classical scholarship (e.g. Mrs Piper), some unknown to each other and most who had no knowledge of the pieces being supplied elsewhere around the world. While other mediumistic material seems usually better explained in terms of telepathy and multiple personality, such a theory is strained for the 'cross correspondence' material.

Interestingly, the scripts themselves often contain references to the difficulty involved in such communication. For example, 'Myers', writing through Mrs Holland (i.e. Mrs Fleming) says, 'I appear to be standing behind a sheet of frosted glass - which blurs sight and deadens sound - dictating feebly - to a reluctant and somewhat obtuse 'secretary' (quoted in Thouless, From Anecdote to Experiment in Psychical Research, p 157). Altogether, the 'cross correspondence' material is most interesting. An excellent discussion of it can be found in Gardner Murphy (1961, 1979) op.cit.

THE AMERICAN SOCIETY FOR PSYCHICAL RESEARCH

Physicist Sir William Barrett (1845-1926), who was actually the first to propose the formal establishment of the SPR., was also instrumental in founding the American counterpart, the ASPR, in January 1885, with noted astronomer and mathematician Simon Newcomb (1835-1909) as its first President and the famous philosopher-psychologist William James (1842-1910) as its leading luminary. Its principal center was Boston. Hodgson went to Boston in 1887 to be Executive Secretary,

financed largely by Sidgwick. Whereupon, the fledgling organization became a branch of the British body for eight years. Upon Hodgson's sudden death of a heart attack in 1905, it regained separate status under Columbia University professor of logic and ethics James R Hyslop (1854-1920), who resigned from the University in 1902 to devote his full time to psychical research. He began its Journal in 1907.

One of the great figures of the early ASPR was Dr Walter Franklin Prince (1863-1934). His study of multiple personalities cast serious doubt on any simplistic interpretation of mental mediumship. He also had an important influence on the young J B Rhine.

Upon Hyslop's death, the Presidency of the ASPR was assumed for three years by noted social psychologist William McDougal (1871-1938). McDougal had been a professor at Oxford when his book Social Psychology (1912) revolutionized the field. He was also an early member of the SPR. He had left Oxford in 1920 for Harvard to take up the chair previously held by William James. He, too, had a profound influence on Rhine and others. The decline in ASPR research standards after 1923 when the Rev Dean Frederick Edwards became President and replaced Prince as editor of the Society's Journal led to the founding by McDougal of the Boston Society for Psychical Research in 1925. The two bodies reunited in 1941, through the efforts of Gardner Murphy and others.

OTHER PSYCHICAL RESEARCH ORGANIZATIONS

Many Europeans joined the British SPR, but in addition like organizations were formed in a number of other countries. In France, Jean Meyer founded the Institut Metapsychique International in 1918 with Charles Richet, Camille Flammarion, Sir Oliver Lodge, Eugene Osty, Gustav Geley and Rene Warcollier as noted early members. Its journal Revue Metapsychique, began publication in 1920 and remains today the leading French journal in the field. In 1928, the Institut für Metapsychische Forschung (Institute for Metapsychical Research) was formed in Germany with Rudolf Tischner (1879-1961) as a prominent member. A Russian psychical researcher, Alexandre N Aksakof (1832-1903), Imperial Councillor to Czar Alexander II, began a journal in German - Psychische Studien - because the ruler opposed his ideas. In 1925, its name was changed to Zeitschrift für Parapsychologie.

There were also organizations in Scandanavia, Greece, Austria, Holland, Hungary (under Julien Ochorowicz) and Poland (under Stephan Ossowiecki).

Most of these national organizations ceased to exist during WWII and the center of research shifted to the US. Since then, however, many have reorganized, often changing their name from 'psychical research' to 'parapsychology'. In Germany, the Journal expanded its name to Zeitschrift für Parapsychologie und Grenzgebiete Psychologie (i.e. and Borderlands, or Frontiers of Psychology). It is now the publication of the Institut für Grenzgebiete der Psychologie und Psychohygiene founded by Professor Hans Bender in 1954. A European Journal of Parapsychology was started in 1975.

An International Committee on Psychical Research, comprising 19 European countries and the US was started in 1921 at the initiative of Richet. It, too, was disbanded during WWII. The Parapsychology Foundation, Inc., started in 1951, may be considered its successor. The PF has sponsored international meetings regularly and, from 1959-68, published the International Journal of Parapsychology. The magazine was succeeded by Parapsychology Review, still the best English language journal in the field for the non-specialist reader.

CHAPTER 3: THE AGE OF STATISTICS**RECOMMENDED READING**

Randall, John (1975) op. cit.

Rhine, J B (1978) A century of parapsychology. In: Ebon, Martin, The Signet Handbook of Parapsychology. New American Library

Rogo, D Scott (1975) op. cit. Chapter 3, 4

EARLY WORK

Mediumistic communications were believed very early to have their possible origin in thought transference (telepathy). Experiments into the possibility and nature of telepathy were therefore begun. Some of these used pictures for targets and some used playing cards or other similar material suited to statistical evaluation, with mathematical measures pioneered by Richet. The former type of test is now termed 'free response', the latter 'forced choice'.

A systematic and tightly controlled series of ESP experiments using pictures as targets was run intermittently, interrupted by two World Wars, by French chemical engineer and parapsychologist Rene Warcollier, Stephan Ossowiecki and others. A similar, though less well controlled, series was done (1928-30) by noted American social reformer Upton Sinclair with his wife, Mary Craig Sinclair (see his book Mental Radio, 1930).

Among early experiments using statistically quantifiable material, one of the more noteworthy was a card-calling test done at Stanford University by Professor J E Coover. The odds against a chance explanation of his results were 130 to 1. Coover, however, made no statistical evaluation of his work - that was done years later by Rhine and his associates - and declared it nonsignificant!

Another series of early experiments was that done in Holland at the University of Groningen by psychologist H J F W Brugmans (1885-1961). The subject was a 23-year-old student of mathematics and the physical sciences named Van Dam. A series of trials over four months yielded results with odds in excess of billions to one against a chance explanation. Brugmans also demonstrated that Van Dam could do better in a relaxed state than in his ordinary state of consciousness (see Gardner Murphy, op. cit., pp.56-62).

These, and other experiments, seem to have been relatively short-lived. Persistent, long-term experimentation and the systematic task of sorting out separate psi abilities, and seeking to find out more about them, really began with J B Rhine, the founder of modern parapsychology.

J B RHINE

Joseph Banks Rhine (1895-1980) was born in Waterloo, Pennsylvania, and grew up on his father's farm, one of three sons. He had an early interest in both botany and religion, as did the daughter of a neighbour, Louisa E Weckesser whom he later married (1920). Rhine had considered a career as a minister until his and his wife's religions 'crumbled... once we were confronted with the physical-chemical view of the universe'. Like so many others who entered psychical research with similar motivation, they became interested in mediumship and began personal investigations in Chicago, Detroit and New York.

In 1923, the Rhines got teaching positions at West Virginia University, he in botany and she in Latin. While there, they read the writings of William McDougal and they resolved to go to Harvard to study under him. They arrived in the summer of 1926 just as McDougal was leaving for a year's trip around the world. The professor urged them to stay at Harvard studying philosophy and psychology, and to contact Dr Walter Franklin Prince of the Boston Society for Psychical Research.

The following year (1927) when McDougal returned from his trip to start the Psychology Department at the newly established Duke University, the Rhines decided to continue their research under his direction. They left Boston for Durham, North Carolina, where, to their surprise, McDougal, with the full support of the university's President, Dr W P Few, invited Rhine to join the faculty of his department. From that time, the Rhines remained in Durham.

In 1930, they turned their attention to ESP, first testing children in summer camps and then students at the university. Their first test materials were numbered or lettered cards sealed in opaque envelopes. Then, with the help of Dr Karl E Zener, a colleague in the Psychology Department, they devised the now famous 'ESP cards' ('Zener cards') using five common but distinctly different symbols - circle, square, cross, star and wavy lines - as suits of five each in a deck of 25 cards. This arrangement made statistical analysis of the results relatively easy. The 'Age of Statistics' was under way.

Soon, Rhine became dissatisfied with the term 'psychical research' and adopted the German 'parapsychologie' instead. Further, reasoning that the many reported paranormal abilities might be analogous to normal sensory perception and ordinary kinetic abilities, he invented the terms 'extrasensory perception' and 'psychokinesis' to categorize the data ⁷. Although Rhine quickly came to believe that telepathy, clairvoyance, precognition and the rest are not 'perception' in the usual sense, the acronym 'ESP' stuck and it is now used neutrally without any presuppositions as to its possible analogy with sense perception. The same is true of 'PK'.

The problem, as Rhine formulated it, was

Is it possible repeatedly to obtain results that are statistically significant, when subjects are tested for knowledge of (or reaction to) external stimuli (unknown and un-inferable to the subject) under conditions that safely exclude the recognized sensory processes? (Extra-Sensory Perception After Sixty Years, p. 15: original in italics.)

The answer, published in his monograph Extra-Sensory Perception (1934), was an unequivocal 'Yes'. - even though it was stated in the cautious language of experimental scientists. This conclu-

⁷ Rhine later discovered that as early as 1870 an almost identical term - 'extra-sensuous perception' - had been used by the British explorer and orientalist Sir Richard Burton (1821-1890).

sion was based mainly on the extensive testing by Rhine and others of several 'star' performers, all of whom were discovered by accident during group tests of students in psychology classes.

The most notable of these 'stars' was Hubert E Pearce, Jr., a divinity student whose ESP ability was discovered in 1932 by J G Pratt, then a graduate student at Duke. After starting near chance for the first 100 calls, Pearce's scores rose continually until they averaged 9 out of 25 over the first 15,000 calls. The odds against this happening by chance are billions to one. In subsequent testing, Pearce's scores rose even further. He showed that he could alternate high and low scores (the latter termed 'psi-missing') upon request. As experiments progressed, conditions were continually tightened: the decks were constantly changed to prevent possible memorization of any visual or tactile clues; Pearce was asked to call the deck 'down through' without anyone looking at the faces until the end of the 'run'; a screen was placed between Pearce and Pratt; and finally Pearce made his calls from the library 100 yards from Pratt's laboratory. None of these conditions altered his phenomenal scoring rate.

After the first Pearce-Pratt experiment, it no longer seemed profitable to Rhine to spend further time trying to prove the existence of ESP, which he considered amply demonstrated. He turned instead to varying the conditions to find out what influenced it. Visitors were introduced into the laboratory; scoring dropped initially until the subject became accustomed to the new person (the period varying from one subject to another), whereupon they rose to their previous levels. Prolonged tests were administered; it was noted that scores declined as fatigue or boredom set in - the so-called 'decline effect'. Drugs were administered to Pearce: sodium amytal, a soporific, lowered scores; citrated caffeine brought his scores back to their normal high rate whenever they had dropped due to fatigue (although otherwise it had no effect). Shifts in testing method (touched matching, down-through) and mode (telepathy, clairvoyance or general unspecified ESP - GESP) brought an initial drop followed by a return to high scores.

Distance tests were begun in June, 1933, some with remarkable results; in July that year, it was discovered that George Zirkle, a graduate student in psychology, got significant extra-chance results whether in the same room with the experimenter or miles away (especially when the agent was his girl-friend, Sara Ownbey). By the end of 1933, Rhine had decided that since space (distance) was irrelevant to ESP, perhaps time was also — as, of course, was already suggested by spontaneous cases of foreknowledge - so precognition experiments were begun. About a year later, PK experiments were started using dice.

It was the preliminary results in the Pearce-Pratt distance experiments that convinced Rhine that it was time to publish his findings. Prince and the Boston SPR printed the monograph. PK, however, was considered too bizarre to risk mentioning at this point; in fact, publication of PK results was withheld until 1943. Despite the obscurity of its publisher and the fact that it was not popularly written, Extra-Sensory Perception 'caught on'. Card-guessing spread across America as a popular craze.

Over enthusiastic public interest was followed by equally intemperate denunciation of Rhine, mainly by psychologists. For a while there were more critical articles in professional journals than there were reports of new research. The pressure was too great for some of Rhine's colleagues in the Psychology Department at Duke, so in 1935 he established the Parapsychology Laboratory as an independent unit. In 1937, the Journal of Parapsychology was begun, to publish experimental results, partly because orthodox journals wouldn't accept such articles and partly because all other special fields of science have their own journals.

Late in 1934, Gardner Murphy paid a visit to Durham to 'get a feel' for what Rhine was doing. It was then that he met J G Pratt, was impressed by him and arranged for him to go to New York to continue his graduate work in psychology at Columbia University. Along with Murphy and Rhine, Gaither Pratt stands as one of the greats in 20th century parapsychology in the US. Sadly, all three died within a year of each other (1979-80).

J G PRATT

J Gaither Pratt (1910-79) is another of those in psychical research whose early religious beliefs were upset by science. He had intended going into the ministry, but soon after he began his graduate study in religion he realised that he wanted answers not based merely on faith. As an undergraduate, he had attended a course by J B Rhine and had become interested in parapsychology, so he transferred to the Psychology Department. Thus it was that he became associated in 1932 with McDougal and Rhine and did his famous experiments with Hubert Pearce, still considered today among the strongest laboratory proofs for the existence of ESP.

At Columbia (1935-37), Pratt took courses, read extensively in the literature of the SPR as recommended by Murphy, worked on his conventional doctoral dissertation (on the nature of learning in white rats) and engaged in an analysis of verbal material from Eileen Garrett's mediumship. The latter, furthering the methods of Myers, Whately Carington and others, remains another landmark in the history of psychical research - done while Pratt was still in his twenties. In 1937, Rhine offered him a position in the newly formed Parapsychology Laboratory, so Pratt returned to Durham.

When Rhine retired in 1962 and moved his laboratory off campus, Pratt decided to leave him. Pratt believed, as had McDougal, that such work properly belongs on university campuses, so he took an appointment with Professor Ian Stevenson at the University of Virginia. It was here that he conducted his lengthy series of ESP card tests with the Czech psychic Pavel Štěpánek, revived an interest in poltergeist cases in the US and began Western investigations of the PK abilities of Mrs Nina Kulagina of Prussia - all of which are described briefly in the following chapter. Over his 45 years of active work, Pratt did more and more varied research than any other person in the field.

THE CRITICS

Both spontaneous cases and laboratory experiments produced data that were asserted to be evidence (or even proof) for ESP. But, as every scientist knows, any data must pass four tests:

1. Are the data authentic?
2. Are the data reliable?
3. li/hat is the proper interpretation of the data?
4. What is the significance of the data?

In other words, in the first case, are the data genuine facts or are they merely coincidences or statistical artefacts? In the second case, can the data be obtained by others? Are the experiments which purportedly produced them repeatable? If not, why not? Thirdly, to some scientists (often called 'operationalists') if you cannot specify the variables which produce the result, the experiment is meaningless, no matter how astronomical its probability against chance may be. What do all these statistics (or 'significant coincidences') mean? And finally, how do you explain the data? What are the laws of nature that regulate them? What theories - testable by further experimentation -

can be offered to account for them? If you cannot answer these questions, say the critics, there is no reason to take the data seriously. Criticism of Rhine's work fell into all four of these areas, though the initial criticism was mainly in the first two. All fair-minded scientists recognize that answers to the last two come, in any field of science, only after years of research.

One of the first 'errors' that critics, mainly psychologists, tried to attribute to the experiments was in their use of statistics. For example, some claimed that only favorable runs were retained while unfavorable ones were discarded, thus 'loading' the statistical analysis in favor of a psi interpretation. Such criticisms were initially countered by two mathematicians who have been associated with parapsychology ever since –

Dr Joseph A Greenwood and Dr Thomas N E Greville; the latter is a Theosophist and a priest of the LCC. Then criticism of Rhine's work on statistical grounds was largely silenced in 1937 when the Institute of Mathematical Statistics released the following statement:

Dr Rhine's investigations have two aspects: experimental and statistical. On the experimental side, mathematicians of course have nothing to say. On the statistical side, however, recent mathematical work has established the fact that, assuming the experiments have been properly performed, the statistical analysis is essentially valid. If the Rhine investigation is to be fairly attacked, it must be on other than mathematical grounds.

The second line of attack was to attribute the results to errors in recording and calculation. Rhine countered this criticism by offering his record sheets for checking. In fact, recording errors were found. However, in all but a few cases they had no effect on the results and in those few where they did it was 'hits' that had been overlooked, so the re-evaluations were even more favorable to psi! Recently, electronic devices which automatically record results have been introduced to eliminate this source of error altogether.

The next accusation was that the target cards (or other materials) were not randomly ordered so that subjects gradually came to remember certain sequences which could, in the long run, skew the statistics from chance.

Again, this had an effect on future experiments: the ESP cards (or other 'forced choice' targets) are now arranged according to tables of random numbers generated by computer.

A fourth criticism was that not enough precaution was taken to ensure that there was no sensory leakage. Some critics claimed that the cards were not really opaque, or that ink blotches or dog-earing gave enough targets away to skew the statistics. Some critics claimed unconscious behavioral or audible cues from the agent (a favorite was 'unconscious whispering') were being picked up by the subject. Some even claimed the 'star' subjects were cheating. Of course, none of these criticisms could apply to the very successful distance tests, nor to the down-through clairvoyance tests, yet they too led to modifications of experimental design. From this time on, no results of 'self-testing' were considered evidential, agent and subject were screened from each other and runs were usually done using a predetermined timing device or some other method which avoided any possibility of signaling between subject and agent.

A fifth criticism was that the hypotheses being tested were not specified in advance, hence all findings were post hoc; that is to say, some correlation can probably be found between practically any two series of events after the fact. Nowadays, in all parapsychology experiments, the hypothesis being tested must be specified in advance; any post hoc findings must be supported by further independent testing. But there is a corollary to this criticism which cannot be dismissed so easily. To

avoid meaningless post hoc findings, science requires that experiments be repeatable. This has proved to be the most serious criticism of all, and one that parapsychologists are well aware of and most embarrassed by. Yet certain types of ESP experiments have been replicated. In any case, the notion of replication itself is by no means clear.

A sixth criticism, the most hysterical of all, was that the results are all due to fraud, that data 'must' have been tampered with, or the experimenters 'must' be morally untrustworthy and engaging in a collusion. Replication of results by anyone anywhere, especially by sceptics, would immediately forestall such criticism. But until that is possible, the 'conspiracy theory' (at present most fervently advanced by arch critics C E M Hansel, a British psychologist, and G R Price, an American chemist) will continue to seem attractive to those who don't know the researchers involved. In its 'hundred years of conspiracy' form this criticism borders on paranoia. Yet there are a number of individual cases in the history of science where even famous scientists (such as Sir Cyril Burt in his study of the genetic basis of I.Q. ⁸) were later found to have falsified their data. One such case has been exposed recently in parapsychology - possibly two. More about them later.

Short of the dogmatic 'ESP is impossible because it contradicts the laws of nature' criticism, which one still hears today, there are three other such criticisms of a general nature:

- i) if ESP really occurred it would have been discovered earlier
- ii) if ESP really occurred it would be useful in some way, e.g. picking the winners of horse races
- iii) ESP is only negatively defined, so findings prove nothing beyond a collection of negations.

The last of these, again, is an embarrassment to parapsychologists; until they can devise a theory which accounts for the data, the findings (and the definitions of the various psi abilities) will remain negative only. Yet that is precisely why they are being investigated - to find a theory! As for the other two objections, one reason others haven't discovered psi is that they weren't looking for it; think of all the centuries electricity and nuclear energy went undiscovered. And perhaps, for most people, ESP is too unreliable to be put to practical use at present.

After countering most of these criticisms in professional journals, Rhine, Gardner Murphy and Ton Greville met three critics in a debate at the September 1938 meeting of the American Psychological Association which drew a huge crowd. All agreed that the parapsychologists won the day. In 1940, Rhine and associates published Extra-Sensory Perception After Sixty Years, reviewing all the data from 1882 on and dealing in detail with all the published criticism. In addition, Rhine wrote to the seven critics who had made the 'most penetrating and impressive' criticism, asking them to read and criticize the manuscript of the book. Of these, four declined on the basis of other pressing obligations. Two of those who responded merely repeated criticisms that had already been answered. One, Dr Robert H Thouless of Cambridge University, replied at length that he had now been satisfied on all points. Thouless later became an active worker in parapsychology himself.

DEVELOPMENTS ELSEWHERE DURING THE 1930S

⁸ Burt was also a persuasive propagandist for psychical research, which has proved embarrassing of late.

After reading Rhine's Extra-Sensory Perception, W. Dillwyn Dillwyn Carington (1834-1947), an inventive British psychologist, turned his attention to a study of ESP. By 1939, he had concluded that the use of symbols as targets was too unexciting to reproduce adequately the emotional situations usually involved in spontaneous cases. Therefore, he began to use drawings, as had Warcollier and Sinclair, but he devised an ingenious method of quantifying the results so that a statistical analysis could be made.

Carington chose his targets by randomly selecting a three- or four-digit number from a mathematical table and using it to determine a page in Webster's dictionary. His wife then drew a sketch of the first picturable object on that page. These sketches were, one by one, put up overnight in a locked, heavily curtained room in his home while hundreds of participants in the US, Britain and Holland tried to reproduce them, mailing their efforts to Carington. After randomizing these efforts, he turned the 20,000 or so drawings - targets and guesses - over to a judge who was ignorant ('blind') as to the actual order of targets and attempted reproductions. This judge matched the 'fit' between targets and guesses and a statistical analysis was applied to the results to determine whether there would be significantly more matches than could be expected by chance. This technique, with some modifications, is now widely used in parapsychology.

In Carington's work (summarized by Randall, pp. 83-84), can be found:

- i) the method for quantifying target material
- ii) the 'displacement effect' - above chance scoring on the picture immediately before or after the target, showing that ESP is not sharply focussed in time
- iii) the 'experimenter effect' - showing that certain researchers have more success than others in getting positive results under similar conditions and
- iv) evidence for a non-physical theory of psi.

The second and fourth of these are also to be found in the results of famous experiments by Carington's contemporaries.

One such contemporary was Samuel G. Soal (1889-1975), a sceptical mathematician at London University and a friend of Dillwyn Carington. Soal attempted to replicate Rhine's experiments, copying the 'forced choice' card-calling technique under carefully controlled conditions but using animal pictures instead of the Zener symbols. By 1939, after five years of work testing 160 subjects and recording 128,350 guesses, Soal had achieved only chance results. He decided that Rhine's reported successes must have been due to some normal explanation. With some difficulty, Carington persuaded him to re-examine the data for the displacement effect which Carington had just discovered in his own work. Previewing his records, Soal found that two subjects - Basil Shackleton and Mrs Gloria Stewart - had indeed scored considerably above chance in this way. Soal then started a new series of tests in co-operation with Mrs Kathleen M. Goldney, using just those two subjects. Despite being conducted during a time of heavy bombing raids, they obtained remarkably significant results. But, more interestingly, Shackleton, who normally scored on the symbol just ahead of the target - called +1 displacement - changed to +2 displacement when the rate of calling was speeded up. These experiments are described in Soal and Batement, Modern Experiments in Telepathy (1953).

Unfortunately, questions have arisen recently concerning Soal's later work. First of all one oddity is that Shackleton and Stewart scored only at chance on pure clairvoyance tasks, whereas Rhine's findings (and those of others) were that the mode of testing makes no difference. Then critics Price and Hansel claimed that a code 'could have been' worked out between Soal and Shack-

leton; further, one of Soal's assistants, Mrs Greti Albert, claimed she saw Soal altering his records. A review turned up some unsettling things :

- i) Soal's original records could not be found because, he said, they had been lost on board a train some years before
- ii) the target sequence in Soal's written report did not always match the randomized source from which he claimed to have taken it, and
- ii) Shackleton's calls occasionally showed an excess of certain targets coinciding with the ones Mrs Albert claimed she saw Soal altering.

While none of this proves experimenter fraud, it certainly looks suspicious. Fortunately, none of Soal's data affect the case for parapsychology one way or the other.

Another researcher during this period whose work paralleled Rhine's but didn't come to the attention of the West until the 1960s was Leonid L Vasiliev (1891-1966) of Russia. Parapsychology in Russia grew out of Spiritualism as it did elsewhere. Investigation of mediums began in the mid-1370s. Then developments in psychical research in England helped foster an interest in telepathy. In 1920, the popular animal trainer Vladimir Durov approached physiologist Vladimir M Bechterev with a proposal to test some of his dogs for telepathy. Vasiliev was one of Bechterev's pupils at this time and was involved in the experiments. Bechterev then turned to work on human subjects and Vasiliev was included in the prestigious team which undertook this work. Initially, the team had the support of the Russian government largely because of apparent theoretical support for a purely material, electromagnetic explanation for the phenomenon.

To test these electromagnetic ('mental radio') theories, Vasiliev needed a method of telepathic transmission more reliable than the statistically based work of Rhine. He found this in the use of hypnosis ⁹. Between late 1933 and mid--1934, Vasiliev used what he called the 'hypnogenic' method in 260 trials with colleagues Joseph F Tomashevsky and Arseny V Dubrovsky alternating as agents (A). The subjects (S) were Federova and Ivanova, two easily hypnotizable, 'hysterical', 35-year-old women patients. The subject was either seated in an armchair or lying on a bed with an observer present; the agent, out of sight in the same room or in a different room separated by two doors, attempted at an unspecified time determined by him to induce hypnotic sleep in the subject telepathically, A record was kept to determine how long it took for sleep to occur after the telepathic command was started. Then the process was reversed and the subject telepathically commanded to wake up. Interestingly, although the subject sometimes did not follow the sleep/wake command immediately (average elapsed times were about 3½ and 3 minutes respectively), she often verbalized the command while initially resisting it. She also could tell which agent was sending it (she wasn't told this prior to the experiment).

This technique was used in four ways: S and A in the same room, S and A in different rooms, S screened in a Faraday cage, and both S and A screened in Faraday cages. The Faraday cage is a device made of metal which intercepts the transmission of all but the lowest and highest (e.g. atomic) frequency radiation. This shielding had no effect whatever on telepathic transmission. Vasiliev also did some distance tests including one between Leningrad and Sebastopol (1700 km) which showed no significant difference from shorter distances.

⁹ It is interesting to note that the Prussians began this work in the 1920s, just about the time earlier work of a similar kind (e.g. by Richet) was abandoned by the West.

The experiments lasted for 5½ years before being terminated by WWII - and because the findings seemed to rule out altogether any electromagnetic theory of telepathy. Yet if Vasiliev's work was a failure for the leading materialistic hypothesis, it seems to offer, by contrast, support for the 'idealistic' or 'occult' hypothesis he so scornfully rejected. And that may be the real reason why his work in parapsychology was suddenly halted!

Years later, in 1959, an article by Jacques Bergier appeared in the popular French journal Constellation claiming that ship-to-shore telepathy experiments were being conducted aboard the US nuclear submarine Nautilus.

Since communication with submerged submarines is a serious military problem, Russian interest in telepathy revived. Stalin, an adamant opponent of psychic research, had died in 1953. Vasiliev was by then a member of the Soviet Academy of Medical Sciences and holder of the Order of Lenin, so his scientific credentials were impeccable. The government, therefore, permitted him to re-establish his parapsychology unit at the Bechterev Institute for Brain Research and to publish (1962) the results of his earlier research. (The best English translation, with Vasiliev's corrections, was published in 1976 under the title Experiments in Distance Influence.) Contact with Western parapsychologists was renewed and J G Pratt and others made a number of trips to Russia to attend conferences (1962-72).

One of the principal organizers of these meetings after Vasiliev's death was Edward Naumov; however, he didn't have Vasiliev's scientific credentials and official attitudes began to cool by the late 1960s. This became a total freeze when two Canadian journalists published a popular, sensationalized (and often quite inaccurate) account of Eastern European research under the title Psychic Discoveries Behind the Iron Curtain (1970). Even now, the climate for parapsychology in Russia remains unsuitable.

THE SEARCH FOR CORRELATES OF PSI

By 1940. J B Rhine felt that, with the critics (temporarily) silenced and ample proof already amassed for the existence of psi, it was time to turn to the question of how psi worked. Even without any knowledge of Vasiliev's work, it had become apparent to him that established physical theories of information propagation would not explain the phenomena. Work turned, therefore, to trying to capture the psychological 'correlates' of psi.

In the 1940s and 1950s, many diverse kinds of psychological tests were used to determine the personality characteristics associated with psi. A list of some of these found to correlate with positive ESP scores (psi hitting) and negative ESP scores (psi missing) is given by Gertrude R Schmeidler in her article 'The Psychic Personality' in Mitchell and White (op. cit.). The most fascinating thing about it is that some of the traits it contains are incompatible with others (e.g. both 'carefree' and 'tough' people are psi hitters, and both 'demanding' and 'submissive' people are psi missers). If any generalization can be made, it is that 'labile' persons - i.e. those open to change, sensitive to others - are the most likely to demonstrate psi hitting. Another of Schmeidler's findings is that those whose belief is favorable to psi score significantly higher than those who are disbelievers; she labelled the former 'sheep' and the latter 'goats' (after Matthew 25:32-33). This is known as the 'sheep-goat effect'. Interestingly, the goats often score significantly below chance, a deviation as much in need of explanation as above-chance scoring - almost as if they were unconsciously using their latent psi ability to avoid the target and thus prove that psi doesn't exist! Schmeidler's work has since been reproduced by several others in several different countries.

Different experiments were undertaken to determine whether the nature of the target would have an effect on scores. Size didn't, but a British researcher, G W Fisk (1882-1972), working with a young man having sexual problems, noticed that his guessing pattern showed a preference for the cross and circle, which the subject confessed reminded him of the male and female sex organs. They thus had a strong emotional content for him. Fisk then replaced these symbols with actual pictures of the genitals, a modification that proved remarkably successful - though the subject's high scoring occurred exclusively on the erotic targets, while the others were at chance. Other parapsychologists have from time to time adopted erotic target cards with similar results.

A recent (1979) review of target pictures used in past experiments suggests that brightly coloured pictures containing animals and people have been most successful, mechanical and architectural pictures least. If that is so, it is astonishing that Rhine and others have had any success at all with the Zener cards!

In addition to a search for psychological traits that might correlate with psi, there has been some research on psi-conducive states of consciousness. Rhine, like Vasiliev and others, found that the hypnotic state significantly increased scores; a recent review by Charles Honorton shows this to be another of the most repeatable findings in parapsychology. The importance of the dream state has already been mentioned. We will discuss states of consciousness further in the next chapter.

PSI IN ANIMALS

In 1950, after a ten-year review and analysis of spontaneous cases purporting to show psi in animals, J G Pratt began a twelve-year study of the homing ability of pigeons, in collaboration with a leading expert on the subject, Dr Gustav Kramer of Germany, to see if homing had a psi component. While some results were suggestive, Pratt never felt that he had conclusively eliminated all other possible non-psi explanations¹⁰. The same year, Karlis Osis, then also a research assistant at Duke Parapsychology Laboratory, conducted experiments with cats. Rhine ran some extremely successful experiments on a pair of German Shepherds, using an imaginative quantifying technique. Somewhat later, Robert L Morris did marginally significant experiments to test precognition in rats and goldfish.

Then, in 1968, two French scientists, using the pseudonyms 'Duval' and 'Montredon' to protect their reputation¹¹, published a report of an ingeniously contrived 'anpsi' (animal psi) experiment using mice in a cage divided by a low barrier. One half of the cage was randomly shocked with a low voltage at certain intervals. The whole system was automated so that the experiment could be run without any experimenter present, thus hopefully avoiding the 'experimenter effect'. In what the researchers called 'random behavior trials', in which the mouse changed sides without any apparent reason, they hoped to find evidence of precognitive shock avoidance. In fact, they did, with odds of more than 1000 to 1 that such behavior could be due to chance alone.

Similar work was started within months by researchers in the US, most notably by Dr W Jay Levy, a personable and promising young newcomer to the field. Between 1971 and 1973, eight papers reported successful replication of the 'Duval-Montredon' work, using not only mice but gerbils

¹⁰ Recent discovery of micro-magnets in the neck muscles of birds seems to point to a non-psi hypothesis of homing and navigational behavior of birds

¹¹ It has since leaked out that the senior researcher was Professor Remy Chauvin, a distinguished zoologist at the Sorbonne.

and hamsters as well. Levy was brought to the Institute for Parapsychology in Durham and made its Director.

However, in the summer of 1974, other workers at the Institute became suspicious of Levy's data and, in fact, caught him in fraud. He explained that his results had suddenly and unaccountably fallen to chance and so, under great pressure to succeed, he had resorted to deception. He resigned in disgrace and left parapsychology.

PK AND ESP

Rhine published *The Reach of the Mind* in 1947, adding reports of his PK work (begun in 1934) to that of ESP. In fact, by 1940, experiments on PK began to dominate the research at Duke. First the dice were hand thrown.

Later, automated, dice-tumbling cages were built to eliminate the possibility of skill at rolling the dice. In 1950, W E Cox, an engineer working with Rhine, began PK 'placement' tests in which the die is willed to fall in a certain target location rather than with a certain target face upwards. Another engineer, Haaken Forwald from Sweden, continued this work for some 20 years, testing whether different materials, sizes or weights of dice affected PK, in an effort to determine if PK was a force similar to electric, magnetic or gravitational forces. Although the PK effect is usually more subtle than ESP (except in poltergeist cases or the phenomena of the few authentic physical mediums) Forwald's work nonetheless strongly suggests that it doesn't behave in accord with known physical laws. It seems, in fact, to be goal-oriented rather than process-oriented ; that is, neither the complexity of the task nor the subject's acquaintance with the processes needed for success seem to have any effect on PK results. Like ESP, it seems to be affected more by psychological than by physical factors.

A great deal of time was spent during the 1940s trying to devise experiments which would establish the separate, independent reality of the different forms of psi. Interestingly, telepathy proved to be the most elusive, even though in the early days of psychical research (and in Russia) it was the only one accepted. Most of the early 'telepathy' experiments, in which the agent looked at the target while the subject tried to guess it, could as easily be interpreted as clairvoyance of the target by the subject directly. Experiments were run in which the targets were known only to the agent and were never written down - only a record of total hits being kept - to avoid the interpretation of 'precognitive clairvoyance' of the record sheets. But precognition itself was open to question. Could not the results be explained in terms of the subject's PK on the experimenter's target choice? Or were PK effects merely due to precognitively guided selection of targets most favorable to the future fall of the dice? Recent experiments by Helmut Schmidt on 'time-displaced PK' have only added to the confusion. As Randall puts it:

Gradually, as it became evident that all these phenomena operate, at least to some extent, outside the normal space-time framework of our world, parapsychologists began to question whether the classical distinctions between telepathy, clairvoyance, precognition and PK had any validity in nature.

Perhaps they were nothing more than man-made labels for describing the different conditions under which a single basic faculty of the mind displays itself. (op. cit. p 95)

It was that consideration which led Thouless and Wiesner to suggest (1946) 'psi' as a general term to cover all the phenomena. It was also that consideration which led Rhine in 1947 to hypothesize that ESP and PK will always accompany each other as two inseparable sides of a single coin -

that no ESP phenomenon will occur without a PK effect and no PK phenomenon will occur without ESP. Only in 1979 has an ingenious experiment by Karlis Osis on the out-of-the-body experience attempted to put this to the test; preliminary results are strongly suggestive that Rhine was correct.

THE BEGINNING OF FURTHER GROWTH

In 1951, the noted psychic Eileen J Garrett (1893-1970) established the Parapsychology Foundation to assist scientific work by financing research projects, publishing reports, funding library acquisitions and teaching positions, and sponsoring yearly conferences and symposia. The PF's first International Congress of Parapsychological Studies was held in Utrecht, Holland, in 1953, the year in which the University of Utrecht became the first in the world to establish a chair of parapsychology.

But perhaps the most notable event in this period was the formation in 1957 of the Parapsychological Association. J B Rhine invited a group of people to meet on June 19th at the Duke laboratory to form an international professional organization limited to serious workers in the field. The group held its first annual convention the following year at the City College (now University) of New York. It continues to hold annual conventions, alternating between various European and US sites. In 1969, after three rejections (1963, 1967, 1968), the prestigious American Association for the Advancement of Science (AAAS) finally accepted the PA as an affiliate organization and began to sponsor panels on parapsychology at its annual meeting. Opposition to psychical research is by no means silenced yet, but its status in the scientific community continues to grow yearly.

CHAPTER 4: THE AGE OF EXPANSION**RECOMMENDED READING**

Pratt, J G (1973) ESP Research Today: A Study of Developments in Parapsychology Since 1960. Metuchen, NJ, Scarecrow Press Randall, John (1975) op. cit.

Randall, John L (1975) Op. cit. Chapters 9-12

Rogo, D Scott (1975) Op. cit. Chapters 9-10

White, Rhea (1974) Parapsychology today. In: Mitchell, Edgar D and White, John (1974) Op. cit. pp. 195-221apter 3, 4

INTRODUCTION

The turn to statistical laboratory experiments from 1930 through the 1950s coincided with a relative neglect of spontaneous cases, as well as of medium-ship and other evidence bearing more directly on the survival question.

Gardner Murphy had believed that the 'golden age' of psychical research had been the age of Sidgwick, Myers and Gurney and he hoped that those classical research methods, strengthened by modern statistical techniques, would eventually be directed towards this older question. It seems to me that his dream began to be realized in the 1960s. This development was due in part to two different forces: increased financial support for parapsychology and a proliferation of research centres. Chester F Carlson, inventor of the Xerox process, endowed positions at the ASPR (1961) and the University of Virginia (1967).

A grant from the Ittleson Foundation allowed the setting up of a Dream Laboratory at the Maimonides Medical Center (1962) and the estate of James Kidd, a wealthy recluse miner, went to the ASPR. In 1962, on retiring from Duke, Rhine established the Foundation for Research on the Nature of Man (FRNM) in Durham and when Duke closed the Parapsychology Laboratory three years later, trained staff moved away and began new centers. A new period of expansion began.

PSI AND THE ASC

The term 'altered states of consciousness' (ASCs) is applied to states other than our normal waking condition. Certain ASCs are apparently psi conducive and one such is the dream state. Studies from different countries and cultures show that anywhere between 40% and 70% of all spontaneous cases of ESP occur in dreams. However, it wasn't until the 1960s that sustained and systematic work was carried out with the establishment of the Dream Laboratory at Maimonides in Brooklyn. This was made possible partly by advances in sleep and dream research by orthodox workers. In 1952-53, Aserinsky and Kleitman at the University of Chicago discovered physiological correlates of the dream state, namely, rapid eye movements (REMs) and brain activity, as measured by the electroencephalogram (EEG), which resembled the waking state.

Using these physiological measures in combination with an experimental technique reminiscent of Whately Carington's, Montague Ullman and his associates set out to see if dreams could be

influenced telepathically. Later the experimental design was modified for clairvoyance and precognition as well.

The telepathy procedure was as follows: the subject went to the dream lab late in the evening and was hooked up to the various monitoring instruments. Then he or she lay down on a bed as comfortably as possible and was left alone in the soundproof room. The experimenter watched the equipment in an adjacent room. When he saw from REM and EEG activity that the subject was beginning to dream, he pressed a switch which activated a light in a third, also soundproof, room. Alone in that third room, the agent selected the target picture, an art print, by a randomized technique from a pool of targets and began to concentrate upon it. When the F.EM period came to an end, the experimenter signalled the agent to stop, woke the subject by means of an intercom, turned on a tape recorder and asked the subject to describe the dream. Afterwards, the subject was allowed to go back to sleep until the next REM period, whereupon the procedure was repeated using the same target. This usually occurred four or five times a night. In the morning before the subject was dismissed, he or she was asked to make a final dream report. On succeeding nights, the entire procedure was repeated with different targets until all the prints in the pool had been used. Typed transcripts of the dream reports along with all the target pictures were then sent to three 'blind' judges to rate the degree of fit between each transcript and each target. A statistical analysis was done on the judges' ratings, comparing actual target ratings with non-target ratings. Not only were the results statistically significant, but the dream reports gave further evidence of how psi intrudes into, mixes with and modifies the dream content. Thus part of Gardner Murphy's hope was fulfilled - see Dream Telepathy (1973).

After the dream psi work at Maimonides, a new psi-conductive technique was discovered and is now widely copied around the world. This induces an ASC by means of the 'ganzfeld' or 'uniform (perceptual) field' technique. Halved ping pong balls (or other translucent devices) are taped over the eyes of the subject to produce a uniformly diffused white light. At the same time, a uniformly diffused sound (a kind of whooshing 'white' or 'pink' noise) is played to the subject through snugly fitting earphones. The experiment is run similarly to the dream experiment, but has the advantage of being usable at any time of the day and without the necessity of hooking the subject up to monitoring devices. The subject's imagery reports are blind judged and evaluated as the dream reports were, though various improvements in judging continue to be explored.

Experiments using so-called psychedelic drugs - marijuana, mescaline, LSD, psilocybin, peyotl - have had indifferent results. Usually the subject gets so far out of touch with the experimental situation that he is uncooperative. And it is difficult - if not unprofitable - to try to structure the experiment around this extremely detached ASC. More useful, and more controllable, is the meditative state. Frequently it is used in conjunction with EEG measures of alpha wave activity, sometimes even with biofeedback.

In 1961, a Czech chemist and parapsychologist, Milan Rýzl, and his wife Jirina Rýzlova, began a series of ESP experiments in Prague with Pavel Štěpánek which soon attracted international attention. Štěpánek with great consistency scored significantly above chance on 'forced choice' ESP tests. Thus a new 'star' subject was discovered. More interestingly, Rýzl claimed that he had trained Štěpánek to be 'psychic' by hypnosis, particularly by posthypnotic suggestion. However, other workers have found no such results. Rýzl used a two-choice target: colored cards - either white on one side and black on the other or, more commonly, white and green - concealed in an opaque cover. The results of his various tests are summarized in his *Parapsychology: A Scientific Approach* (1970); each is independently significant, some yielding odds of millions to one against the chance hypothesis.

But when John Beloff from the University of Edinburgh tested Štěpánek in July, 1964, he produced the only negative deviation (psi missing) with a probability less than 0.0003. Beloff is well known for his inability to get positive results and his experience with Štěpánek is further confirmation of the 'experimenter effect'.

The work with Štěpánek also produced a new wrinkle in ESP research - the 'focussing effect'. In his early experiments, Rýzl had numbered each envelope on one side (kept hidden at the time of guessing) so as to record Štěpánek's call next to its identifying envelope number. It was noted that his calls for certain envelopes were consistently the same, almost as if he had 'decided' the color of that target for himself and thereafter psi-responded to his decision. It was, of course, possible that he was picking up visual clues from the envelopes, so they were concealed inside larger envelopes; still the effect persisted.

Then, suddenly, this 'focussing effect' disappeared. In fact, Štěpánek's ESP seemed to vanish altogether around 1965 and Rýzl stopped working with him.

Pratt, who had visited Rýzl several times, resumed testing at Štěpánek's request in 1966 in an effort to determine the nature of the elusive 'focussing effect'. Altogether, Pratt tested Štěpánek for ten years but no satisfactory answer was found.

TRACKING THE POLTERGEIST

Interest in poltergeist phenomena began to revive with the publication in 1958 of a report by William G Roll of the Psychical Research Foundation (PRF) and J G Pratt of their investigation of a case in Seaford, Long Island. But although this interest grew through the 1960s, most experimentally minded parapsychologists (of the J B Rhine school) continued to dismiss or ignore such phenomena. It was the 'Miami Case' of 1967 that finally brought respectability to the poltergeist.

This was due to four factors. First, there was increasing confirmation that the disturbances nearly always focussed around an incarnate source and therefore were probably not due to a 'noisy spirit', as the German word suggests. That made the phenomenon both of scientific interest and susceptible to investigation. This incarnate source seemed usually, though not invariably, to be a child around the age of puberty. And the disturbances were characteristically of short duration. (Podmore had noted these features over 80 years before). Secondly, the apparent poltergeist agent seemed also to be a person with repressed hostility and frustration, placed in a situation which made it difficult or impossible to vent this hostility normally. In other words, the manifestations, however bizarre and apparently impossible, seemed to have an underlying lawfulness. That also made them promising for research. Third, because the agent seemed usually to be incarnate rather than discarnate (though not invariably so), it also seemed appropriate to rename the phenomenon 'recurrent spontaneous psychokinesis¹ or RSPK. This name removed some of the aura of 'spooks and chills' from the phenomenon and made it more scientifically respectable. Finally, and most importantly, the Miami disturbances were so thoroughly investigated while still active that they were not only well authenticated as of clearly paranormal nature but were susceptible to computer analysis.

By 1968, Roll and John L Artley had noted that the events in the Seaford and Miami cases decreased in frequency as the distance from the agent increased, and that this relationship seemed to follow what is called in mathematics an 'exponential decay curve'. This theory was later refined to fit a kind of pulsating radar-like sweep - the Rotating Beam Theory. This primitive theoretical wave

model of RSPK, it was suggested, operates in conjunction with a hypothetical 'psi field' surrounding every human being. At the 1979 PA meeting, Roll presented a lengthy paper summarizing to that date all the characteristics of the poltergeist. Among other things, he noted an unusually large percentage - though still a minority - of agents had a problem with epilepsy. Perhaps there is a clue to understanding the elusive poltergeist here.

Yet others feel that Roll is rushing too quickly to his conclusion that the poltergeist can be explained solely in terms of gross PK from an incarnate source. One of the papers at the 1980 PA meeting was 'A Poltergeist Case without a Poltergeist Agent' based on the investigation by Karlis Osis and Donna McCormick of a case in southern New Jersey. Some poltergeist cases seem also to involve materialization of objects, such as were reported in conjunction with the psychic Matthew Manning when he was attending an English boarding school; his RSPK phenomena ceased when he took up automatic writing and painting.

PK ON STATIC OBJECTS

Rhine's study of PK was made with dice in motion, as was most follow-up work. In the late 1960s, before the parapsychology freeze deepened, there came reports out of Russia of dramatic PK effects produced under test conditions on static objects - akin to poltergeist phenomena - by a middle-aged housewife named Mrs Nina S Kulagina. J G Pratt heard of Kulagina during a visit to Russia in 1963, but it wasn't until his 1968 visit that he saw a film of her. This showed the subject apparently causing a compass needle to swing and then to spin, and also causing various small, non-metallic and nonmagnetic objects to move across the table without any apparent human contact.

It is also obvious from the film (which I have seen) that Mrs Kulagina is straining very hard to produce these PK effects. Physiological examinations showed that her heart beat increased dangerously (to 150-240 beats per minute), there were weight loss and other debilities, and the amplitude of EEG recordings from the occipital region of the brain (the visual projection area) increased to fifty times normal, although the rest of her brain activity remained unchanged.

After the clamp-down on parapsychological research in Russia, PK experiments on static objects were attempted in the US. Miss Felicia Parise, who was involved in the Maimonides dream research, attempted to duplicate Kulagina's effects, practising at home with ordinary drinking glasses on her formica kitchen counter. She was eventually successful, but after a couple of years gave it up because it was adversely affecting her health.

Then the Israeli psychic Uri Geller burst upon the scene, claiming not only clairvoyant powers, but also the ability to bend metal objects and 'repair' watches by PK. His claims have been investigated by a number of parapsychologists, including W E Cox, a specialist in PK at FRNM, and Russell Targ, a physicist, and Dr Harold E Puthoff, a senior research engineer, at the Stanford Research Institute. Although the latter experiments have been criticized, it is clear that at least some of Geller's demonstrations were of a genuine paranormal nature. At the 1980 meeting of the Parapsychological Association, several papers were devoted to reporting results of experiments on 'metal bending' as well as other Geller-like phenomena done by ordinary college students.

In 1973, Gertrude Schmeidler tested psychic Ingo Swann for PK Influence on the temperature of pieces of graphite and Bakelite, as measured by sensitive thermistors connected to them. Swann was effective in either warming or cooling the target as directed but, more interestingly, other targets in its immediate vicinity shifted their temperatures similarly, while remoter targets changed

temperature in the opposite direction, almost as if a field effect was being set up around the target, which drew heat from one place and directed it to another. This accords with the RSPK findings, and so is of greater scientific interest than Geller's more 'showy' phenomena.

THOUGHTOGRAPHY

An equally dramatic kind of PK was discovered in the mid-60s by a Denver psychiatrist, Dr Jule Eisenbud. A Chicago hotel worker, Ted Serios, claimed to be able to project images onto photographic film merely by concentrating on the target image. Like Pavel Štěpánek, Ted (as he prefers to be called) discovered this strange ability after a friend hypnotized him and gave him the suggestion that he could do it. Eisenbud reluctantly agreed to attend a demonstration. That evening, Ted had only one success at the very end of a long series of failures - for he couldn't produce the effect every try - yet it convinced Eisenbud that follow-up studies should be done. The results of his several years* work are narrated in The World of Ted Serios (1967). Ted was also investigated by Pratt and Stevenson at the University of Virginia.

Most of Ted's efforts are done with polaroid cameras held in front of him. One of the most suspicious aspects of this process is that Ted uses a 'gizmo', as he calls it - a kind of rolled piece of paper or cardboard - held in front of the camera lens and through which he stares while concentrating. The 'gizmo' is, of course, thoroughly examined; it contains nothing and seems to be only a harmless psychological aid. Yet even if this 'gizmo' did contain a concealed picture rolled up, the resulting photograph would hardly show it. Further, the 'concealed picture' theory is completely negated when the polaroid results show, as they often do, interesting differences from the target pictures (which in any event were not always revealed to Ted prior to the experiment). For instance, in one picture the word 'Canada' on a building came out 'Canada' on Ted's psychic photograph. In others, windows are in the wrong place.

The term 'thoughtography' was actually invented in 1910 by a Japanese scholar, Tomokichi Fukurai, at the Imperial University of Tokyo. However, an expose of 'spirit photography' by the SPR in 1933 contributed to a neglect of this phenomenon, and since 1969, when Ted seemed to lose his abilities, little further work has been done.

PK AND PLANTS: THE BACKSTER EFFECT

In 1968, a polygraph expert and plant lover named Cleve Backster published an article in the International Journal of Parapsychology (now superseded by Parapsychology Review) which described an experiment in which he claimed to have proved the existence of a 'primary perception' present in all life forms, however simple. Backster ran classes in New York where he taught police officers how to use the polygraph ('lie detector'). One day, while watering his plants, he wondered if the polygraph could be used to measure how long water took to rise from their roots to their leaves. So he placed electrodes on either side of a philodendron leaf to find out. Nothing happened. But while he had the plant thus connected, he recalled the so-called green thumb effect and wondered whether it might have a telepathic basis. He pondered on how he could test this. Then, he says, he merely thought about burning the leaf and the polygraph needle began deflecting. This simple event changed his life; he eventually gave up his school and moved to California to continue his research.

His one and only published paper deals with an elaborate experiment about which there are many questions. Furthermore, several attempts by others to replicate it have been unsuccessful. Those successes that have been claimed have been reported in 'popular' magazines where experimental design is poorly described. More reliable studies were done by Graham and Anita Watkins at the Institute for Parapsychology (at FRNM) in 1971. They tested the effect of PK on resuscitating anesthetized mice. Their experimental group revived significantly more rapidly than the control group. And their experiment was subsequently replicated. That human thoughts can influence biological systems - including plants - seems, therefore, indisputable, whatever the assessment of Backster's work.

ESP AND THE PLETHYSMOGRAPH

In 1962, Douglas Dean used the plethysmograph (which records changes in blood flow) to measure subconscious emotional reactions; for targets he used a group of cards, some of which were blank and some of which had names written on them - names (a) meaningful only to the subject or (b) meaningful only to the agent or (c) taken randomly from the telephone directory and not meaningful either to S or A. With S and A in separate rooms, A looked at the shuffled set of cards and tried to 'send* the name (or blank) to S, who was connected to the plethysmograph. Afterwards, independent judges examined the record of vasoconstrictions or vasodilations. They found that when names emotionally meaningful to S were 'sent', there was a greater change than for other names or blank cards. Yet S was unable to guess these targets at any significant level of ESP.

Dean later repeated this experiment in collaboration with Dr Carroll B Nash, a biologist at St Joseph's College, Philadelphia. A similar experiment, using mild shocks administered to A as a target in place of names, was done in 1963 by Charles Tart with similar results. These important studies show that at least under some circumstances people demonstrate physiological evidence of ESP even when they may not be consciously aware of it.

PSI AND HEALING

Careful investigations of claims of paranormal healing have been few and indisputable evidence of cures has been difficult to establish. The noted French physician Dr Alexis Carrel (1873-1944) once witnessed at Lourdes the phenomenal cure of a young patient of his, Marie Bailly, diagnosed by him and two other doctors as in the final stages of tubercular peritonitis prior to their visit to the shrine in 1903. Yet D J West's analysis of eleven other allegedly miraculous cures (Eleven Lourdes Miracles, 1957) found them not as remarkable as they seemed superficially to be. Dr Louis Rose's study of 95 patients (Journal SPR, 1955), most of them treated by the Spiritualist healer Harry Edwards, found only one demonstrable cure among them.

It wasn't until 1960 that the first controlled experiment in psychic healing, funded by the Parapsychology Foundation, was performed by Dr Bernard Grad of the Department of Psychiatry at McGill University, Montreal. The healer he tested was Oskar Estebany.

For two years Grad ran an experiment in which Estebany tried to heal mice that had been surgically wounded under anesthesia by having a small patch of skin removed from their backs. After guarding against the possible effect of heat from Estebany's hands and the so-called gentling effect (some small animals grow faster and are more stress resistant if they are regularly stroked), it was

found that the treated mice still healed significantly faster than untreated mice. Estebany did not actually touch the mice but merely held the cage between his hands for 15 minutes twice a day for 20 days. By day 14, the difference was clearly perceptible.

Grad then tried a new experiment in which Estebany 'healed' a slightly saline solution of sterile water later used on barley seeds. The plants fed with 'treated' water grew significantly faster than the control group, even though Estebany had only held the sealed bottle of water in his hands for 15 minutes and had not had any contact with the plants themselves. A careful chemical analysis of the treated and untreated water showed no detectable difference between them.

Estebany was then (1967) tested by Sister Dr M Justa Smith, a Franciscan nun and noted biochemist and enzymologist at Rosary Hill College, Buffalo. Sceptical of Grad's findings and believing that health and disease are related to the body's enzyme activity, Sister Smith studied Estebany's effect on the enzyme trypsin, using a sophisticated chromoanalysis machine. To her surprise, Estebany had an effect similar to that of a 13,000 gauss magnetic field; both increased the enzyme's ability to break down ('digest') proteins. Sister Smith subsequently replicated the experiment with the noted healer from Baltimore, Mrs Olga Worrall.

In 1973, Dr Delores Krieger reported at a conference of the American Nurses Association the results of a different approach to the study of this type of psychic healing, usually called 'laying-on-of-hands' (LOH). Learning of Grad's and Smith's studies, she experimented with Estebany to see if his healing would have a significant, measurable effect on hemoglobin count. It did. The measurements were done 'in vivo', i.e. based on blood samples taken from the patient (or 'healee') before and after treatment. The advantage of this approach was that Estebany was not being asked to heal bottles of liquid or cages in bags, but actual human beings.

Out of this experiment Krieger developed a healing technique which she called 'therapeutic touch' to distinguish it from LOH healing. The name is somewhat misleading, since the healer doesn't actually touch the healee, but rather works slightly above the skin; her theory is that the healing acts directly on the patient's aura or energy field (i.e. the 'psi field'). It would seem that psychical research has now come full circle back to Mesmer!

Parapsychologists have also investigated a phenomenon known as 'psychic surgery'. Perhaps the most famous of these psychic surgeons was José Pedro de Freitas (1918-1971) of Brazil, better known by his nickname 'Arigó'. Arigó began his practice while in a trance, treating up to 300 persons a day in generally insanitary conditions using unsterilized instruments. In this unorthodox way, he apparently removed tumours, cataracts and other organic disorders. Because of his technique, he was dubbed 'the surgeon of the rusty knife'. Despite the lack of any anaesthesia or antiseptic, patients clearly felt no pain and suffered no secondary infection. Bleeding was minimal and incision healing extremely rapid after Arigó merely laid his hands on it.

Arigó was studied by Brazilian physicians, then by other doctors and journalists from various countries, including the US, as his fame spread. Even the conservative and usually cynical Time magazine reported objectively and favorably on him (Oct 16, 1972). Arigó asked for and, as far as all investigations could determine, received no remuneration for these treatments. He insisted that he would lose his powers if he were ever to accept payment for his ministrations. The Roman Catholic Church and the Brazilian Medical Association branded him a curandeiro (charlatan, quack) and brought suit against him for practising medicine without a license. After years of court action, Arigó was jailed for several months, but he continued to treat patients from his jail cell. Eventually, the

Brazilian Supreme Court overturned the conviction and the next day Arigó was back at his 'clinic' as usual treating people as if nothing had happened.

There are numerous other purported 'psychic surgeons', especially in the Philippines. Stanley Krippner, Ian Stevenson and others have conducted some investigations but more work needs to be done in this field.

SEEING WITH THE FINGERS?

Just as psychic healing has important practical implications, so does 'dermal optics', a phenomenon the Prussians claim to have discovered. But from the 19th century on, there have been sporadic reports that colors could be perceived by other than normal vision, most commonly under hypnosis, usually by the skin. Following initial publication of the Russian findings in the *Journal of Parapsychology* (1965), Dr Carroll Nash did some experiments for a few years (1968-71).

In France, Dr Yvonne Duplessis, a member for many years of the Institut Metapsychique International, took up the work in 1968. Dr Duplessis deems the phenomenon to be 'a more or less explicit reasoning process which develops after a psychological analysis of impressions received by [the fingers of] the subject' (*Parapsychology Review*, 1975; her emphasis). Apparently it is not clairvoyance, as many parapsychologists believe. It seems to be a purely physiological response, however uncommon, by the fingers to purely physical emanations from the colors, so neither is it a separate form of ESP, as ESP is usually conceived.

PSI IN THE ELECTRONIC AGE

On December 30, 1969, the Parapsychological Association was at last accepted as an affiliate member of the American Association for the Advancement of Science. One of the reasons for this very significant breakthrough was the publication earlier that year of preliminary work by Dr Helmut Schmidt on psi testing using a virtually fraud-proof machine. Schmidt's work is summarized in Randall (op. cit., pp. 123-34).

A number of ESP machines had been used by earlier parapsychologists, such as G N M Tyrrell (prior to WWII) and David Kahn (1952). W E Cox is famous in parapsychological circles for his inventive PK testing machines, dubbed 'Cox clocks'. With the development of small computers, it became possible to build small, sophisticated, randomized machines which could be adapted to both ESP and PK testing. Schmidt was a senior research scientist at Boeing Laboratories in Seattle when he devised his first 'Schmidt machine', using radioactive strontium-90 as his randomizing source and a high-speed oscillator, which can go through an 'on-off' or '1-2-3-4' sequence about a million times a second. Schmidt called it an electronic 'coin-flipper'.

When the strontium-90 decays, it emits an electron which is registered on a Geiger counter; this sends a signal to stop the sequencing process, thus generating a target. The subject presses one of several buttons on the console of the machine and gets immediate feedback as to whether the guess was correct or not. In the precognition mode, the target is generated after the subject makes a guess. In the PK mode, the subject attempts to influence the machine's selection of the target (presumably by influencing the oscillator or the radioactive decay). Since individual events of radioactive decay are the most unpredictable things we know, the critics of parapsychology cannot

claim a biased source of target selection, as they did in earlier experiments. Furthermore, the machine is built so as to record its own data and calculate the results; that eliminates any possibility of recorder and experimenter errors. Schmidt also designed his machine so as to sequence an ESP (or PK) use and a control use alternately during the same experiment as a check on the machine's randomness. Both electro-mechanical counters and punch-tape records are kept as a check against each other, and various fail-safe hidden electronic devices are enclosed so as to detect any possible tampering with the counters. As Randall observes, 'The Schmidt machine is undoubtedly the most advanced piece of equipment ever used in parapsychology'.

Schmidt had subjects aim either at high scores or low scores (i.e. try to press the wrong button); he found they could do this equally well, as Hubert Pearce had demonstrated with the Zener cards years before. He adjusted the machine for PK experiments with similar success. Two 13-year-old boys achieved results billions to one against chance.

In 1969, Schmidt left Boeing and moved to Rhine's Institute for Parapsychology in Durham, becoming a full-time parapsychologist. He modified the machine in subsequent experiments and continued to achieve impressive results. Randall writes: 'In so far as it is humanly possible to prove anything in this uncertain world, the Schmidt experiments provide us with the final proof of the reality of both ESP and PK'. Others, including a young Australian worker, Eve André (1972), have used Schmidt's machines with similar results.

REMOTE VIEWING

In 1976, Puthoff and Targ of the Stanford Research Institute published an account of experiments which investigated what they called 'remote viewing' (Proc. Inst. Electrical and Electronic Engineers, 64, pp. 329-54). This is the ability of certain individuals to describe remote geographical locations, often in great detail. The term was used as a general one to cover 'dis-association', 'simple clairvoyance' and 'travelling clairvoyance' (or OBE or 'astral projection'). The principal subjects were Mrs Hella Hamnid, Pat Price and Ingo Swann. In each experiment, a target location within a 30 minute drive of the laboratory was randomly chosen from a pool of locations printed on cards sealed in envelopes and kept secure in an office safe. The selected target was unknown to the experimenter and subject who waited at the laboratory for 30 minutes to allow the target demarcation team to reach the chosen site. They remained at the site for 15 minutes during which time the subject's description of the target was recorded on tape. The subject was also asked to make any appropriate drawings. Independent judging of the match between descriptions/sketches and targets was carried out as in the dream and ganzfeld techniques described earlier.

This remote viewing method proved enormously successful. Longer distances were attempted, as was electromagnetic shielding of the subject, as in Vasiliev's work. None of these had any effect on the quality of the remote viewing reports. The technique was quickly replicated by other parapsychologists, often using unselected persons (i.e. not specially 'psychic' persons) as subjects.

One of the most successful of these replications was done in the Chicago area by Dr John P Bisaha and Miss Brenda Dunne.

Miss Dunne proved to be an excellent subject - or 'percipient' as the subject has now come to be called¹². She was so accurate in her descriptions that blind judging and statistical analysis hardly seemed necessary. The team then modified the experiment to run it in the precognitive mode, the target envelope being chosen by the agent while driving aimlessly around for a pre-specified time, after the percipient back in the lab had given her description.

In 1978, a CBS camera crew ran a test in which the agent was put on a small company airplane and was not told to select the target location until the plane was in the air and the description had been made back in the lab.

The choice of city (and site in that city) was made from a pool (made up by CBS and unknown to Bisaha and Dunne) using a pocket calculator with a quasi-random number generator. No one in the plane had any idea where they were headed when they took off. Yet the percipient, prior to randomized target selection, described their eventual destination with amazing accuracy.

SURVIVAL AGAIN

There are many avenues towards attaining evidence suggestive of survival besides mediumistic utterances. One, clearly, is memory of past lives.

Another, more indirect, is the complex variety of data which seem best organized by postulating the existence of a 'psi field' or 'astral body'. Not only RSPK phenomena, but psychic healing and PK on static objects suggest this. So, too, do the out-of-the-body experience and the near-death experience (NDE). Apparitions also support this theory.

It was when Karlis Osis reviewed reports of apparitions that he noticed they were of several quite distinct types. In one, the subject's surroundings are suppressed and S sees the agent in A's environment, as if in a clairvoyant 'vision'. More commonly, S sees A intruding into S's own environment, just as if A were actually present in the flesh. In both of these types, it is the agent who usually is undergoing - or recently has undergone - a crisis, often resulting in A's death. But occasionally there would be reports of a very different kind of apparition. In this type, a pre-deceased agent appeared to a dying subject. Osis decided late in 1959 to undertake a systematic study of this latter type of apparition.

To determine the percentage of such cases in the general population (within the limits of sampling error) and the demographic and psychological/physiological characteristics of subjects reporting these apparitions, Osis mailed a questionnaire to 5000 physicians and 5000 nurses selected at random throughout the US. Only 640 were returned. This group of responders had observed a total of 35,540 dying patients, but less than 10% these were conscious at the time of death. Of this subset, some 884 cases involved a deathbed 'vision'; in 329 cases the physician or nurse reported that they actually observed the patient having the hallucination. Although this is a rather small sample from which to make any generalizations, there seemed to be no characteristics which the cases had in common - strongly suggesting that the experience cannot be explained either in terms of brain chemistry or culturally-imposed psychological conditioning.

¹² Actually, 'percipient' was the term used by Sir Oliver Lodge in his 1884 telepathy experiments; it had fallen out of use with Rhine's introduction of statistically evaluated, quantitative target material.

A second American survey was conducted in five north-eastern states between 1961 and 1964 in which follow-up interviews were held with respondents who reported cases involving deathbed visions. The conclusion of the earlier study was supported. To further test the possibility that cultural expectation could explain the visions, Osiris, with the help of Icelandic parapsychologist Erlendur Haraldsson, conducted a similar survey in India in 1972-73. Again, there seemed to be no cultural or personality characteristics that correlated with the visions. The most plausible explanation for them, therefore, is that they are genuine psi phenomena relating to survival.

Other evidence for survival comes from the 'near-death experience' (NDE) - persons who actually died (heartbeat and breathing had ceased and, in the few cases where it was being monitored, EEG or 'brain wave' activity had stopped) and then shortly afterwards were resuscitated. The experiences which some of these people had during that interim period - while they were clinically 'dead' - were occasionally reported to doctors, but most dismissed them as delusive. The eminent thanatologist, Dr Elisabeth Kubler-Ross, however, concluded from her long experience with the dying that the 'destruction hypothesis' was untenable (see *On Death and Dying*, 1969). But it was Dr Raymond Moody's *Life After Life* (1975) that had the most dramatic impact.

Moody stumbled on the NDE more or less by accident. His first encounter with an NDE report was in 1965 from one of his undergraduate professors at the University of Virginia who had had the experience himself. The second was some five years later from one of his own philosophy students. The similarity between the two accounts struck Moody and he set out to collect more from both his students and medical professionals. At the time his book was published, he had about 150 cases upon which his analysis was based.

Moody found, as had Osiris and Haraldsson, that there were 'great similarities in the reports, despite the fact that they come from people of highly varied religious, social and educational backgrounds' (*Life After Life*, p. 15).

There are, in fact, some 15 different features of the NDE, although rarely does any one person experience them all. Moody summarized this 'ideal or 'complete' NDE (ibid. pp. 21-23) and three replications of his findings (involving a total of 242 cases) were reported at the 1978 meeting of the Parapsychological Association. Once again, the data strongly supported the survival hypothesis. Careful statistical analysis of over 200 different characteristics of the cases by Ian Stevenson and Dr Bruce Greyson showed no support for any alternative hypothesis - neurochemical, psychopathological or socioeconomic. Furthermore, one feature of most, though not all, NDEs is the out-of-the-body experience, which many people report having had in other than NDE circumstances. Thus the OBE is partial support for the veracity of the NDE reports as well as independent support for survival itself. Surely the survival hypothesis would predict such a state, for whatever survives the death of the physical body must be a separable part of our being during the body's lifetime.

THE OUT-OF-THE-BODY EXPERIENCE

Preliminary experimental work on the OBE did not begin until 1965 when Charles T Tart, then at the University of Virginia, did systematic studies with a Miss Z who had informed him of her ability to induce this state at will. Tart was well aware of numerous such claims in 'occult' literature and earlier psychical research. Some respectability was given the subject when SFR and ASPR member Dr Hereward Carrington (1881-1958) collaborated with Sylvan J Muldoon to describe the latter's OBEs, which he had experienced spontaneously since the age of 12 - see *Projection of the Astral Body* (1929).

A number of other useful books have been published since including Celia Green, *Out-of-the-Body Experiences* (1968) and Robert A Monroe, *Journeys Out of the Body* (1971).

Tart's experiments, described in his contribution to the Mitchell-White anthology, found in Miss Z's EEG record a unique brain wave pattern that correlated with the times she reported having her OBE. That looked promising. Shortly after completing his investigations with Miss Z in 1965, Tart met Monroe, an intelligent, successful businessman then in his early 50s with no interest in the occult until he started having his OBEs. Investigation of his brain wave states unfortunately failed to replicate Miss Z's unique pattern.

In 1973, Karlis Osis and several associates began a series of imaginative experiments at the ASFR headquarters in New York, using psychics Ingo Swann and (later) Alex Tanous. The subject, hooked up to a polygraph machine in one room, was instructed to 'project' himself to another room, where a target was located. At the target area was a box containing a device which would project randomized combinations of slides onto a small screen to produce an optical illusion when seen through its viewing window, but not otherwise. If the OBE were, as John Palmer had suggested, merely a peculiar form of clairvoyance (earlier literature sometimes called it 'travelling clairvoyance'), the subject ought not to report seeing the optical illusion (unknown to the experi-menter until afterwards). In fact, the illusion was reported, suggesting that the percipient had indeed viewed the target through the window.

Osis then decided to further test the bilocation hypothesis - and at the same time test Rhine's theory that ESP and PK will always accompany one another - by placing a delicate strain gauge in the area in which the subject would have to 'project' himself to look through the window of the target device. To his delight, the strain gauge registered a change when the subject correctly identified the target. There appeared to be an extremely high correlation between the ESP and PK effects, thus confirming both theories.¹³

Meanwhile, similar investigation of the OBE was begun in 1974 at the Psychical Research Foundation by William Roll and Robert L Morris using a Duke University graduate student in psychology, Stuart 'Blue' Harary, as subject. Like other OBE subjects, Harary claimed to be able to induce the state at will. Various devices were used to see if Harary's 'astral body' could be detected in the target location during his OBE; no measurable change in temperature, illumination or electromagnetic field was detected. And again, no unique brain wave pattern was found to correlate with the subject's OBEs.

On the other hand, behavioral change in animals was noticed. The results are strongly suggestive of the 'psi field' or 'astral body' hypothesis.

Thus the evidence from OBE, NDE, deathbed visions, RSPK, PK on static objects and paranormal healing collectively support the survival hypothesis as well as the existence of an 'astral body' as the vehicle of that survival. However, many parapsychologists remain unconvinced. My own feeling is that the notion of a 'conclusive demonstration' of anything in science is an illusion. Science is not a collection of isolated bits of data, independently proven; it is a network of interrelated findings. And at present, this web more strongly supports survival than it does any other hypothesis. Further, the notion of 'proof' is itself very unclear. How much evidence is 'enough' evidence for

¹³ Yet other evidence seems to conflict with this correlation. For example, ESP is facilitated, by almost all evidence, by a relaxed, quiet state of mind. PK seems to manifest most frequently in an excited, tense state (cf. RSPK, PK on static objects).

anything? The answer to that question, in the final analysis, is very subjective. On balance, the evidence for survival and a psi field is persuasive to me. Others will have to make up their own minds for themselves .

EPILOGUE

RECOMMENDED READING

Honorton, Charles (1978) Has science developed the competence to confront claims of the paranormal? In: Ebon, Martin, Signet Handbook of Parapsychology, pp. 483-508

Koestier, Arthur (1972) The Roots of Coincidence. London, Hutchinson (paper in Picador, 1974)

“ (1967) The Ghost in the Machine. London, Hutchinson

Randall, John L (1975) Op. cit. Chapters 13-16, Epilogue

I have tried to place this very brief survey of parapsychology within the context of both its scientific study and its challenge to the widely held scientific assumption known as micro-reductionism. For years, the noted writer Arthur Koestier has, as John Randall puts it, 'carried on a kind of guerrilla warfare' against this view. In Koestier's book The Ghost in the Machine (1967), he attacks what he calls the 'four pillars of unwisdom' which support 20th century scientific orthodoxy. Randall (op. cit.) summarizes them as follows:

- (a) that biological evolution is the result of random mutations preserved by natural selection;
- (b) that mental evolution is the result of random tries preserved by 'reinforcement' (rewards);
- (c) that all organisms, including man, are essentially passive automata controlled by the environment, whose sole purpose in life is the reduction of tensions by adaptive responses;
- (d) that the only scientific method worth that name is quantitative measurement; and, consequently, that complex phenomena must be reduced to simple elements accessible to such treatment, without undue worry whether the specific characteristics of a complex phenomenon, for instance man, may be lost in the process.

The trouble with this view is twofold. First, it does not - and it would seem cannot - account adequately for psychic phenomena. Second, if it were accepted, then the theory itself would, by its own admission, be merely the product of 'adaptive responses' preserved by 'reinforcement'; i.e. a neural output caused by a complex environmental stimulus.

But neural responses are not the kind of things that can be either 'true' or 'false'. They are merely neural responses. They may be adaptive, aversive, etc., but they have no truth value. It is inappropriate of a reaction that is caused to enquire about its accuracy. Knee jerks, for example,

are neither 'accurate' nor 'inaccurate'. Thus, if the theory were to be taken seriously, it too (as a complex neural response, a complicated knee jerk) would have no truth value! This rather simple logical conclusion seems to have escaped most scientists. Once you ask whether a theory is true or false, you are asking for reasons in support of it (evidence, correlations, laws) not causes. And it is just that support which the theory of materialist micro-reduction cannot supply about itself.

It follows from this that the scientists who formulated the reductionist- mechanist hypothesis to account for all phenomena in the cosmos must themselves be exempt from that explanation, must be something that cannot be reduced to 'passive automata' striving to reduce their scientific tensions by 'adaptive responses'. And so must the rest of mankind too! That is exactly what the data of parapsychology (not to mention aesthetic, moral and religious experience) support. It is, therefore, more rational to believe in these things than to deny them on the grounds that they are 'impossible', whatever orthodox scientists may believe to the contrary.

These simple philosophical considerations ought to open our minds to the need for alternative methods of exploring the nature of man and of the world he lives in. While not in the least denying the value of quantitative measurement, we may with Koestler urge that careful, objective, scientific investigation could possibly be carried on in other ways as well, ways that would not do violence either to the scientific method or to the subject matter it was designed to study.

One suggestion made recently by Charles Tart is that we extend our notion of scientific observation to include observations made in states of consciousness other than the normal, waking state. He suggests, in fact, 'state- specific sciences': different methods for different altered states of consciousness (Science, June 16, 1972; pp. 1203-10). In other words, the best means of investigating an ASC may be to get into it. Liberal Catholics will recognize immediately that this is precisely what C W Leadbeater did with his clairvoyant powers. Tart's suggestion, needless to say, has not exactly taken the scientific community (even the parapsychological community) by storm - but it is an indication of some slight movement towards greater flexibility on the part of at least one scientist. Who knows how far it will eventually lead?

APPENDIX**DEVELOPMENTS IN PARAPSYCHOLOGY, 1981 - 1986**

This Appendix does not pretend to be in any way comprehensive and it covers only a little of the published work in the field that has come to the attention of the writer. To attempt anything more would be to attempt the impossible.

BIBLIOGRAPHY

The following is a selection of the many recent books in the field.

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Gauld, A (1982) *Mediumship and Survival: A Century of Investigation*. London, Paladin. Examines reports of supposed rebirth memories, apparitions, OBEs and possession.

Grattan-Guinness, I Ed. (1982) *Psychical Research: A Guide to its History, Principles and Practices*. Wellingborough, Aquarian Press. This anthology was published to commemorate the centenary of the SPR. It covers a wide range of topics including fringe phenomena such as UFOs. A useful introduction.

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Perry, M (1984) *Psychic Studies: A Christian's View*. Wellingborough, Aquarian Press. A collection of essays, lectures and sermons with emphasis on survival by the Archdeacon of Durham and editor of the *Christian Parapsychologist*.

Zusne, L and Jones, W H (1982) *Anomalistic Psychology*. Hillsdale, NJ; Laurence Erlbaum. A very broad approach ranging into UFOs and occultism, but good for sources.

Two recently published articles that would be of interest to many Liberal Catholics are:

Perry, M (1985) *Parapsychology and the Christian hope*. *Parapsych. Rev.* 17(3) pp 1-5

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PP 1-5

1. INTRODUCTION - PSI IN THE 80S

Arthur Koestler died on March 3, 1983. His bequest to Edinburgh University established the Koestler Chair of Parapsychology, occupied at present by Professor Robert L Morris. This is just one development in the continued expansion that has occurred in the field in the 1980s. In addition, new journals have appeared, including *PSI Research* (1982) edited by Larissa Vilenskaya, a noted Russian parapsychologist who emigrated to Israel in 1979 and who has since worked at the Washington Research Center, San Francisco. Another new journal is *Anabiosis* (1981), published by the International Association for Near-Death Studies at the University of Connecticut.

Nineteen eighty-two saw the centenary of the Society for Psychical Research and in his presidential address Arthur Ellison noted that 'public interest in psychical research is today enormous: it has never been greater'. Interest has revived in Eastern Europe and the USSR, too. Researchers have appeared in China, including Shen Han-Chang at the Shanghai Jiao-Tong University and Chen Souliang and others in Beijing.

The SPR centenary seems to have sparked off a certain amount of soul-searching (if I may use such a phrase in this context) among parapsychologists. Answers to questions such as 'After 100 years, what do we really know?' range from the skeptics' 'nothing' to Ellison's 'a great deal'.

John Palmer, in an article entitled 'Psi research in the 1980s' (*Parapsych. Rev.*, Mar/Apr 1985) maintains that 'the most important question...is still what it always has been, namely, "Does psi exist?". K Ramakrishna Rao, Director of the Institute for Parapsychology at FRNM, has discussed 'Science and the legitimacy of psi' (*Parapsych. Rev.*, Jan/Feb 1982), while William Braud has looked closely at 'What is a controlled psi experiment?' (*Parapsych. Rev.* Mar/Apr 1986). Braud discusses controls that are absolutely necessary and then goes on to deal with more subtle problems and the difference between demonstrations and experiments.

Many parapsychologists (and some of their critics) would now agree with the view that a 'conclusive experiment', in the sense of one for which all 'normal' explanations are ruled out, is an illusion. Such an experiment does not exist in the 1980s any more than it did in earlier times. Further, the persisting lack of repeatability of psi experiments and the well-established 'experimenter effect' have led a number of workers to view psi experiments in an 'holistic' manner. Quantum mechanical notions are being applied to parapsychology, the experimenter being seen now as an integral part of the experiment and sometimes even the source of the observed phenomena (see Section 8).

On the experimental side, survival-related phenomena seem to have been prominent, with emphasis on the OBE and NDE. Also, the number of researchers carrying out 'ganzfeld' experiments has grown. These experiments have proved more successful than many in that repeatability rates of the order of 50% have been claimed.

The practical application of psi has always had its proponents but it has recently attracted increased interest. The term 'psionics' has been coined to describe this area of activity, and a paper was given by Jeffrey Mishlove on the subject at the 1984 Parapsychology Foundation conference in New Orleans. He summarized practical applications of psi in over twenty-five different business and

professional areas and suggested that 'psionics' is a developing new industry. Of course, there's just one snag in all this - psi phenomena are as unreliable in the 1980s as they've ever been.

2. MAGICIANS AND PARAPSYCHOLOGY

The exploits of 'stars' such as Serios, Kulagina and Geller in static PK have led critics to ask how good parapsychologists are at detecting deceit. It has long been recognized that a knowledge of magic (e.g. leger-demain) is quite useful in investigating certain types of psychic phenomena. A 1981 poll of parapsychologists showed that 92% agreed that stage magicians should be consulted when setting up tests for alleged psychics.

In 1983, the Parapsychological Association issued a 'statement on magicians' which welcomed collaboration with professional magicians of repute. Among the most highly regarded magicians who have been strongly critical of some areas of research are Milbourne Christopher, Martin Gardner and James Randi. The last is well known for his 'exposés' of Uri Geller.

George P Hansen, of the Institute of Parapsychology, FRNM, has published a brief overview of magic for parapsychologists (Parapsych. Rev. Mar/Apr 1985). Another recent paper is one by W E Cox (JSPR, 1984) . Cox is himself a magician as well as an eminent parapsychologist.

3. PSYCHOLOGY OF PSI

Erlendur Haraldson, University of Iceland, published in 1981 the results of a study in which he tested a number of variables for possible relationships with belief in psychic phenomena. He found that believers in psi tended to be women, believers in life after death, more religious, better able to recall dreams, and interpreters of dreams. Michael Thalbourne, an Australian researcher then at Washington University's McDonnell Laboratory for Psychical Research, partially repeated these findings. Thalbourne has also carried out a series of studies to explore, among other things, the relationship between ESP scores and extraversion, but all of them failed to confirm the expected positive relationship to any significant degree. Indeed, two tests seemed to suggest a negative relationship.

Gertrude R Schmeidler, President of the ASPR, has given a useful summary on belief and disbelief in psi (Parapsych. Rev. Jan/Feb 1985) .

She points out that surveys are difficult to compare not only because of differences in testing and presentation, but also because the context of the questions and the conditions under which they are asked are important. She quotes the work of James Crandall at the University of Idaho. His first sample of ESP subjects showed 56% classing themselves as 'sheep', 34% as undecided and 10% as 'goats'. Students in similar classes at the same university were then given the same test by an assistant who said he was merely standing in for the experimenter, that he didn't know much about 'this stuff' and generally showed a lack of interest bordering on hostility. His results produced only 8% sheep while the percentage of goats rose to 72.

Schmeidler also discusses other correlates of belief including level of education, financial status and social and psychological deviance.

Firm disbelief is likely to have an emotional base rather than a rational one.

Some PK researchers have found that RNG (random number generator) - PK success is greater when subjects are in relatively quiescent, non-striving states; others have found strong PK success when subjects are encouraged to become involved in a striving game like situation. Jeffrey Debes and Robert Morris have published (J. Parapsych. 1982) results showing that student subjects given striving instructions scored significantly below chance ($p < 0.02$) whereas those given non-striving instructions scored significantly above chance ($p < 0.001$). They found that non-striving strategies were appropriate for both high- and low-competitive subjects, whereas striving strategies appeared to induce psi missing. This result seems to have been repeated by Palmer and Kramer (J. Parapsych. 1984) who found that significant PK results were restricted to trials during which conscious attempts at influence were not being exerted. These results have very important implications in considering theories of psi.

Finally in this section, reference should be made to the question of psi development. Some researchers believe that the learning of psi abilities is quite possible; others feel that methods claimed to develop psi only eliminate psychological blocks allowing subjects to perform better in experiments (see Jeffrey Mishlove, *Psi Development Systems*, Jefferson, NC; McFarland, 1985).

Several researchers have tried training subjects in imagery to see if this would improve success rates in ESP/PK tests. William Braud (PK) and Robert Morris and Leonard George (ESP) have concentrated more on the length of the training period while Hoyt Edge has looked at the intensity of training. The former workers reported varying degrees of success in improving scores. Edge, for very intensive training, found a 'highly significant' difference in pre-training and post-training ESP scores - but in the direction of psi missing. Edge found a 'suggestive' improvement in ESP scores for his less intensively trained subjects.

Apparent success in developing psi abilities in her students has been claimed by Barbara Ivanova, a leading researcher and healer in Moscow. She claims her methods, involving group relaxation and visualization, have given numerous students an intuitive diagnostic ability. Results were much more significant when these training sessions were conducted by a 'psychic' person.

4. ESP/PK

The ganzfeld technique has proved conducive to the occurrence of ESP in many studies in various laboratories. Researchers (in particular Rex Stanford of St John's University, Jamaica, NY) are now trying to find out why ganzfeld is so suitable for ESP performance. Stanford has looked at the part played by the 'white' or 'pink*' noise to which volunteers are subjected (see for example, Parapsych. Rev., 1986). His investigations have supported the hypothesis that the character of the auditory stimulation influences cognitive processes during ganzfeld. He also found that at least some of the psychological consequences of the noise depend on character traits of the subject, including extraversion.

Gertrude Schmeidler has published the results of tests to determine whether ESP responses are influenced by a prominent feature within the target field (JASPR. 1985). She found that although the prominent feature (in this case a repeated target) did not elicit good ESP scores, it did 'pull' ESP responses towards itself even when the true target was different. Obviously this has implications in ganzfeld research. To obtain a good score, a subject's responses must not only resemble the target picture; they must also fail to resemble the other (control) pictures. ESP may be unconsciously used

initially to scan the whole array - evidence for this was found by Whately Carington in 1944. So what happens if this initial scan finds a control picture which is especially attractive to the subject? It seems likely that responses would center around this prominent feature in the array rather than on the designated target.

The displacement effect has been further studied by James E Crandall and Donald D Hite at the University of Idaho (JASPR, 1983). They found that subjects who scored below chance expectation on intended targets in GESP and clairvoyance tests showed significant above chance scoring on preceeding and succeeding targets, particularly on preferred tasks. This is referred to as the 'psi missing displacement effect' or PMDE. In precognition studies, the PMDE occurred when subjects were trying to guess the target but not when they were trying to miss, and it was only in precognition studies that the effect extended to ± 2 or ± 3 targets. Crandall also tested the effect of experimenter attitude on results (JASPR 1985). A favorable attitude to the research produced a significantly larger PMDE than an unfavorable one (see Section 3).

Charles T Tart (University of California, Davis) has developed a way of assessing information acquisition rates in forced choice ESP experiments. In a review of 53 present time ESP studies and 32 precognition studies, he has concluded that present time ESP 'works' up to ten times better than precognition ESP in such forced choice tests (JASPR 1983).

Remote viewing continues to be controversial. In 1984, a review by Hansen, Schlitz and Tart (in: R Targ and K Harary, *Mind Race*, NY, Random House) of 28 remote viewing studies showed that over half reported a statistical significance at the 0.05 level (where results are 20:1 against a chance explanation). The review also noted 18 unpublished studies of which 8 reported statistical success.

Robert L Morris (Koestler Professor of Parapsychology, Edinburgh) has opened up an interesting new area by considering the possible role of psi in human/equipment interactions. Certain people and situations appear to be associated with a high incidence of equipment faults and accidents.

For others, the reverse is true. Although much can be explained conventionally, there is a residue that is suggestive of psi. Some examples suggest information exchange between equipment and person by ESP; e.g. people for whom equipment works well may be consistently avoiding equipment about to break down. People associated with unusually or consistently positive or negative equipment performance may be influencing the behavior of unstable or sensitive components by PK. Morris began his studies by developing a technology attitudes questionnaire and collecting data on spontaneous cases. He has also carried out relevant restricted choice ESP and discrete outcome PK research using equipment components as targets.

Psychokinetic influence on living things has been further suggested by the work of Carroll B Nash at St Joseph's University, Philadelphia (JASPR, 1984), who has shown that the rate of mutation of lac -ve to lac +ve strains of the bacterium *Escherichia coli* can be mentally promoted. This supports the results of earlier studies by Nash on PK influence on bacterial growth.

5. HEALING

Psychic healing has not received a great deal of attention from researchers in the US, but it is still the subject of interest elsewhere, including, for example, The Netherlands and Russia. There is sufficient evidence from controlled studies to support a belief in the validity of the phenomenon, but much needs to be done to clarify its nature and to elucidate the mechanisms involved in its operation.

An interesting experiment has been conducted by Jerry Solfvin of the John F Kennedy University, Orinda, CA, with Dutch veterinary students (Eur. J. Parapsych. 1982). Each student was placed in charge of a cage of 12 mice. They were told that half of the mice had been injected with a large dose of malarial blood parasite, while the other half had been given a much smaller dose that was not expected to manifest in illness during the study.

The students were also told that a famous healer would be sending distant healing to half the mice in each cage. There actually was no healer and there was no difference in the injections. However, the students' expectations appeared to be linked to the results. The mice which the students had been told had received the large dose of parasite showed the highest percentage of destroyed red blood cells. Further, the mice in the 'healed' group showed significantly fewer destroyed red blood cells. This demonstrates the difficulties of psychic healing research and the role that expectancy might play in healing.

A distant healing experiment by Robert Miller, in which patients were not aware that they were part of a research project, avoided the expectancy factor. Eight healers brought about a statistically significant improvement in systolic blood pressure in 96 hypertense clients. There was no improvement in diastolic blood pressure or heart-beat rates, however.

Such a distant healing experiment, in which healees are 'blind' regarding the timing and nature of the healing attempt is one relatively straightforward way of isolating a possible psi component in one person's healing of another. It is more difficult to investigate the possible role of psi in self-healing. Methods for doing this have been suggested in an article by William Braud on the interface between parapsychology and the exciting new discipline of psychoneuroimmunology or PNI (Parapsych. Rev. 1986).

PNI explores the health-enhancing aspects of relaxation and imagery. Recent findings are delineating major interactions among mental processes, neural functioning and the activity of the immune system. Psi processes may well be involved in these interactions. Immunological factors, such as white blood cell activity, may be useful target systems for biological PK experiments and may prove to be especially responsive to PK influence.

For cancer patients, visualization exercises typically involve images of weakened and disorganized cancer cells, a strong and efficient immune system and images of increased effectiveness of conventional treatments.

The role of visualization in healing generally has been reviewed in a lengthy paper by Daniel J Benor, a psychic healer and MD from Doylestown, Pennsylvania ([PSI Research, 1985](#)). Benor has also reviewed the possible involvement of 'biofields and energies' in healing ([PSI Research, 1984](#)).

Larissa Vilenskaya has summarized what is known and unknown about the biofield on the basis of Soviet research ([PSI Research, 1983](#)). She reproduces diagrams of 'equipotential lines of bioelectric field' in healthy people and in people with certain diseases. However, the largest distance at which these particular fields have been recorded is around two meters. On the other hand, Moscow researcher Barbara Ivanova has obtained results in a distance healing experiment that indicate that the biofield is highly penetrating, suffers small dispersion and thus operates at long range with little attenuation ([PSI Research, 1983](#)). Obviously much more work is needed in this area.

Investigations of psychic surgery have produced another interesting case in Brazil. Anthropologist Sidney Greenfield (University of Wisconsin- Milwaukee) has been working with Dr Edson Queroz who performs psychic surgery while possessed by the spirit of the same 'Dr Fritz' who earlier possessed Arigo. Footage shot by a Brazilian TV station shows Queroz performing several operations without anaesthetics or antiseptics, as Arigo did. Queroz' patients tend to heal quickly with no infection. Because he is already a licensed doctor, the Brazilian Medical Association has been unable to stop his activities.

6. SURVIVAL-RELATED PHENOMENA

OUT-OF-BODY EXPERIENCE

There has been a lot of interest in the OBE in the 1980s with emphasis on spontaneous cases. Findings suggest that demographic factors (e.g. sex, race, religion) are poor predictors of the OBE, but that psychological variables such as absorption, fantasy proneness, lucid dreaming, dream recall and others show important positive relationships with the experience.

Carlos Alvarado (University of Virginia) has investigated the incidence of ESP in the OB experience. The student is referred to Alvarado's comprehensive review of experimental studies ([J. Parapsych. 1982](#)).

For a detailed discussion on the survival question and the variety of phenomena that bear upon it, students are referred to a lengthy paper by Robert H Thouless entitled 'Do we survive bodily death?' in the [Proceedings](#) of the SPR, October, 1984. A useful book on the subject is [Survival? Body, Mind and Death in the Light of Psychic Experience](#) by David Lorimer (London, RKP, 1984)

7. OTHER STUDIES - EAST AND WEST

DOWSING

There has been argument from the earliest days of the SPR as to whether dowsing is a physical or psychical phenomenon. Experimental investigations are few and far between but it is worth noting a review by George P Hansen (JSPR, 1982). He records the work of J B Rhine (1950), Karlis Osis (1960) and more recently Alsemo (1978) and Francis Hitching (1978). Hansen concludes that considerably more experimental work is required to support the case that dowsing is a psi process.

DREAM STUDIES

Montague Ullmann has published the results of tests for psi communication through dream sharing in small groups of 5-8 people (Parapsych. Rev.1981). Assuming that psi is not only an unconscious process but also a field effect, this dream sharing was designed to establish natural psi linkages. Ullmann describes several examples of such linkages.

Keith Hearne (Hull, UK) has studied the 'lucid dream' and presented a paper on the subject at the PF conference in New Orleans in 1984. In the lucid dream, the sleeper develops full comprehension that he/she is indeed dreaming. Such insight often persists for many minutes, during which the sleeper may manipulate the dream scenery and events by volition. Subjects can deliberately alter their breathing rate, too, and this is the basis of a 'dream machine' invented by Hearne which enables the subject to switch on equipment from within the dream.

POLTERGEISTS (RSPK)

L Stafford Betty of the California State College, Bakersfield, describes the case of a poltergeist in a house in Bakersfield (JSPR, 1984) during the owners' first two months of occupancy. Activity ceased after exorcism by two sensitives. Certain unusual features of the case point to a deceased person, the former owner of the house, as the agent.

VANAF HIER VERDER

DERMO-OPTICS

Dr Yvonne Duplessis, now at the Centre d'Information de la Couleur, Paris, is continuing her studies of dermo-optic color perception with both blind and sighted subjects. Her aim is to find new procedures that may be useful for the rehabilitation of the blind. (For work in China, see below).

RUSSIA AND EASTERN EUROPE

It seems that parapsychological research has begun to flourish again in Eastern Europe. Milan Rýzl reports particularly on the work of Professor Kahuda (PSI Research 1982), a Czech scientist. Kahuda's work has been carried out at the Psychoenergetic Laboratory established in 1978 at the Czechoslovak Technical University. His theory of psychic functioning attempts to explain psychic phenomena and consciousness on a common basis and to integrate this explanation into the framework of modern physics.

Kahuda has also organized a group of associates who have performed experiments in dowsing, psychometry, ESP and PK as well as healing and aura studies. Another laboratory, the Research Unit for Psychotronics and Juvenology, was established in Prague in 1981 under the direction of Dr Zdenek Rejdak.

An article published in a Moscow student magazine in 1980 presents evidence that Nina Kulagina was still active at that time. She was accredited with the ability to see through walls, read with the back of her head and transmit thoughts at a distance as well as her well known PK abilities. According to G N Dulnov ([PSI Research](#), 1984) she has also influenced laser beam propagation and produced acoustic impulses and vibrations that could be measured. Professor G A Sergeev, who has worked with Kulagina at Leningrad, claims that the energy which she directs can flow from her hands or can be concentrated in the stream of her vision.

A report of other PK studies has been published by Vladimir Zlokazov and his associates at the Kalinin Polytechnic Institute ([PSI Research](#), 1982). Zlokazov discussed the 'form' of objects as a definite material structure. He sees the brain as possibly an organ which creates field (wave) structures corresponding to the forms surrounding humans, and animate and inanimate objects. He claims that PK phenomena provide a method for studying psychological reality as a manifestation of form. Zlokazov and his associates have worked with two talented subjects, Elvira Shevchik and Boris Ermolaev. Results appear to rule out the involvement of magnetic and electrostatic fields.

Reference has already been made to the work of Moscow researcher and healer, Barbara Ivanova.

CHINA

The rapid changes that followed the death of Chairman Mao have also led, since 1979, to fresh enquiries into apparent psychic phenomena. Recent Chinese studies were provoked by a series of reports, beginning in the Spring of 1979, of children who seemed able to 'read with their ears'.

Most were between 8 and 15 years old. Chen Shouliang and He Muyan tested two sisters in Beijing who were able 'to recognise writing and pictures with their armpits, ears and other parts of their bodies without the use of their eyes'. A number of similar cases have been reported by other workers (see Martin Ebon, [Parapsych. Rev.](#), 1981; and Tao Kiang, [JSPR](#), 1982).

In the March issue of [PSI Research](#), 1983, a paper appeared by Lin Shuhuang and associates of the Beijing Teacher Training Institute describing investigations of the ability of some young children to move small objects without any body contact. During the process, the sample occasionally disappeared for more than 30 minutes and then it re-appeared. On the basis of experiments performed, the authors conclude that some 'exceptional function' people can cause substances to enter an 'exceptional' state.

These then cannot be detected by ordinary people or common detectors.

8. THEORIES OF PSI

John Beloff, in an article entitled 'Research strategies for dealing with unstable phenomena' (Parapsych. Rev.1984), regards the 'rarified realm of theory' as an excuse to escape from research oriented parapsychology. He notes that among theorists there is no consensus even as to the conceptual framework into which parapsychology will eventually fit. Beloff goes on to suggest that 'nowadays it is fundamental physics that is proving the strongest attraction to theorists of the paranormal'.

Evan Harris Walker in 1972 was among the first who attempted to explain psi by quantum mechanics. Quantum mechanics deals in probabilities. We cannot precisely define the state of a system because the very act of observation changes that state. If you like, the observer himself is part of the system observed. Carroll B Nash has written a clear and readable summary in Parapsychology Review (1984).

Helmut Schmidt (J Parapsych. 1984) compares a teleological model with the quantum collapse model of psi. The former emphasises the space-time independence of psi and the close relationship between ESP and PK (first proposed by J B Rhine). But it leads to a divergence problem in that the role of future observers is exaggerated. The quantum collapse model avoids this problem, but seems less attractive insofar as some of the space-time independence is lost and the relationship between ESP and PK is weakened.

The teleological model can be formulated completely within the framework of classical physics, and there is no necessary link to the concept of consciousness. The quantum collapse model, on the other hand, assumes a tight relationship between psi, consciousness and quantum theory. Schmidt suggests that the two models might be too extreme in opposite directions.

There is no space here to go into other models that have been put forward, examples of which include Stanford's 'psi mediated instrumental response' (PMIR) model and his later (1978) conformance model, Irwin's information processing model (1979) and William G Roll's systems theoretical approach (1984).

I would like to conclude this Section and this Appendix with another quote from John Beloff:

.....what partisans of the theoretical strategy tend to overlook is that until we can convince more advanced thinkers among theoretical physicists and others that we have phenomena that are worth their attention, it is unlikely that we will attract the potential Einstein that we are looking for..... Hence the policy of promoting theory in parapsychology at the expense of empirical research and the search for yet more rigorous evidence may be self-defeating.